

Federico Rosei, Professor and Canada Research Chair in Nanostructured Materials

UNESCO Chair, Materials and Technologies for Energy Conversion, Saving and Storage

F.R.S.C., FAPS, FCAE, FEurASc, FAAS, FAAAS, FACerS, FAAET(F), FSPIE, FOSA, FASM, FRSC(UK), FIET, FEIC, FInstP, FIMMM, FAIP, SMIEEE

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(On leave from Institut National de la Recherche Scientifique, Canada)

EDUCATION

Ph.D. (Materials Physics) University of Rome 'La Sapienza', Rome, Italy (February 2001)

Laurea (Physics) University of Rome 'La Sapienza', Rome, Italy (February 1996)

ACADEMIC EXPERIENCE

Chair in Industrial Chemistry	03/2023-Present	DSCF, University of Trieste	Trieste, Italy
Visiting Scientist	11/2022	CNR-IOM	Trieste, Italy
Visiting Professor	09/2022	Ca' Foscari University, Venezia	Venice, Italy
Executive Director	01/2021-Present	International Organization of Chemical Sciences in Development (IOCD)	Namur, Belgium
Research Advisor, Collaborative Partner	2020 – 2024	Universiti Tunku Abdul Raman (UTAR)	Kuala Lumpur (Malaysia)
Visiting Scientist	09/2019	CNR-ISM	Rome, Italy
Fulbright Visiting Chair	01/2017 – 04/2018	California Nanosystems Institute, UCLA	Los Angeles, USA
Canada Research Chair (Tier I)	2016 – 2023	Centre EMT, INRS	Varennes, Canada
Chang Jiang Scholar	2015 – 2017	Institute of Fundamental and Frontier Science, UESTC	Chengdu, China
UNESCO Chair	2013 – 2025	Centre EMT, INRS	Varennes, Canada
Canada Research Chair (Tier II)	2003 – 2013	Centre EMT, INRS	Varennes, Canada
Visiting Scientist	06/2014	CNR-ISM	Rome, Italy
Visiting Professor	09/2013	Flinders University, Australia	Adelaide, Australia
Director	06/2011 – 03/2019	Centre EMT, INRS	Varennes, Canada
Visiting Scientist	06/2010 – 07/2010	CNR-ISM	Rome, Italy
Visiting Scientist	03/2010 – 04/2010	MANA-NIMS	Tsukuba, Japan
Visiting Professor	01/2010 – 12/2012	University of Western Australia	Perth, Australia
Humboldt Awardee	05/2011 – 11/2011	Max Planck Institute for Solid State Research	Stuttgart, Germany
Full Professor	06/2009-02/2023	Centre EMT, INRS	Varennes, Canada
Visiting Professor	12/2008 – 05/2009	University of Western Australia	Perth, Australia
Associate Professor	06/2004 – 05/2009	Centre EMT, INRS	Varennes, Canada
Visiting Professor	02/2008	Nanyang Technological University	Singapore
Visiting Scientist	11/2007	CNR-ISC	Rome, Italy
Visiting Professor	07/2007	NUSNNI, National University of Singapore	Singapore
Visiting Professor	11/2006 – 02/2007	ISSP, University of Tokyo	Kashiwa, Japan
Visiting Scientist	09/2006	CNR-INFN-TASC	Trieste, Italy
Visiting Professor	01/2005	CQCT, University of New South Wales	Sydney, Australia
Assistant Professor	05/2002 – 05/2004	Centre EMT, INRS	Varennes, Canada
Post-Doctoral Fellow	11/2000 – 04/2002	Centre for Atomic Scale Materials Physics, University of Aarhus	Aarhus, Denmark

SERVICE, MEMBERSHIP AND LEADERSHIP IN LEARNED SOCIETIES

Member of the Board of Directors, University Foundation INRS Armand Frappier, 2012–2017

Member of the MRS Mentoring Program, 2012–2015

Member of the Diversity Committee, American Ceramic Society, 2013–2014.

Canadian and International Associate Director, Sigma Xi Society, 2013–2016.

Member of the Selection Committee of the Global Young Academy, 2014 – 2021.

Member of the Emerging Technologies Awareness Committee, ASM International, 2015–2018; renewed, 2018–2021.

Member of the Global Science Excellence Roundtable (initiative of the Government of Canada), Saskatoon August 2016.

Founding Chair of the IEEE Nanotechnology Council Montreal Chapter, 2016 – Present

Vice Chair of the IEEE Montreal Section, 2016–2019.

Member of the JC Polanyi Award Selection Committee, Canadian Society for Chemistry, 2017–2018 and 2019–2020.

Member of the “Prix du Quebec / Lionel-Boulet” Selection Committee, 2017.

Ambassador, IEEE Day 2017 and 2019.

Founding Chair of the American Ceramic Society Canada Chapter, 2017 – Present

Member of the International Committee of the Canadian Academy of Engineering, 2018 – Present

Member of the Killam Prizes and Fellowships Selection Committee, Canada Council for the Arts, 2018–2021.

Member of the Selection Committee of new Fellows, Division of Applied Science and Engineering, Academy of Science, Royal Society of Canada 2019–2020; Secretary of the Committee, 2020; Chair of the Division of Applied Science and Engineering, 2021–2023.

Member of the Selection Committee of new Fellows, Canadian Academy of Engineering, 2019–2021.

Member of the Alan Ray Putnam Award Selection Committee, ASM International, 2020–2022.

Member of the Steacie Prize Selection Committee, 2020–2022.

Head of the Materials Science Division, European Academy of Sciences (March 2020 – Present)

Member of the John Wheatley Award Selection Committee, American Physical Society, 2020.

Member of the ACerS Rishi Raj Medal for Innovation and Commercialization in Ceramics, 2020–2025

Member of the PCSA Mentoring Program, American Ceramic Society, Jan. 2020 – Present

Member of the APS Inclusion, Diversity, and Equity Alliance (IDEA) Network, April 2020 – Present

Member of the Advisory Committee (MACs) for Chemical Sciences, African Academy of Sciences, April 2021 – Present

Member of the Advisory Committee (MACs) for Engineering Technology and Applied Sciences, African Academy of Sciences, April 2021 – Present

Member of the R.W. Wood Prize Committee, Optica, 2022–2024.

Lifetime Member: American Physical Society; American Ceramic Society; SPIE; TMS; Electrochemical Society (ECS); Optical Society of America (OSA, now Optica); ASM International

Vice President, International Engineering and Technology Institute (IETI) (2022–2026)

Mentor for Early Career Researchers, American Ceramic Society (2023 –)

Mentor for Graduate Students, American Ceramic Society (2023 –)

SERVICE TO INDUSTRY

Member of the Advisory Board, Group NanoXplore Inc. (2013–2015)

Awards, honours, prizes, medals, distinctions

Fellowships in national and international academies (12)

Foreign Fellow, ASEAN Academy of Engineering and Technology (2022)

Member, European Academy of Sciences and Arts (2021)

Foreign Member, Academia Europaea (2018)

Foreign Fellow, Bangladesh Academy of Sciences (2018)

Associate Fellow, African Academy of Sciences (2017)

Academician, World Academy of Ceramics (2017)

Fellow, World Academy of Art and Science (2016)

Fellow, Canadian Academy of Engineering (2015)

Fellow, Royal Society of Canada (2014)

Member (Fellow), European Academy of Sciences (2014)

Fellow, Engineering Institute of Canada (2013)

Member, Global Young Academy (2013–2018)

Fellowships and Senior Memberships in learned societies (21)

Fellow, American Ceramic Society (2021)

Distinguished Fellow, International Engineering and Technology Institute (IETI) (2018)

Fellow, International Association of Advanced Materials (2020)

Fellow, Optica (2018) [formerly the Optical Society of America]

Senior Member, Optical Society of America (2017)

Fellow, Royal Society of Arts (2016)

Honorary Fellow, Chinese Chemical Society (2015)

Fellow, ASM International (2015)

Fellow, SPIE (2015)

Fellow, American Physical Society (2014)

Fellow, Australian Institute of Physics (2013)

Senior Member, SPIE (2013)

Fellow, American Association for the Advancement of Science (2012)

Fellow, Royal Society of Chemistry (UK) (2012)
Senior Member, Institute of Electrical and Electronics Engineers (2012)
Fellow, Institution of Engineering and Technology (UK) (2011)
Fellow, Institute of Materials, Metallurgy and Mining (UK) (2011)
Fellow, Institute of Physics (UK) (2010)
Full Member, Sigma Xi Society (2010)
Fellow, Institute of Nanotechnology (UK) (2010)

Awards and distinctions for research (19, International)

Fellowship, John Simon Guggenheim Memorial Foundation (2023)
Spirit of Alam Award, The Abdus Salam International Centre for Theoretical Physics (2023)
Envoy of People's Friendship Award, Jiangsu Province, China (2022)
World's Top 2% Scientists, Listed by Stanford University (2022)
Brimacombe Medal, TMS (2021)
World's Top 2% Scientists, Listed by Stanford University (2021)
Nano Energy Advances Award, Nano Energy Advances Journal (2021)
Annual Scientific Award, International Engineering and Technology Institute (IETI) (2020)
Guangxi Golden Silkball Friendship Award, Guangxi Zhuang Autonomous Region, China (2020)
World's Top 2% Scientists, Listed by Stanford University (2020)
Top 5% of highly cited authors of RSC journals, Royal Society of Chemistry (2019–2020)
Blaise Pascal Medal, Materials Science Division, European Academy of Sciences (2019)
Distinguished Award on Novel Materials and their Synthesis (2017), XIIIth IUPAC Conference on Novel Materials and their Synthesis, Nanjing (2017)
Premio Venezia (Academic/Scientific category), Italian Chamber of Commerce, Montreal (2017)
1000 Talents short term award, Sichuan Province (2017)
Khwarizmi International Award (2nd laureate), Iranian Research Organization for Science and Technology (2015)
Chang Jiang Chair Professor, UESTC, Chengdu (2015–2017)
Friedrich Wilhelm Bessel Award, Alexander von Humboldt Foundation (2010)
Marie Curie Fellowship, European Union (2001–2002)

Awards and distinctions for research (20, National)

Knight of the National Order of Quebec, Government of Quebec (2023)
Canadian Light Source T.K. Sham Award in Materials Chemistry, Canadian Society for Chemistry (2023)
Brockhouse Medal, Canadian Association of Physicists (DCMMP) (2022)
Premio nazionale "Gentile da Fabriano", Associazione "Gentile Premio", Fabriano (Italy), 2022
Julian C. Smith Medal, Engineering Institute of Canada (2022)
Prix Urgel Archambault, ACFAS (2021)
Prix du Quebec "Marie Victorin", Prix du Quebec scientifiques, Ministere de l'Economie et l'Innovation (2021)
Gold Medal, IEEE Montreal (2018)
Outstanding Engineer Award, IEEE Canada (2017)
Canada Research Chair, Tier I, Centre EMT, INRS (2016-2023)
John C. Polanyi Award, Canadian Society for Chemistry (2016)
Lash Miller Award, Canada Section, Electrochemical Society (2015)
Award for Excellence in Materials Chemistry, Canadian Society for Chemistry (2014)
EWR Steacie Memorial Fellowship, NSERC (2014), received from the Governor General of Canada
Herzberg Medal, Canadian Association of Physicists (2013)
Best Paper Award, Centre for Self-Assembled Chemical Structures (2012)
Rutherford Memorial Medal (Chemistry), Royal Society of Canada (2011)
Canada Research Chair, Tier II, Centre EMT, INRS (2008-2013, renewal)
Canada Research Chair, Tier II, Centre EMT, INRS (2003-2008)
New Strategic Professor, FQRNT, Province of Quebec (2002)

Awards and distinctions for service, collaboration, education and outreach (8)

Envoy of People's Friendship Award, Jiangsu Province, China (2022)
Guangxi Golden Silkball Friendship Award, Guangxi Zhuang Autonomous Region, China (2020)
John Wheatley Award, American Physical Society (2019)
Changbai Mountain Friendship Award, Province of Jilin, China (2018)

ACerS Global Ambassador, American Ceramic Society (2018)
 Excellence in Mentorship, American Vacuum Society (2015)
 José Vasconcelos Award for Education, World Cultural Council (2014)
 Bell Outreach Award, Foundation INRS Armand Frappier (2014)

Awards for research and education (6, Internal)

Planet INRS Career Award for excellence in supervision and training, INRS (2023)
 Planet INRS Award for Education, INRS (2021)
 Planet INRS Award for Education, INRS (2019)
 Planet INRS Award for Research, INRS (2017)
 Planet INRS Award for Research, INRS (2016)
 Planet INRS Award for Education, INRS (2015, shared with T.W. Johnston and A. Pignolet)

HONORARY PROFESSORSHIPS (10)

Honorary Professor	Nanjing Tech (2022)
Advisory Professor	Beijing Institute of Technology (2019)
Honorary Professor	Jilin Normal University, Changchun (2018)
Distinguished Honorary Professor	Changchun Institute of Applied Chemistry, Chinese Academy of Sciences (2018)
Honorary Professor	Changchun University (2017)
Honorary Professor	Changchun University of Science and Technology (2017)
Honorary Professor	University of Qingdao (2017)
Chair Professor	Suzhou University (2016 –)
Honorary Professor	Harbin Institute of Technology (2016)
Honorary Professor	University of Jinan (2015–2018)

NAMED / AWARD / VISITING LECTURESHIPS

Distinguished Lecturer	IEEE Electron Devices Society (2022–2024).
Wolfson Visiting Fellowship	The Royal Society (2021)
Skipper Lecture	CAS Institute of Process Engineering, Beijing (China) (2021)
Dongwu Master's Lecture Forum	Suzhou University, Suzhou (Jiangsu, China) (2021)
Distinguished Lecturer	IEEE Photonics Society (2020–2022)
Distinguished Lecture	Waterloo Institute of Nanotechnology, University of Waterloo (2019)
Special Lecture	CAS Youth Innovation Promotion Association, Beijing (2019)
Qinghe Seminar Prize	Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences (2018)
Distinguished Guest Speaker	SUSTech Lecture Series, Shenzhen, China (2018)
Honorable Speaker for the Applied Chemistry Lecture Series	Changchun Institute of Applied Chemistry, Chinese Academy of Sciences (2018)
Lee Hsun Lecture Award	Institute of Metal Research, Chinese Academy of Sciences (2017)
President's Visiting Fellowship for Distinguished Scientists (formerly Einstein Professorship)	Chinese Academy of Sciences (2017)
Fulbright Visiting Chair (UCLA)	USA/Canada Fulbright Foundation (2017)
Distinguished Lecturer	Sigma Xi Society (2018–2020)
Kennedy Series Lecture	Ohio University (2017)
China Distinguished Materials Scientist Forum	University of Science and Technology Beijing (2016)
iNano Distinguished Lecture	University of Aarhus, Denmark (2016)
Visiting Lectureship Award (India)	ASM IIM (2016)
Selby Fellowship	Australian Academy of Sciences (2016)
Distinguished Lecturer	IEEE Nanotechnology Council (2015 and 2016)
Distinguished Visitor/Speaker	California State University Northridge (2013)
Grand Challenge Lecture	Institute for Future Environments, Queensland University of Technology (2013)
Brian Ives Lectureship Award	ASM Canada Council / ASM International (2013)
Visiting Lectureship Award (India)	ASM IIM (2010)
Spheres of Influence Lecture	Institute of Health and Biomedical Innovation, Queensland Univ of Technology (2008)
JSPS Senior Special Visiting Fellowship	MANA–NIMS, Tsukuba (Japan) (2010)
Tan Chin Tuan Fellowship	Nanyang Technological University (2008)

Gledden Fellowship
 REES/JISTEC Fellowship
 REES/JISTEC Fellowship

University of Western Australia (2008)
 NTT Basic Research Laboratories (2000)
 NTT Basic Research Laboratories (1999)

CITATIONS FOR FELLOWSHIPS AND AWARDS

❖ **Knight of the National Order of Quebec (2023) [Chevalier de l'Ordre National du Quebec, 2023]**

Federico Rosei est un professeur et un chercheur œuvrant dans le domaine des systèmes infiniment petits. Se mesurant à l'échelle nanométrique, ces systèmes sont utilisés dans une vaste gamme d'applications, y compris la santé, l'environnement, les énergies renouvelables ainsi que les technologies de l'information et des communications. M. Rosei a fondé le Laboratoire nanofemtoseconde de l'Institut national de la recherche scientifique et en est le responsable scientifique. Il est également titulaire de la Chaire de recherche du Canada (niveau 1) sur les matériaux nanostructurés. Mû par la quête de solutions aux défis du développement durable, il est le créateur et le titulaire de la Chaire de l'UNESCO sur les matériaux et les technologies pour la conversion, l'économie et le stockage de l'énergie. Son équipe de recherche a entre autres participé à l'essor de l'utilisation de la radiation solaire pour transformer l'eau en oxygène et hydrogène, un combustible vert. De plus, il a travaillé avec plusieurs entreprises québécoises sur les cellules solaires et batteries de nouvelle génération. Par ailleurs, il a formé plus de 200 jeunes scientifiques provenant de 46 pays, dont 31 poursuivent une carrière professorale dans 14 pays. Pendant tout son parcours professionnel, Federico Rosei a utilisé la recherche pour promouvoir les technologies d'énergie renouvelable. Il a visé à influencer les politiques publiques sur les priorités de recherche, en particulier en matière de développement durable. Au-delà de l'originalité de ses idées et de son leadership scientifique et académique, son approche pluridisciplinaire et collaborative le pousse à jouer un rôle transformationnel à l'échelle mondiale.

❖ **Canadian Light Source – T.K. Sham Award in Materials Chemistry, Canadian Society for Chemistry (2023)**

During 20 years of independent research and supervision in Canada, Federico Rosei has reported numerous breakthrough achievements in materials chemistry, working on several different classes of materials. He pioneered the synthesis and characterization of multiple novel materials systems, also integrating them in optoelectronic devices. In particular, he designed and realized various cases of core/shell Quantum Dots (QDs), in which he varied the composition, size and morphology to fine-tune the energy levels, bandgap and emission spectra. Integrating these QDs in solar cells, photoelectrochemical (PEC) cells for green H₂ production from water and Luminescence Solar Concentrators ("solar windows"), he reported several record values of performance. His group holds the world record of power conversion efficiency in ferroelectric photovoltaics, both in multilayer films (8.1%) and single layer films (4.2%). In addition to highly original and impactful research in materials chemistry, Prof. Rosei is also an outstanding mentor who has personally trained over 185 young scientists at all levels, from 42 different countries. Many alumni from his group, including 30 who are themselves professors in 14 countries, have already developed independent careers in their own right. Several thousand students and trainees beyond his research group have also benefited from his advice and guidance, through his popular book "Survival Skills for Scientists", his professional development workshop by the same title and over 80 lectures at international conferences and universities worldwide. Both his achievements in research and in mentoring have been widely recognized through numerous national and international awards and honours.

❖ **Spirit of Salam Award, the International Centre for Theoretical Physics (2023)**

Federico Rosei, Institut National Recherche Scientifique (Montréal, Canada), has shown outstanding international leadership, spanning from research, to education to building capacity and mentoring. His efforts in research, education, capacity building and knowledge dissemination have no disciplinary or geographical borders and go well beyond his own interests and pursuits, consistent with that Salam's vision and legacy.

❖ **Canadian Association of Physicists Brockhouse Medal (2022)**

Federico Rosei is an experimental physicist who works towards understanding structure-property relationships in nanostructured materials, at the forefront and interface of materials physics and related disciplines. He elucidated the determining factors of structure, composition and size on the physical properties of several classes of nanomaterials including semiconductor nanostructures, multiferroic oxides, two-dimensional molecular assemblies and biocompatible interfaces. In particular, he developed novel strategies to control the growth of low-dimensional organic and inorganic materials from the basic and applied science's perspectives. His original work in designing and synthesizing on-surface conjugated and carbon-based conducting polymers using the Ullmann coupling reaction has had a significant impact in the field of surface polymerization and molecular self-assembly. In parallel, his group holds the world record of power conversion efficiency (8.1%) in ferroelectric photovoltaics, based on the novel concept they developed for tuning the bandgap of multiferroic oxide thin films. His influence is international, as testified by peer recognition through numerous prestigious awards, honours and distinctions including Fellow of: the American Physical Society, the Royal Society of Canada, the European Academy of Sciences, the Academia Europaea, AAAS, Optica, SPIE, ASM International, Khwarizmi International Award (Iran); Selby Fellowship (Australian Academy of Sciences); Herzberg Medal (Canadian Association of Physicists 2013); the Rutherford Medal (Royal Society of Canada); NSERC Steacie Fellowship; Bessel

Award (Humboldt Foundation). In addition to his outstanding research, he is renowned for mentoring young scientists through his widely-attended “Survival Skills for Scientists” workshops, manifested in his best-selling book of the same title. He also established the UNESCO Chair MATECSS that marks an expansive stage of his devotion to sharing knowledge and capacity building in the South. He is a champion of equity, diversity and inclusion through his exceptional mentoring efforts of women and young scholars from all over the world.

❖ **Julian C. Smith Medal, Engineering Institute of Canada (2022)**

For exceptional achievements in the development of Canada

❖ **Fellow of the American Ceramic Society (2021)**

In Recognition of Notable Contributions to the Ceramic Arts and Sciences.

❖ **John Wheatley Award, American Physical Society (2019)**

For sustained leadership and service to the international physics community, in particular for developing global collaborations through projects and networks in China, Mexico and several African countries, and for exceptional mentoring efforts.

❖ **Distinguished Fellow of International Engineering and Technology Institute (2018)**

By authority of the Members of IETI, Federico Rosei, having achieved distinction for outstanding, rigorous, insightful and innovative contributions to engineering and technology, and for unselfish dedication in promoting the aims of the Institute, has this day (October 19th, 2018) been admitted as a Distinguished Fellow of IETI

❖ **Fellow of Optica (Optical Society of America, 2018)**

For leadership in photonic materials and optoelectronic devices, in particular for next generation solar technologies

❖ **ACerS Global Ambassador (2018)**

For his sustained leadership and service to the society in organizing numerous conferences and his outstanding efforts in developing global collaborations and outreach on behalf of the ceramics community

❖ **Lee Hsun Lecture Award, Chinese Academy of Sciences (2017)**

For his outstanding contribution in the field of materials science and engineering

❖ **Academician, World Academy of Ceramics (2017)**

For leadership in ceramic materials synthesis and characterization, in particular multifunctional materials and their use in photovoltaics, and for sustained efforts in mentoring and outreach

❖ **John C. Polanyi Award, Canadian Society for Chemistry (2016)**

For innovation in physical chemistry and seminal work in surface reactions

❖ **Fellow of ASM International (2015)**

For sustained contributions to the synthesis and characterization of multifunctional materials through outstanding research in terms of output and impact and for exceptional mentoring activities.

❖ **Fellow of the Canadian Academy of Engineering (2015)**

Federico Rosei has made a number of seminal contributions in materials engineering, including quantifying intermixing in Group IV semiconductors, nanostructuring surfaces to improve biocompatibility, controlled patterning of functional materials and their integration in devices. His work has been recognized through multiple awards and distinctions in Canada and internationally, including Fellow of the Royal Society of Canada, of the European Academy of Sciences, of the Engineering Institute of Canada, of AAAS, Steacie Fellowship (NSERC) and Bessel Award (Humboldt Foundation) among others. He has also made distinct contributions to mentoring young engineers and scientists, by fostering diversity and developing an intensive training course as a career guide for young professionals.

❖ **Fellow of SPIE (2015)**

For his leadership in nanomaterials and their applications in photonics.

❖ **Khwarizmi International Award (2015)**

For his Excellence and Dedication in Research.

❖ **Jose Vasconcelos World Award for Education, World Cultural Council (2014)**

The prize was awarded for his career both within the Chemical Sciences and as an advocate of a global approach to societal development through scientific knowledge and innovation, inspiring and educating people. The prize also recognized his vision and talent, through which he built a global network of young researchers, many of whom have obtained important positions both in science and in society.

❖ **Fellow of the American Physical Society (2014)**

For his pioneering and innovative work on the physical properties of organic/inorganic surfaces and interfaces and of molecular self-assembly in two dimensions.

❖ **Fellow of the Royal Society of Canada (2014)**

Federico Rosei has made seminal contributions to the development and application of nanomaterials: semiconductor nanostructures, novel functional materials and their integration in devices, nanostructuring surfaces for biocompatibility and surface-confined molecular architectures. He is committed to fostering diversity in science and engineering. He has drawn trainees from 24 countries, and developed an intensive training course, delivered to hundreds of trainees since 2003, as a career guide for young scientists.

❖ **Award for Excellence in Materials Chemistry, Canadian Society for Chemistry (2014)**

For innovation in materials chemistry and pioneering molecular self-assembly and surface polymerization approaches.

❖ **Senior Member, SPIE (2013)**

For achievements in technical accomplishments, technical leadership and professional contributions.

❖ **Canadian Association of Physicists Herzberg Medal (2013)**

Federico Rosei is a materials physicist who has made outstanding contributions to the field of experimental condensed matter physics, including several breakthrough demonstrations of new materials and techniques. His research focuses on the control of size, shape, composition and stability of nanomaterials. Rosei's work has led to new insights in structure/property relationships in several classes of materials, ranging from semiconductor nanostructures to two-dimensional supramolecular assemblies to biocompatible materials. His group developed novel strategies to control the growth of low-dimensional organic and inorganic materials, and has significantly elucidated intermixing, nanostructure formation and crystallization phenomena in Group IV semiconductors. His work has had a significant impact in the field of molecular self-assembly, identifying new directions of discovery, including the first demonstration of extended on-surface covalent coupling using the Ullmann reaction. Rosei's 150 articles have been cited over 3700 times. He has been invited to speak at over 150 international conferences and has given over 145 seminars in 39 countries on all inhabited continents, demonstrating the outstanding impact of his work. He is also renowned for his efforts in mentoring young scientists, which extend well beyond his own group through widely-attended "Survival Skills for Scientists" workshops, supported by his book of the same title. Rosei's influence spans across many disciplines, as testified by the numerous prestigious awards and distinctions he already received. He is Fellow of the American Association for the Advancement of Science, the Institute of Physics, the Australian Institute of Physics, the Royal Society of Chemistry, the Institution of Engineering and Technology, the Engineering Institute of Canada, the Institute of Materials, Metallurgy and Mining, Senior Member of IEEE and Member of the Global Young Academy. His awards include a Canada Research Chair, the Bessel Award (Alexander von Humboldt Foundation) and the Rutherford Memorial Medal in Chemistry (Royal Society of Canada).

❖ **Fellow, Engineering Institute of Canada (2013)**

For excellence in engineering and services to the profession and society:

Federico Rosei has applied his expertise in nano engineering and materials engineering to a number of different areas. He has made notable contributions in the understanding and metrology of intermixing in Group IV semiconductors, nanostructuring of surfaces for improved biocompatibility, controlled growth of one and two-dimensional polymers, patterning and controlled positioning of functional materials, and the development of novel oxide photovoltaic materials. Prof. Rosei's commitment to materials research is matched by his commitment to mentoring and training the next generation of engineers and scientists. In addition, he has developed an intensive training course to guide trainees through the process of planning and advancing in their careers, and has delivered it to over 450 students and postdocs during its presentation as a graduate course and during intensive two-day sessions.

❖ **Fellow, American Association for the Advancement of Science (2013)**

For outstanding contributions to the understanding of the physical and chemical properties of surfaces and interfaces.

❖ **Rutherford Memorial Medal in Chemistry, Royal Society of Canada (2011)**

The nominee's work and scientific achievements have led to remarkable new insights on the properties of organic/inorganic surfaces and interfaces. In particular, he has made outstanding contributions to the understanding of molecule-surface interactions,

surface reconstructions induced by molecular adsorbates, formation of supramolecular structures governed by non-covalent interactions, guest/host molecular architectures and surface confined polymerization reactions.

❖ **Friedrich Wilhelm Bessel Award, Alexander von Humboldt Foundation (2010)**

In recognition of the caliber and scope of his research in the field of nanomaterials.

THESES

- **Ph.D. Thesis:** *Growth and Characterization of Ge/Si(111) Nanostructures*, University of Rome 'La Sapienza', Rome, Italy.
Advisor: Prof. A. Balzarotti
- **Laurea Thesis:** *(e,2e) Coincidence Spectroscopy from Solid Surfaces*, University of Rome 'La Sapienza', Rome, Italy.
Advisor: Prof. G. Stefani

EDITORIAL AND ADVISORY BOARD RESPONSIBILITIES

- Inaugural Editor in Chief, *RSC Applied Interfaces* (February 2023 – Present)
- Associate Editor, *Journal of Materials Chemistry C*, RSC (July 2014 – Present)
- Associate Editor, *Materials Advances*, RSC (July 2020 – Present)
- Editor, *Applied Surface Science* Elsevier (Jan. 2012 – June 2014)
- Managing Editor, *Int. J. Nanoscience* (2008–2009)
- Advisory Board Member, *Applied Surface Science*, *Ceramics International*, *Electronics*, *Int. J. Nanotech.*, *Res. Lett. Nanotech.*, *Nano Energy Advances*, *Nanomaterials*, *J. Exp. Nanoscience*, *J. of Nanotechnology*, *Open Appl. Phys. J.*, *J. Cryst. Phys. & Chem.*, *Nanomaterials & Nanotechnology*, *Rev. Adv. Sci. & Eng.*, *Nanomaterials & Nanosciences*, *Nanoenergy Advances*, *Frontiers of Chemical Science and Engineering (FCSE)*

RESEARCH INTERESTS

Nanostructured Materials, Surface Science, Organic Electronics, Nanoelectronics, Quantum Dots, Supramolecular Assemblies, Biomaterials, Scanning Probe Microscopy, Multifunctional Materials, Functional Nanomaterials, Third Generation Solar Technologies, Photovoltaic Materials and Devices, Surface-Confined Reactions, Surface-Confined Polymerization, Materials for Energy Storage

PUBLISHED WORKS

BOOKS (4)

1. **F. Rosei**, “*La Strada Non Percorsa*”, *Work of Fiction (Novel) in Italian*, EAN: 9788845604003, ISBN: 8845604004, 288 pages, first published in 2000.
2. **F. Rosei**, T.W. Johnston, “*Survival Skills for Scientists*”, Imperial College Press (July 2006); Japanese version (2008).
Publisher’s description: This book provides young scientists, from physicists through to sociologists, the counsel and tools that are needed to be their own agents and planners, to survive and succeed, hopefully even thrive in science. Making a good career based on peer-reviewed science means navigating many stressful phases from graduate school through to permanent employment. Performing artists pay agents to help them in this effort. In effect, this book is designed to allow you to act as your own agent. You are counseled to analyze yourself deeply to know clearly what you want and whether you can live with it, how to make career choices and what you should then keep in mind, when to fight and when to yield. The unwritten rules of the “science game” are explained, including how to become published and known, the pitfalls of peer review and how to evade them, papers and posters, job interviews and getting your science funded. Interspersed with this are illustrative anecdotes and a fair amount of humor. While the book is aimed at young scientists, from graduate students and beyond, more senior scientists will benefit from seeing the world from the point of view of rising scientists and become aware of the preoccupations of people in a system which has changed much from when the present senior scientists were rather younger.
Selected reviews: *Materials Today* **10**(7–8), 53 (2007): “...the book offers a wealth of sound advice that will find applicability to the current choices, strategies, battles, and initiatives that face a scientist at any stage of his or her professional career... an exhaustive resource.”, *Science* **314**, 1245 (2006): “...thought provoking and packed with information...”. Additional reviews appeared in *Choice*, the Newsletter of the Society of General Physiology and *Journal of Materials Education*.
3. **A. Korkin, F. Rosei (Eds.)**, *Nanoelectronics and Photonics: From Atoms to Materials, Devices, and Architectures*, Nanostructure Science and Technology (series), Springer Pg Technology & Engineering / Nanotechnology / Lasers & Photonics / Electronics – Microelectronics, first published Oct 1st, 2008 (Hard cover), 2nd Edition May 1st 2009 (paperback), 3rd Edition Feb 1st 2010 (paperback) ISBN – 978-1-44192-6xx-x

Publisher's description: Nanoelectronics and Photonics provides a fundamental description of the core elements and problems of advanced and future information technology. The authoritative book collects a series of tutorial chapters from leaders in the field covering fundamental topics from materials to devices and system architecture, and bridges the fundamental laws of physics and chemistry of materials at the atomic scale with device and circuit design and performance requirements.

4. P. Grutter, W. Hofer, **F. Rosei** (Eds.), *Properties of Single Organic Molecules On Crystal Surfaces*, Imperial College Press – World Scientific (April 2006) – ISBN 978-1-86094-628-8

Publisher's description: Within nanoscience, an emerging discipline is the study of the physics and chemistry of *single molecules*. Molecules may be considered as the ultimate building blocks, and are therefore interesting for the development of molecular devices and for surface functionalization. Thus, it is interesting to study their properties when adsorbed on a suitable substrate such as a solid or crystal surface, and also for their potential applications in nano- or molecular-electronics and nanosensing. Investigations have been made possible by the advent of high resolution surface imaging and characterization techniques, commonly referred to as Scanning Probe Microscopes. This book focuses on the fascinating properties of the single molecules, and the difference between single molecules and ensembles of molecules is emphasized. As the first book intended for graduate courses in the field, after each chapter, students should be able to answer the question: “*What physical or chemical properties do you learn from a single molecule in this particular context?*” Contributed by experts across the disciplines, the book provides useful reference material for specialized practitioners in surface science, nanoscience and nanoelectronics.

BOOK CHAPTERS (10)

10. D. Benetti, **F. Rosei**, “The role of carbon allotrope-based charge transport layers in enhancing the performance of perovskite solar cells,” in *Halide Perovskites for Photonics*, edited by A. Vinattieri and G. Giorgi (AIP Publishing, Melville, New York, 2021), pp. 4-1–4-38.
9. J.M. MacLeod, **F. Rosei**, “Supporting the Development and Deployment of Sustainable Energy Technologies Through Targeted Scientific Training”, Ch. 20, pp. 231–233 in *Sustainable Access to Energy in the Global South*, edited by Silvia Hostettler, Ashok Gadgil and Eileen Hazboun, Springer (2015).
8. K.R. Moonosawmy, J.M. MacLeod, **F. Rosei**, “STM Characterization of Supramolecular Materials with Potential for Organic Electronics and Nanotechnology” in *Functional Supramolecular Architectures*, edited by Paolo Samori and Franco Cacialli. Vol. 1, pp. 457-490. Wiley-VCH Verlag GmbH & Co. KGaA, Weinheim (2011).
7. J.M. MacLeod, **F. Rosei**, “Directed Assembly of Nanostructures” in *Comprehensive Nanoscience and Technology*, edited by D. Andrews, G. Scholes and G. Wiedderrecht, Vol. 3, pp. 13-68. Elsevier, Amsterdam (2010).
6. C. Santato, F. Cicaira, **F. Rosei**, “Self-assembly of thiophene-based materials: a scanning tunneling microscopy perspective” in *Thiophene Based Materials for Electronics and Photonics*, Ed.s I.F. Perepichka and D.F. Perepichka, Wiley and Sons, 517–547 (2009).
5. C.V. Cojocaru, F. Cicaira, **F. Rosei**, “Alternative Nanofabrication Approaches for Non-CMOS Applications” in *Nanofabrication: Fundamentals and Applications*, pp. 499-542, Ed. A.A. Tseng, World Scientific (2008).
4. J.A. Miwa, **F. Rosei**, “Molecular Self-Assembly: Fundamental Concepts and Applications” in *The MEMS Handbook 2nd Edition*, Ed. M. Gad El Hak, Taylor and Francis (2005).
3. **F. Rosei**, R. Rosei, “Scanning Tunnelling Microscopy Studies of Elementary Surface Processes”, in *Science, Technology and Education of Microscopy, An Overview*, Vol. I, pp. 24–33 (2003).
2. **F. Rosei**, “Scanning Probe Microscopy studies of Ge/Si surfaces”, in *Science, Technology and Education of Microscopy, An Overview*, Vol. I, pp. 84–92 (2003).
1. M. Schunack, **F. Rosei**, F. Besenbacher, “The Scanning Tunneling Microscope as a Unique Tool to Investigate the Interaction Between Complex Molecules and Metal Surfaces”, in *Science, Technology and Education of Microscopy, An Overview*, Vol. I, pp. 43–51 (2003).

PATENTS (4)

1) Luminescent solar concentrator using a metal-free emitter (INRS/UESTC)

PCT/CA2018/050176 Patent pending (filed 2018-02-16, published 2018-08-23, International Publication Number WO2018/148837 A1)

Inventors: Ma, Dongling; INRS; **Rosei, Federico**; INRS; Wang, Zhiming M.; University of Electronic Science and Technology of China (UESTC); Tong, Xin (PhD student); Jin, Lei (PhD); Zhao, Haiguang (postdoc); Zhou, Yufeng (PhD); Benetti, Daniele (PhD student);

2) Combined PN Junction and Bulk Photovoltaic Device (Granted)

Patent issued on 2014-12-09 US 8,907,205 B2 (filed in 2011-06-16, published in 2012-01-26)

Canadian patent application: CA 2,743,346 A1 (filed in 2011-06-16, published in 2011-12-18)

Inventors: Ruediger, Andreas; INRS; **Rosei Federico**; INRS; Nechache, Riad (postdoc);

3) Nanothermometer

PCT patent application: WO2016015146 A1 (filed in 2015-07-27, published in 2016-02-04)

US patent application: US2017/0248477 A1 (filed in 2017-01-26, published in 2017-08-31)

Canadian patent application: CA2955094 A1 (filed in 2017-01-13, identical to the PCT)

Inventors: **Federico Rosei**; INRS; Haiguang Zhao (postdoc); Alberto Vomiero (Researcher);

4) Thin film coating and method of fabrication thereof (Plasmionique) (Granted)

US patent application: US 15/840,407. (filed in 2017-12-13, published in 2019-06-13)

Inventors: MacLeod, Jennifer; INRS; Nechache, Riad; INRS; Pépin, Henri; INRS; **Rosei, Federico**; INRS; Nouar, Rafik; Plasmionique inc.; Sarkissian, Andranik; Plasmionique inc.; Benetti, Daniele (PhD student).

ESSAYS AND COMMENTARIES (4)

4. M. Chaker, **F. Rosei***, 'Materials Research in Africa: Rising from the Falls', *Nature Materials* **11**, 187 (2012).
3. **F. Rosei***, L. Vayssieres*, P. Mensah*, 'Materials Science in the developing world: Challenges and perspectives for Africa' *Advanced Materials* **20**, 4627–4640 (2008).
2. **F. Rosei**, 'Reform Science? First, Reset the Economy' (Correspondence), *Nature Materials* **5**, 757 (2006).
1. **F. Rosei**, 'Favouritism in Physics?' (Correspondence), *Nature* **416**, 123 (2002).

EDITORIALS (4)

4. K.P. Loh, **F. Rosei**, Editorial, *Journal of Experimental Nanoscience* **3**, 95 (2008).
3. **F. Rosei**, Editorial, *Int. J. Nanotech.*, Special Issue: 'Nano' in Canada, vol. **5**, 897 (2008).
2. **F. Rosei**, Editorial, "Nanoelectronics and photonics: from atoms to materials, devices and system architecture", F. Rosei and A. Korkin Ed.s, *Springer* ISBN: 978-0-387-76498-6 (2008).
1. P. Grütter, W.A. Hofer, **F. Rosei**, Editorial, "Properties of Single Molecules at Crystal Surfaces", Imperial College Press – World Scientific (April 2006).

JOURNAL ARTICLES (460)¹

Citation metrics: H-index – 78, i-10 index – 349, Total Citations – 22,830 (Google Scholar June 20th, 2023)

460. J. Liu, S. Yue, H. Zhang, C. Wang, D. Barba, F. Vidal, S. Sun, Z. Wang, J. Bao, H. Zhao, G.S. Selopal, **F. Rosei**, Federico, Efficient Photoelectrochemical Hydrogen Generation Using Eco-friendly Giant InP/ZnSe Core/shell Quantum Dots, *ACS Appl. Mater. Int.*, in press (2023).
459. H. Peng, F. Hu, L. Yao, S. Liu, J. Jiang, P. Yi, L. Sun, Y. Zou, H. Zhang, G. Zhu, P. Cai, F. Xu, G. Wang, **F. Rosei**, X. Lu, Efficient electrochemical energy storage designed by second alcoholic fermentation of rice, *J. Energy Storage* **70**, 108060 (2023).
458. Y. Bu, L. Sun, F. Xu, S. Wei, **F. Rosei**, Y. Luo, Z. Liu, J. Liu, C. Zhang, Y. Yao, Highly active bimetallic MOF derivatives for improving the dehydrogenation performance of LiAlH₄, *J. Alloys and Comp.* **961**, 170897 (2023).
457. A. Baqaei; A.A. Sabbagh Alvani, H. Sameie, **F. Rosei**, Role of pH in the Hydrothermal Synthesis of TiO₂ Nanorod Photocatalysts, *Chemistry Select*, in press (2023).
456. C. Wang, Q. Cheng, M. Wang, S. Liu, Y. He, C. Deng, Y. Sun, T. Qian, **F. Rosei**, C. Yan, Asymmetric electrode design with built-in nitrogen transfer channel achieving maximized three-phase reaction region for electrochemical ammonia synthesis, *Electron*, in press (2023).
455. X. Liu, J. Liu, L. Jin[†], D. Benetti[†], **F. Rosei***, Color-tunable multilayered laminated luminescent solar concentrators based on colloidal quantum dots, *Nano Energy* **111**, 108438 (2023).
454. J. Ye, D. Zhang, S. Salli, Y. Li, F. Han, Y. Mai, **F. Rosei**, Y. Li, Y. Yang, F. Besenbacher, H. Niemantsverdriet, E. Richards, R. Su*, Heterogeneous Photocatalytic Recycling of FeX₂/FeX₃ for Efficient Halogenation of C-H Bonds Using NaX, *Angew. Chem.* **62**, e202302994 (2023).
453. Y. Li, D. Zhang, J. Ye, Y. Mai, C. Wang, Y. Yang, Y. Li, F. Besenbacher, H. Niemantsverdriet, **F. Rosei**, F. Pan, R. Su*, A Modular Tubular Flow System with Replaceable Photocatalyst Membranes for Scalable Coupling and Hydrogenation, *Angew. Chem.* **62**, e202302979 (2023).
452. L. Jin[†], J. Liu, X. Liu, D. Benetti[†], G.S. Selopal, X. Tong, E. Hamzehpoor, F. Li, D.F. Perepichka, Z.M. Wang, **F. Rosei***, Rational Control of Near-Infrared Colloidal Thick-Shell AgInSe₂/AgInS₂ Quantum Dots for Solar Energy Conversion, *Small Meth.*, in press (2023).
451. L. Shi, D. Benetti[†], Q. Wei, **F. Rosei***, MOF-derived In₂O₃/CuO p-n heterojunction photoanode incorporating graphene nanoribbon for solar hydrogen generation, *Small*, in press (2023).
450. N.P. Genesh, D. Cui, D. Dettmann, O. MacLean, T.K. Johal[†], A.V. Lunchev, A.C. Grimsdale, **F. Rosei***, Selective Self-Assembly and Modification of Herringbone Reconstructions at a Solid-Liquid Interface of Au(111), *J. Phys. Chem. Lett.* **14**, 3057–3062 (2023).

¹ Students are underlined, post-docs are marked by a [†]. The corresponding authors are indicated with an *.

449. G. Li, A. Akbar, L.W. Zhang, **F. Rosei**, K.M. Liew, Surface modification strategy for controlling wettability and ionic diffusion behaviors of calcium silicate hydrate, *Appl. Surf. Sci.* **622**, 156993 (2023).
448. **F. Rosei**, HOW TO 'SURVIVE' AFTER GRADUATING IN MATERIALS SCIENCE - VII: Writing Cover Letters for Top Journals, *J. Mater. Ed.*, *in press* (2023).
447. E. Afsharipour*, K.D. Malviya, M. Montazeri, E. Mortazy, R. Soltanzadeh, A. Hassani, **F. Rosei***, M. Chaker, Evanescent-field excited surface plasmon-enhanced U-bent fiber probes coated with Au and ZnO nanoparticles for humidity detection, *Processes* **11**, 642 (2023).
446. G. Li, A. Akbar, L.-W. Zhang, **F. Rosei**, K.M. Liew*, Exploring durability and environmental impact of cementitious composites modified by fluoroalkyl-silane based additive, *Constr. and Build. Mater.* **370**, 130665 (2023).
445. L. Liang, L. Jin, G.S. Selopal, **F. Rosei***, Peace engineering in practice: China's energy diplomacy strategy and its global implications, *Sustainability* **15**, 1442 (2023).
444. S.M. Wu, **F. Rosei**, X.-Y. Yang, "Coupling Rules for Bifunctional Pair Sites", *Matter* **6**, 13–15 (2023).
443. D. Zhou, Z.-Q. Wang, X.-D. Liu, H. Chen, X.-Y. Zhu, L.-Y. Song, Y. Yang, J. Bai, M.J Kim, W.M. Lau, **F. Rosei**, Aqueous Zn-ion batteries using amorphous Zn-buserite with high activity and stability, *J. Mater. Chem. A* **11**, 1380–1393 (2023).
442. F. Han, Feiyu, D. Zhang, S. Salli, J. Ye, Y. Li, **F. Rosei**, X.-D. Wen, H. Niemantsverdriet, E. Richards, R. Su*, Copper Cocatalyst Modulated Radical Generation for Selective Heterogeneous Photosynthesis of α -Haloketones, *ACS Cat.* **13**, 248–255 (2023).
441. H. Hugo, R. Ronchi, G. Portugal, J. Rossato, G.S. Selopal, D. Barba, E. Venancio, **F. Rosei**, J. Arantes, S. Ferreira Santos, Efficient $\text{Ti}_3\text{C}_2\text{T}_x$ MXene/ TiO_2 hybrid photoanodes for dye-sensitized solar cells, *ACS Appl. En. Mat.* **5**, 15928–15938 (2022).
440. F. Li, D. Benetti, M. Zhang, L. Shi, J. Feng, Q. Wei, **F. Rosei***, Tunable 0D/2D/2D nanocomposite based on green Zn-doped CuInS_2 Quantum Dots and MoS_2/rGO as photoelectrodes for solar hydrogen production, *ACS Appl. Mat. Int.* **14**, 54790–54802 (2022).
439. Zhuo Li, Guoqiang Shi, Junfeng Zhou, Yanghan Chen, Pengcheng Ding, Wei Yi, Ye Sun, Xin Yang, Qiang Fang, L.N. Kantorovich, **F. Rosei**, M. Yu*, Olefin Cyclization on Cu(111) Driven by Subsurface Carbon and Ultraviolet Irradiation, *Cell Reports Phys. Sci.* **3**, 101172 (2022).
438. Y. Xu, S. Li, M. Chen, J. Zhang, * **F. Rosei***, Carbon-based Nanostructures for Emerging Photocatalytic Applications: CO_2 Reduction, N_2 Fixation and Organic Conversion, *Trends in Chem.* **4**, 984 (2022).
437. X. Pan, Q. Wang, D. Benetti†, Y. Ni, **F. Rosei***, Polyelectrolyte hydrogel: a versatile platform for mechanical-electric conversion and self-powered sensing, *Nano Energy* **103**, 107718 (2022).
436. R. Salimi, A.A. Sabbagh Alvani, H. Sameie, D. Poelman, **F. Rosei**, Designing 1D Plasmonic Ag/CuWO_4 Nanocomposite for Enhancing Visible-Light Photoelectrochemical Performance, *J. Elec. Soc.* **169**, 086503 (2022).
435. M. Golmohammadi, A.A. Sabbagh Alvani*, H. Sameie, B. Mei, R. Salimi, D. Poelman, **F. Rosei**, Photocatalytic nanocomposite membranes for environmental remediation, *Nanotechnology* **33**, 465701 (2022).
434. F. Wang, H. Duan, X. Li, S. Yang, D. Han, L. Yang*, L. Fan, H. Liu, J. Yang, **F. Rosei***, Gradient doped nickel oxide hole selective heterocontact and ultrathin passivation for silicon photovoltaics with efficiencies beyond 20%, *Chem. Eng. J.* **450**, 138060 (2022).
433. D. Benetti†, F. Rosei*, Alternative Uses of Luminescent Solar Concentrators, *Nano En. Adv.* **2**, 222–240 (2022).
432. K. Wang, Y. Tao, Z. Tang, F. Vidal, H. Zhao, **F. Rosei**, X. Sun, Heterostructured core/gradient multi-shell quantum dots for high-performance and durable photoelectrochemical hydrogen generation, *Nano Energy* **100**, 107524 (2022).
431. F. Wang, X. Li, H. Wang, Y. Gou, S. Yang, D. Han, L. Yang, L. Fan, J. Yang, **F. Rosei**, Supramolecular bridging strategy enables high performance and stable organic-inorganic halide perovskite solar cells, *Chem. Eng. J.* **446**, 137431 (2022).
430. C. He, C. Liu, M. Li, M. Li, J. Yin, S. Han, J. Xia, D. Chen, W. Cao, Q. Lu, **F. Rosei**, 3D Hierarchical Cu-MOF Nanosheets-Based Antibacterial Mesh, *Chem. Eng. J.* **446**, 137381 (2022).
429. L. Giovanelli, R. Pawlak, F. Hussein, O. Maclean†, **F. Rosei**, W. Song, C. Pigot, F. Dumur, D. Gigmès, Y. Ksari, F. Bondino, E. Magnano, E. Meyer, S. Clair, On-surface synthesis of unsaturated hydrocarbon chains through C-S activation, *Chem. Eur. J.* **28**, e20220080 (2022).
428. O. Abdelkarim, A. Mirzaei, G.S. Selopal†, A. Yurtsever, G. Bassioni, Z.M. Wang, M. Chaker, **F. Rosei***, Constructing Quantum dots sensitized TiO_2 Nanotube p-n Heterojunction for Photoelectrochemical Hydrogen Generation, *Chem. Eng. J.* **446**, 137312 (2022).
427. Z. Sun, H. Zhang*, Q. Zhang, R. Jing, B. Wu, F. Xu, L. Sun*, Y. Xia, **F. Rosei***, Shape-stabilized phase change composites enabled by lightweight and bio-inspired interconnecting carbon aerogels for efficient energy storage and photo-thermal conversion, *J. Mater. Chem. A* **10**, 13556–13569 (2022).
426. M. Mohammadnezhad, B. Aïssa*, C. Harnagea, A. Bentouaf, E. Haddad, **F. Rosei***, Photovoltaic properties of hybrid c-Si/ ZnO nanorods solar cells, *Mater. Adv.* **3**, 5911–5921 (2022).
425. L. Shi, D. Benetti*†, F. Li, Q. Wei*, **F. Rosei***, Design of MOF-Derived NiO-Carbon Nanohybrids Photocathodes Sensitized with Quantum Dots for Solar Hydrogen Production, *Small* **18**, 2201815 (2022).
424. A.T. Nkeumaleu, D. Benetti*†, I. Haddadou, M. Di Mare, C.M. Ouellet-Plamondon*, **F. Rosei***, Brewery spent grain derived carbon dots for proof of concept metal sensing, *RSC Adv.* **12**, 11621–11627 (2022).
423. A. La Monaca, W. Zhu, Z. Feng, G. Bertoni, D. Campanella, G. Girard, S. Savoie, A. Gheorghe Nita, D. Clement, H. Demers, A.K. Vijh, **F. Rosei**, A. Paoletta, Influence of Rutile and Anatase TiO_2 Precursors on the Synthesis of a $\text{Li}_{1.5}\text{Al}_{0.5}\text{Ti}_{1.5}(\text{PO}_4)_3$ Electrolyte for Solid-State Lithium Batteries, *J. Elec. Soc.* **169**, 040515 (2022).

422. P. Ji, D. Dettmann, Y.-H. Liu, G. Berti, N. Preetha Genesh, D. Cui[†], O. MacLean, D.F. Perepichka, L. Chi, **F. Rosei***, Tandem Desulfurization/C-C Coupling Reaction of Tetrathienylbenzenes on Cu(111): Synthesis of Pentacene and an Exotic Ladder Polymer, *ACS Nano* **16**, 6506–6514 (2022).
421. N. Preetha Genesh, F. De Marchi, F. Ratto, S. Heun, S. Fontana, R. Belkhou, R. Purandare, N. Motta, A. Sgarlata, M. Fanfoni, J. MacLeod, O. MacLean, **F. Rosei***, Dynamical evolution of Ge quantum dots on Si(111): from island formation to high temperature decay, *Aggregate* **3**, e201 (2022).
420. A. La Monaca, G. Girard, S. Savoie, R. Veillette, S. Krachkovskiy, F. Pierini, A.K. Vijh, **F. Rosei**, A. Paoletta*, Influence of Ti^{IV} substitution on the properties of a Li_{1.5}Al_{0.5}Ge_{1.5}(PO₄)₃ nanofiber-based solid electrolyte, *Nanoscale* **14**, 5094–5101 (2022).
419. J.H.H. Rossato, Marcey E. Oliveira, B.V. Lopes, B.B. Gallo, A.B. La Rosa, E. Piva, D. Barba, **F. Rosei**, N.L.V. Carreño, M.T. Escote*, Flexible Electrochemical Biosensor Based on NdNiO₃ Nanotubes for Ascorbic Acid Detection, *ACS Appl. Nanomat.* **5**, 3394–3405 (2022).
418. X. Wang, Y. Zhang, J. Li, G. Liu, M. Gao, S. Ren, B. Liu, L. Zhang, G. Han*, J. Yu*, H. Zhao*, **F. Rosei***, Platinum Cluster/Carbon Quantum Dots Derived Graphene Heterostructured Carbon Nanofibers for Efficient and Durable Solar-Driven Electrochemical Hydrogen Evolution, *Small Meth.* **6**, 2101470 (2022).
417. D. Cui[†], N. Preetha Genesh, O. MacLean, P. Ji, J.M. MacLeod, M. Ebrahimi, A.V. Lunchev, A.C. Grimsdale, D.F. Perepichka*, **F. Rosei***, Probing the thermodynamics of moiré patterns in molecular self-assembly at the liquid-solid interface, *Chem. Mater.* **34**, 2449–2457 (2022).
416. R. Akilimali, G.S. Selopal^{†,*}, M. Mohammadnezhad, I. Ka[†], Z.M. Wang, R. Nechache, G.P. Lopinski, H. Zhao, **F. Rosei***, Structural Effect of Low-dimensional Carbon Nanostructures on Long-term Stability of Dye Sensitized Solar Cells, *Chem. Eng. J.* **435**, 135037 (2022).
415. G.S. Selopal[†], O. Abdelkarim, P. Kumar[†], L. Jin[†], J. Liu, H. Zhao, A. Yurtsever, F. Vidal, Z.M. Wang, **F. Rosei***, Role of Interfacial Engineering of “Giant” Core-Shell Quantum Dots, *ACS Adv. En. Mater.* **5**, 1447–1459 (2022).
414. X. Sheng, T. Li, M. Sun, G. Liu, Q. Zhang, Z. Ling, S. Gao, F. Diao, J. Zhang, **F. Rosei***, Y. Wang*, Flexible electrospun iron compounds/carbon fibers: phase transformation and electrochemical properties, *Electroch. Acta* **407**, 139892 (2022).
413. D. Cui[†], C.-H. Liu, **F. Rosei**, D.F. Perepichka, Bidirectional phase transformation of supramolecular networks using two molecular signals, *ACS Nano* **16**, 1560–1566 (2022).
412. N.Y. Doumon[†], L. Yang, **F. Rosei**, Ternary Organic Solar Cells: A Review of The Role of the Third Element, *Nano Energy* **94**, 106915 (2022).
411. C. Yang, H.A. Atwater, M.A. Baldo, D. Baran, C. Barile, M.C. Barr, M. Bates, M.G. Bawendi, M.R. Bergren, C.J. Brabec, S. Brovelli, V. Bulović, P. Ceroni, M.G. Debye, J.-M. Delgado-Sanchez, W.-J. Dong, P.M. Duxbury, R.C. Evans, S.R. Forrest, D.R. Gamelin, N.C. Giebink, X. Gong, G. Griffini, F. Guo, C.K. Herrera, A.W.Y. Ho-Baillie, R.J. Holmes, S.-K. Hong, T. Kirchartz, H. Li, Y. Li, D. Liu, M.A. Loi, C.K. Luscombe, N.S. Makarov, F. Mateen, R. Mazzaro, H. McDaniel, M.D. McGehee, F. Meinardi, A. Menéndez-Velázquez, J. Min, D.B. Mitzi, J.H. Moon, A. Nattestad, M.K. Nazeeruddin, A.F. Nogueira, U.W. Paetzold, D.L. Patrick, A. Pucci, B.P. Rand, E. Reichmanis, B.S. Richards, J. Roncali, **F. Rosei**, T.W. Schmidt, F. So, C.-C. Tu, W.G.J.H.M. van Sark, R. Verduzco, A. Vomiero, W.W.H. Wong, K. Wu, H.-L. Yip, X. Zhang, H. Zhao, R.R. Lunt*, Consensus Statement: Standardized Reporting of Power-Producing Luminescent Solar Concentrator Performance, *Joule* **6**, 1–15 (2022).
410. F. Wang, X. Li, J. Du, H. Duan, H. Wang, Y. Gou, L. Yang, L. Fan, J. Yang, **F. Rosei**, Coordinating light management and advance metal nitride interlayer enables MAPbI₃ solar cells with >21.8% efficiency, *Nano Energy* **92**, 106765 (2022).
409. T. Yang, S. Wang, D. Benetti[†], K. Wang, Y. Sun, H. Ji, T. Qian, C. Yan, **F. Rosei**, Efficient solar domestic and industrial sewage purification via polymer wastewater collector, *Chem. Eng. J.* **438**, 131199 (2022).
408. S. Wei, J. Liu, Y. Xia, H. Zhang, R. Cheng, L. Sun*, F. Xu, P. Huang, **F. Rosei**, A.A. Pimerzin, H. Pan, H.J. Seifert, Remarkable catalysis of spinel ferrite XFe₂O₄ (X = Ni, Co, Mn, Cu, Zn) nanoparticles on the dehydrogenation properties of LiAlH₄: an experimental and theoretical study, *J. Mat. Sci. Tech.* **111**, 189–203 (2022).
407. R. Cheng, Y. Guan, Y. Luo, C. Zhang, Y. Xia, S. Wei, M. Zhao, Q. Lin, H. Li, **F. Rosei**, L. Sun*, F. Xu*, Guanine-assisted N-doped ordered mesoporous carbons as efficient capacity decaying suppression materials for lithium-sulfur batteries, *J. Mater. Sci. Tech.* **101**, 155–164 (2022).
406. I. Deen, G.S. Selopal[†], Z.M. Wang, **F. Rosei***, Electrophoretic deposition of collagen/chitosan films with copper-doped phosphate glasses for orthopaedic implants, *J. Coll. Int. Sci.* **607**, 869–880 (2022).
405. O. Abdelkarim, G.S. Selopal^{†,*}, K. Suresh, F. Navarro-Pardo, K.K. Ghuman*, A. Yurtsever, G. Bassioni, Z.M. Wang, **F. Rosei***, Role of Surface Engineering of Hybrid Structure for High Performance Quantum Dots Based Photoelectrochemical Hydrogen Generation, *Chem. Eng. J.* **429**, 132425 (2022).
404. K. Wang, J. Liu, Y. Tao, D. Benetti, **F. Rosei***, X. Sun, Temperature-Dependence Photoelectrochemical Hydrogen Generation based on Alloyed Quantum Dots, *J. Phys. Chem. C* **126**, 174–182 (2022).
403. C. Brunet*, O. Savadogo, P. Baptiste, M.A. Bouchard, C. Cholez, **F. Rosei**, C. Gendron, B. Sinclair-Desgagné, N. Merveille, Does solar energy reduce poverty or increase energy security? A comparative analysis of sustainability impacts of on-grid power plants in Burkina Faso, Madagascar, Morocco, Rwanda, Senegal and South Africa, *Energy Res. & Soc. Sci.* **87**, 102212 (2022).

402. Q. Yu, T. Peng, J. Zhang, X. Liu, Y. Pan, D. Ge, L. Zhao, **F. Rosei***, J. Zhang*, Cu_{2-x}S_x Capped AuCu Nanostars for Efficient Plasmonic Photothermal Tumor Treatment in the Second Near-Infrared Window, *Small* **18**, 2103174 (2022).
401. S. Wei, J. Liu, Y. Xia, H. Zhang, R. Cheng, L. Sun*, F. Xu*, Y. Bu, Z. Liu, P. Huang, K. Zhang, **F. Rosei**, A.A. Pimerzin, H.J. Seifert, Enhanced hydrogen storage properties of LiAlH₄ by excellent catalytic activity of XTiO₃@h-BN (X = Co, Ni), *Adv. Func. Mater.* **32**, 2110180 (2022).
400. **F. Rosei**, S. Matlin, IOCD turns 40: The future of the chemistry for sustainable development, *Chem. Int.* **43**, 11–12 (2021).
399. Y. Bu, J. Liu, H. Chu, S. Wei, Q. Yin, L. Kang, X. Luo, L. Sun*, F. Xu*, P. Huang, **F. Rosei**, A.A. Pimerzin, H.J. Seifert, Y. Du, J. Wang, Catalytic Hydrogen Evolution of NaBH₄ Hydrolysis by Cobalt Nanoparticles Supported on Bagasse-Derived Porous Carbon, *Nanomaterials* **11**, 3259 (2021).
398. **A. La Monaca**, G. Girard, S. Savoie, G. Bertonni, S. Krachkovskiy, A. Vijh, F. Pierini, **F. Rosei**, A. Paoletta, Synthesis of Electrospun NASICON Li_{1.5}Al_{0.5}Ge_{1.5}(PO₄)₃ Solid Electrolyte Nanofibers by Control of Germanium Hydrolysis, *J. Elec. Soc.* **168**, 110512 (2021).
397. A. Nawaz, S. Goudarzib, M.A. Asghari, S. Pichiaha*, G.S. Selopal, **F. Rosei**, Z.M. Wang, H. Zarrin*, Review of Hybrid 1D/2D Photocatalysts for Light-Harvesting Applications, *ACS Appl. Nanomat.* **4**, 11323–11352 (2021).
396. H. Peng, D. Duan, S. Liu, J. Liu, L. Sun*, P. Huang, C. Shao, K. Zhang, H. Zhang, X. Xue, F. Xu, Y. Zou, Y. Liu, X. Tian, **F. Rosei**, A graphene-like nanoribbon for efficient bifunctional electrocatalysts, *J. Mater. Chem. A* **9**, 26688–26697 (2021).
395. G. Liu, W. Liang, X. Xue, **F. Rosei***, Y. Wang, Atomic identification of interfaces in individual core@shell quantum dots, *Adv. Sci.* **8**, 2102784 (2021).
394. J.-Y. Xu, X. Tong, L.V. Besteiro, X. Li, C. Hu, R. Liu, A.I. Channa, H. Zhao, P. Yu, J. Wu, X. Niu, **F. Rosei**, A.O. Govorov, Q. Wang, Z.M. Wang, Rational Synthesis of Novel “Giant” CuInTeSe/CdS Core/Shell Quantum Dots for Optoelectronics, *Nanoscale* **13**, 15301–15310 (2021).
393. **X. Liu**, D. Benetti†, **F. Rosei***, Semi-transparent Luminescent Solar Concentrator based on Plasmonic-enhanced carbon dots, *J. Mater. Chem. A* **9**, 23345–23352 (2021).
392. **D. Dettmann**, G. Galeotti, O. MacLean†, M. Tomellini, M. Di Giovannantonio, J. Lipton-Duffin, A. Verdini, L. Floreano, Y. Fagot-Revurat, D.F. Perepichka, **F. Rosei***, G. Contini*, Identification of Topotactic Surface-Confined Ullmann-Polymerization, *Small* **17**, 2103044 (2021).
391. H. Guo, **J. Liu**, B. Luo, X. Huang, J. Yang, H. Chen, **L. Shi**, **X. Liu**, D. Benetti†, Y. Zhou, G.S. Selopal†, **F. Rosei***, Z.M. Wang, X. Niu, Unlocking the effects of Cu doping in heavy-metal-free AgIn₅S₈ quantum dots for highly efficient photoelectrochemical solar energy conversion, *J. Mater. Chem. C* **9**, 9610–9618 (2021).
390. S. Wang, Z. Li, P. Ding, C. Mattioli, W. Huang, Y. Wang, A. Gourdon, Y. Sun, M. Chen, L. Kantorovich, X. Yang, **F. Rosei**, M. Yu*, On-Surface Decarboxylation Coupling Facilitated by Lock-to-Unlock Variation of Molecules upon the Reaction, *Angew. Chem.* **60**, 17435–17439 (2021).
389. **F. Li**, D. Benetti†*, M. Zhang, J. Feng, Q. Wei*, **F. Rosei***, Modulating the 0D/2D Interface of hybrid semiconductors for enhanced Photoelectrochemical performances, *Small Methods* **5**, 2100109 (2021).
388. Y.Z. Chen*, C. Yan, J. Dong, W. Zhou, **F. Rosei***, Y. Feng*, L.N. Wang*, Structure/Property Control in Photocatalytic Organic Semiconductor Nanocrystals, *Adv. Func. Mater.* **31**, 2104099 (2021).
387. B. Luo, **J. Liu**, H. Guo, **X. Liu**, R. Song, K. Shen, Z.M. Wang, D. Jing, G.S. Selopal†, **F. Rosei***, High Efficiency Photoelectrochemical Hydrogen Generation Using Eco-friendly Cu Doped Zn-In-Se Colloidal Quantum Dots, *Nano Energy* **88**, 106220 (2021).
386. **A. La Monaca**, G. Girard, S. Savoie, H. Demers, G. Bertonni, S. Marras, M. Gemmi, D. Benetti†, **F. Rosei**, A. Paoletta*, Effect of the pressure on the properties of NASICON Li_{1.3}Al_{0.3}Ti_{1.7}(PO₄)₃ nanofibers prepared by electrospinning, *J. Mater. Chem. A* **9**, 13688–13696 (2021).
385. I. Ka,†*, I.M. Asuo, R. Nechache, **F. Rosei***, Highly Stable Air Processed Perovskite Solar Cells By Interfacial Layer Engineering, *Chem. Eng. J.* **423**, 130334 (2021).
384. T. Liu, H. Zhao, D. Zhang*, Y. Lou, L. Huang, L. Ma, X. Hao*, L. Dong, **F. Rosei**, W.M. Lau, Ultrafast and High-efficient Self-Healing Epoxy Cross-linked Network Constructed from Active Multiple Hydrogen Bonds for Corrosion Protection, *Corr. Sci.* **187**, 109485 (2021).
383. S. Wei, S. Xue, C. Huang, B. Che, H. Zhang, L. Sun*, F. Xu, X. Fen, C. Yongpeng, R. Cheng, C. Zhang, T. Wang, W. Cen, Z. Wenlong, Z. Yucao, C. QingFeng, L. Hailiang, Z. Bin, Z. Kexiang, F. Shiyong, **F. Rosei**, Multielement synergetic effect of NiFe₂O₄ and h-BN for improving the dehydrogenation properties of LiAlH₄, *Inorg. Chem. Front.* **8**, 3111–3126 (2021).
382. H. Sameie, A.A. Sabbagh Alvani, B.T. Mei, R. Salimi, D. Poelman, **F. Rosei**, Mo-doped ZnV₂O₆/Reduced Graphene Oxide Photoanodes for Solar Hydrogen Production, *Electroch. Acta* **382**, 138333 (2021).
381. L. Zhu, L. Sun, H. Zhang, H. Aslan, Y. Sun, Y.-D. Huang, **F. Rosei**, M. Yu*, A Solution to Break the Salt Barrier for High-Rate Sustainable Solar Desalination, *Energy & Env. Sci.* **14**, 2451–2459 (2021).
380. C. Zhang, H. Pan, L. Sun, F. Xu, Y. Ouyang, **F. Rosei**, Progress and perspectives of 2D materials as anodes for potassium-ion batteries, *Energy Storage Mater.* **38**, 354–378 (2021).

379. Y. Sun, S. Yang, Z. Pang, Y. Quan, R. Song, Y. Chen, W. Qi, Y. Gao, F. Wang, X. Zhang, Y. Sun, J. Yang*, L. Yang*, **F. Rosei***, Preferred Film Orientation to Achieve Stable and Efficient Sn–Pb Binary Perovskite Solar Cells, *ACS Appl. Mater. Int.* **13**, 10822–10836 (2021).
378. P. Ji, O. MacLean*, G. Galeotti, D. Dettmann, G. Berti†, K. Sun, H. Zhang, **F. Rosei***, L. Chi*, Oxygen-Promoted Synthesis of Armchair Graphene Nanoribbons on Cu(111), *Science China Chemistry* **64**, 636–641 (2021).
377. Y.K. Kshetri, B. Chaudhary, T. Kamiyama, T.-H. Kim, **F. Rosei**, S.W. Lee, Determination of ferroelastic phase transition temperature in BiVO₄ by Raman spectroscopy, *Mater. Lett.* **291**, 129519 (2021).
376. L. Jin†, H. Zhao, Z.M. Wang, **F. Rosei***, Quantum dots-based photoelectrochemical hydrogen evolution from water splitting, *Adv. En. Mater.* **11**, 2003233 (2021). [[Inside Back Cover](#)]
375. J. Kaur, A. Malekhouyan, G.S. Selopal†, Z. Wang, **F. Rosei**, H. Zarrin*, Bidirectional Superionic Conduction in Surface Engineered 2D Hexagonal Boron Nitrides, *ACS Appl. Mater. Int.* **13**, 6532–6544 (2021).
374. H.H. Zama, D. Barba, B. Aissa, E. Haddad, **F. Rosei***, Failure analysis of self-healing epoxy resins using microencapsulated 5E2N and carbon nanotubes, *Smart Mater. & Struct.* **30**, 025011 (2021).
373. M. Zhang, F. Li, D. Benetti†, R. Nechache, Q. Wei, X. Qi, **F. Rosei***, Ferroelectric Polarization-enhanced Charge Separation in Quantum Dots Sensitized Semiconductor Hybrid for Photoelectrochemical Hydrogen Production, *Nano Energy* **81**, 105626 (2021).
372. M. Mohammadnezhad, G.S. Selopal*, O. Cavuslar, E.G. Durmusoglu, D. Barba, H.Y. Acar, Z.M. Wang, G.P. Lopinski, B. Stansfield, H. Zhao*, **F. Rosei***, Gold nanoparticle decorated carbon nanotube nanocomposite for dye-sensitized solar cell performance and stability enhancement, *Chem. Eng. J.* **421**, 127756 (2021).
371. B. Aissa, A. Sinopoli, A. Ali, Y. Zakaria, A. Zekri, M. Helal, M. Nedil, **F. Rosei**, S. Mansour, K. Mahmoud, Nanoelectromagnetic of a highly conductive 2D transition metal carbide (MXene)/Graphene Nanoplatelets composite in the EHF M-band Frequency, *Carbon* **173**, 528–539 (2021).
370. I.M. Asuo, S. Bouzidi, I. Ka†, **F. Rosei**, A. Pignolet, R. Nechache*, S.G. Cloutier*, All-ambient processed CuSCN as an inexpensive alternative to Spiro-OMeTAD for perovskite-based devices, *Energy Tech.* **9**, 2000791 (2021).
369. Y.K. Kshetri*, C. Regmi, B. Chaudhary, H.-S. Kim, T.-H. Kim, **F. Rosei**, S.W. Lee, BiVO₄ ceramics for high-sensitivity and high-temperature optical thermometry, *J. Lumin.* **230**, 117739 (2021).
368. F. Li, M. Zhang, L. Shi, L.V. Besteiro†, H. Zhang, J. Liu, Q. Wei, D. Benetti*,†, **F. Rosei***, Environment-friendly Gradient Multi-Shell CuInSe₂/(CuInSe_xS_{1-x})₅/CuInS₂ Quantum Dots for Photo-electrochemical Hydrogen Generation, *Appl. Cat. B* **280**, 119402 (2021).
367. H. Zhang, L.V. Besteiro†, J. Liu, C. Wang, G.S. Selopal,†* D. Barba, Z.M. Wang, H. Zhao,* G.P. Lopinski, S. Sun, **F. Rosei***, Efficient and stable photoelectrochemical hydrogen generation using optimized colloidal heterostructured quantum dots, *Nano Energy* **79**, 105416 (2021).
366. Y.Z. Chen*, D. Jiang, Y. Zhang, S. Yao, **F. Rosei***, X. Zhang*, Z.-H. Huang, L.-N. Wang*, F. Kang, An ‘ice-melting’ kinetic control strategy for highly photocatalytic organic nanocrystals, *J. Mater. Chem. A* **8**, 25275–25282 (2020).
365. O. Abdelkarim, J. Kaur, J. Liu, M. Mohammadnezhad, F. Navarro-Pardo†, H. Zarrin, A. Yurtsever, G. Bassioni, Z.M. Wang, G.S. Selopal†, **F. Rosei***, Two-Dimensional Functionalized Hexagonal Boron Nitride for Quantum Dot Photoelectrochemical Hydrogen Generation, *J. Mater. Chem. A* **8**, 20698–20713 (2020).
364. M. Mohammadnezhad, B. Aissa, C. Harnagea, **F. Rosei***, Hybrid PCDTBT:PCBM:Graphene-Nanoplatelet Photoabsorbers, *J. Elec. Soc.* **167**, 136504 (2020).
363. L. Curecheriu, C. Harnagea, M.T. Buscaglia, I. Pallecchi, B.S. Vasile, V.-A. Surdu, A.-C. Ianculescu, A. Pignolet, **F. Rosei**, L. Mitoseriu, V. Buscaglia, Four-fold multifunctional properties in self-organized layered ferrite, *Ceramics Int.* **46**, 28621–28630 (2020).
362. S. Das†, P. Fourmont, D. Benetti†, S.G. Cloutier, R. Nechache, Z.M. Wang, **F. Rosei**, High Performance BiFeO₃ Ferroelectric Nanostructured Photocathodes, *J. Chem. Phys.* **153**, 084705 (2020).
361. M. Yu*, C. Chen, Q. Liu, C. Mattioli, H. Sang, G. Shi, W. Huang, K. Shen, Z. Li, P. Ding, P. Guan, S. Wang, Y. Sun, J. Hu, A. Gourdon, L. Kantorovich, F. Besenbacher, M. Chen, F. Song, **F. Rosei**, Long-range ordered and atomic-scale control of graphene hybridization by photocycloaddition, *Nature Chem.* **12**, 1035–1041 (2020).
360. E.G. Durmusoglu†, G.S. Selopal†, M. Mohammadnezhad, H. Zhang, P. Dagtepe, D. Barba, S. Sun, H.G. Zhao, H.Y. Acar, Z.M. Wang, **F. Rosei***, Low-Cost, Air-Processed Quantum Dot Solar Cells via Diffusion-Controlled Synthesis, *ACS Appl. Mater. Int.* **12**, 36301–36310 (2020).
359. J. Liu, H. Zhang, F. Navarro-Pardo†, G.S. Selopal†, S. Sun, Z.M. Wang, H. Zhao, **F. Rosei***, Hybrid surface passivation of PbS/CdS quantum dots for efficient photoelectrochemical hydrogen generation, *Appl. Surf. Sci.* **530**, 147252 (2020).
358. G.S. Selopal†, M. Mohammadnezhad, L.V. Besteiro†, O. Cavuslar, J. Liu, H. Zhang, F. Navarro-Pardo†, G. Liu, M. Wang, E.G. Durmusoglu†, H.Y. Acar, S. Sun, H. Zhao, Z.M. Wang, **F. Rosei***, Synergistic Effect of Plasmonic Gold Nanoparticles Decorated Carbon Nanotubes in Quantum Dots/TiO₂ for Optoelectronic Devices, *Adv. Sci.* **7**, 2001864 (2020).
357. H. Gajardoni de Lemos*, D. Barba, G.S. Selopal†, C. Wang, Z.M. Wang, A. Duong, **F. Rosei**, S. Ferreira Santos, E. Carlos Venancio*, Water-dispersible polyaniline/graphene oxide counter electrodes for dye-sensitized solar cells: influence of synthesis route on the device performance, *Solar Energy* **207**, 1202–1213 (2020).
356. P. Ji, G. Galeotti, F. De Marchi, D. Cui, K. Sun, H. Zhang, G. Contini, M. Ebrahimi, O. MacLean,* **F. Rosei***, L. Chi*, Oxygen-Induced 1D to 2D Transformation of On-Surface Organometallic Structures, *Small* **16**, 2002393 (2020).

355. I. Ka[†], L. Gerlein, I.M. Asuo, S. Bouzidi, D. Gedamu, A. Pignolet, **F. Rosei**, R. Nechache, S.G. Cloutier, Solution-Processed P-type Copper Thiocyanate (CuSCN) Enhanced Sensitivity of PbS-Quantum-Dots Based Photodiode, *ACS Phot.* **7**, 1628–1635 (2020).
354. K. Shi, J. Li, Y. Xiao, L. Guo, X. Chu, Y. Zhai, B. Zhang, L. Beilong, D. Lu, **F. Rosei***, High-response, ultrafast-speed and self-powered photodetection achieved in InP@ZnS-MoS₂ phototransistors with interdigitated Pt electrodes, *ACS Appl. Mater. Int.* **12**, 31382–31391 (2020).
353. M. Wang, Y. Zhang, M. Ng, A. Skripka, T. Cheng, X. Li, K.K. Bhakoo, A.Y. Chang, **F. Rosei**, F. Vetrone*, One-Pot Synthesis of Theranostic Nanocapsules with Lanthanide Doped Nanoparticles, *Chem. Sci.* **11**, 6653–6661 (2020). [[Front Cover](#)]
352. A. Karar*, A. Henni*, F. Namoune, **F. Rosei**, Inhibition of nucleation and crystal growth of calcium carbonate in hard waters using *Paronychia arabica* in an arid desert region, *Water and Environment Journal* **34**, 979–987 (2020).
351. D. Benetti[†], L. Liang, **F. Rosei***, Nature and Chinese Artwork inspire high performance materials for light harvesting, *Matter* **3**, 24–26 (2020).
350. J. Li, X. Hong, Y. Wang, Y. Luo, B. Li, P. Huang, Y. Zou, H. Chu, S. Zheng, L. Sun*, F. Xu, Y. Du, J. Wang, **F. Rosei**, H.J. Seifert, S. Ulrich, X. Wu, NaBH₄ hydrolysis using CoNiP nanosheets arrayed on graphene foam, *RSC Adv.* **10**, 26834–26842 (2020).
349. K. Basu, G.S. Selopal^{†,*}, M. Mohammadnezhad, R. Akilimali, Z.M. Wang, H. Zhao*, F. Vetrone, **F. Rosei***, Hybrid Graphene/Metal Oxide Anodes for Efficient and Stable Dye Sensitized Solar Cell, *Electroch. Acta* **349**, 136409 (2020).
348. G. Galeotti, F. De Marchi, E. Hamzepoor, O. MacLean, R.R. Malakalapalli, Y. Chen, L.V. Besteiro[†], D. Dettmann, L. Ferrari, F. Frezza, P. Sheverdyaeva, R. Liu, A. Kundu, P. Moras, M. Ebrahimi, M. Gallagher, **F. Rosei***, D.F. Perepichka*, G. Contini*, Synthesis of mesoscale ordered 2D π -conjugated polymers with semiconducting properties, *Nature Mater.* **19**, 874–880 (2020). [[Front Cover](#)]
347. H.G. Zhao*, A. Vomiero*, **F. Rosei***, Tailoring the Heterostructure of Colloidal Quantum Dots for Ratiometric Optical Nanothermometry, *Small* **16**, 2000804 (2020).
346. E. Fanizza*, H. Zhao, S. De Zio, N. Depalo*, **F. Rosei**, A. Vomiero, M.L. Curri, M. Striccoli, Silica encapsulated dual emitting giant quantum dots for optical ratiometric temperature nanosensors, *Appl. Sci.* **10**, 2767 (2020).
345. R. Wang, X. Tong*, A.I. Channa, Q. Zeng, J. Sun, C. Liu, X. Li, J. Xu, F. Lin, G.S. Selopal[†], **F. Rosei**, Y. Zhang, J. Wu, H. Zhao, A. Vomiero, X. Sun*, Z.M. Wang*, Environment-friendly Mn-alloyed core/shell quantum dots for high-efficiency photoelectrochemical cells, *J. Mater. Chem. A* **8**, 10736–10741 (2020).
344. Y. Luo, Q. Wang, J. Li, F. Xu, L. Sun*, Y. Bu, Y. Zou, H.-B. Kraatz, **F. Rosei**, Tunable Hierarchical Surfaces of Copper Oxide Derived from Metal-Organic Frameworks for Non-Enzymatic Glucose Sensing, *Inorg. Chem. Front.* **7**, 1512–1525 (2020).
343. M. Mohammadnezhad, M. Liu, G.S. Selopal^{†,*}, F. Navarro Pardo[†], Z.M. Wang, B. Stansfield, H. Zhao, C.-Y. Lai, D.R. Radu*, **F. Rosei***, Synthesis of Highly Efficient Cu₂ZnSnS₄Se_{4-x} (CZTSSe) Nanosheet Electrocatalyst for Dye-Sensitized Solar Cells, *Electroch. Acta* **340**, 135954 (2020).
342. D. Cui[†], D.F. Perepichka, J.M. MacLeod*, **F. Rosei***, Surface-confined single-layer covalent organic frameworks: design, synthesis and application, *Chem. Soc. Rev.* **49**, 2020–2038 (2020).
341. M. Mohammadnezhad, G.S. Selopal, Z. Wang, B. Stansfield, H. Zhao, **F. Rosei***, Role of Carbon Nanotubes to Enhance the Long-term Stability of Dye-Sensitized Solar Cells, *ACS Phot.* **340**, 135954 (2020).
340. S. Yao, F. He, Z. Cao, Z. Sun, Y. Chen, H. Zhao, X. Yu, X. Wang, Y. Yang, **F. Rosei**, L.N. Wang*, Mesenchymal Stem Cells Laden Hydrogel Microfibers for Promoting Nerve Fiber Regeneration in Long-distance Spinal Cord Transection Injury, *ACS Biomaterials Sci. & Eng.* **6**, 1165–1175 (2020).
339. Y. Zhou, X. Tong, D. Benetti*, Z.M. Wang, D. Ma, H. Zhao*, **F. Rosei***, Electron transfer in semiconductor heterostructure interface through electrophoretic deposition and linker-assisted method, *Cryst. Eng. Comm.* **22**, 1664–1673 (2020).
338. F. Navarro-Pardo[†], J. Liu, O. Abdelkarim, G.S. Selopal[†], A. Yurtsever, A.C. Tavares, H. Zhao*, Z.M. Wang*, **F. Rosei***, 1D/2D Cobalt-based Nanohybrids as Electrocatalysts for Hydrogen Generation, *Adv. Func. Mater.* **30**, 1908467 (2020).
337. L. Fan, P. Wang, S. Yang, L. Yang, F. Wang, X. Liu, M. Wei, H. Liu, Y. Sui, **F. Rosei**, J. Yang, Constructing “hillocks”-like random-textured absorber for efficient planar perovskite solar cells, *Chem. Eng. J.* **387**, 124091 (2020).
336. J. Li, X. Hong, Y. Wang, Y. Zou, P. Huang, B. Li, K. Zhang, Y. Luo, Y. Xia, H. Chu, L. Sun*, F. Xu*, **F. Rosei**, S.P. Verevkin, A.A. Pimerzin, Encapsulated Cobalt Nanoparticles as A Recoverable Catalyst for the Hydrolysis of Sodium Borohydride, *Energy Storage Materials* **27**, 187–197 (2020).
335. G.S. Selopal[†], H. Zhao, Z.M. Wang, **F. Rosei***, Core/Shell Quantum Dot Solar Cells, *Adv. Func. Mater.* **30**, 1908762 (2020). [[Inside Front Cover](#)]
334. H.H. Zamal, D. Barba, B. Aissa, E. Haddad, **F. Rosei***, Recovery of electro-mechanical properties inside self-healing composites through microencapsulation of carbon nanotubes, *Sci. Rep.* **10**, 2973 (2020).
333. X. Liu, B. Luo, J. Liu, D. Jing, D. Benetti, **F. Rosei***, Eco-friendly quantum dots for liquid luminescent solar concentrators, *J. Mater. Chem. A* **8**, 1787–1798 (2020).
332. H.G. Zhao, C. Wang, G. Liu, D. Barba, F. Vidal, G. Han, **F. Rosei***, Efficient and Stable Hydrogen Evolution Based on Earth-Abundant SnSe Nanocrystals, *Appl. Cat. B* **264**, 118526 (2020).
331. N. Komba, G. Zhang, Z. Pu, M. Wu, **F. Rosei***, S. Sun*, MoS₂-supported on free-standing TiO₂-nanotubes for efficient hydrogen evolution reaction, *Int. J. Hydrogen Energy* **45**, 4468–4480 (2020).
330. T. Yang, Y. Sun, T. Qian, J. Liu, X. Liu, **F. Rosei***, C. Yan*, Lithium Dendrite Inhibition via 3D Porous Lithium Metal Anode Accompanied by Inherent SEI Layer, *Energy Storage Materials* **26**, 385–390 (2020).

329. R. Akilimali, G.S. Selopal[†]*, D. Benetti, M. Mohammadnezhad, H. Zhao*, Z.M. Wang, B. Stansfield, **F. Rosei***, Graphene Nanoribbon-TiO₂-quantum Dots Hybrid Photoanode to Boost the Performance of Photoelectrochemical for Hydrogen Generation, *Catalysis Today* **340**, 161–169 (2020).
328. L. Shi, D. Benetti*, F. Li, Q. Wei*, **F. Rosei***, Phase-junction design of MOF-derived TiO₂ photoanodes sensitized with Quantum Dots for efficient hydrogen generation, *Appl. Cat. B* **263**, 118317 (2020).
327. F. Wang, M. Yang, Y. Zhang, L. Yang*, J. Yang*, **F. Rosei**, Iodine-assisted Antisolvent Engineering for Stable Perovskite Solar Cells with Efficiency >21.3 %, *Nano Energy* **67**, 104224 (2020).
326. X. Ge, X. Qu, L. He, Y. Sun, X. Guan, Z. Pang, C. Wang, L. Yang*, F. Wang*, **F. Rosei***, 3D low toxicity Cu-Pb binary perovskite films and their photoluminescent/photovoltaic performance, *J. Mater. Chem. A* **7**, 27225–27235 (2019).
325. O. MacLean, **F. Rosei***, Two dimensional polymers grow up, *Science* **366**, 1308–1309 (2019).
324. D. Cui[†], Y. Fang, O. MacLean, D. F. Perepichka*, **F. Rosei***, S. Clair*, Covalent organic frameworks from a monomer with reduced symmetry: polymorphism and Sierpiński triangles, *Chem. Comm.* **55**, 13586–13589 (2019).
323. D. Benetti, **F. Rosei***, A bridge for charge carriers, *Nature Energy* **4**, 910–911 (2019).
322. A. Henni, N. Harfouche, A. Karar, D. Zerrouki, F.X. Perrin, **F. Rosei**, Synthesis of graphene-ZnO nanocomposites by a one-step electrochemical deposition for efficient photocatalytic degradation of organic pollutant, *Solid State Sciences* **98**, 106039 (2019).
321. T. Yang, T. Qian, Y. Sun, J. Zhong, **F. Rosei**, C. Yan*, Mega High Utilization of Sodium Metal Anode Enabled by Single Zinc Atom Sites, *Nanolett.* **19**, 7827–7835 (2019).
320. C. Wang, D. Barba*, H. Zhao, X. Tong, Z. Wang, **F. Rosei***, Epitaxial growth and defect repair of heterostructured CuInSe₂S₂/CdSeS/CdS quantum dots, *Nanoscale* **11**, 19529–19535 (2019).
319. D. Papadaki, G.H. Mhlongo, D.E. Motaung, S.S. Nkosi, K. Panagiotaki, E.M. Christaki, V. Papadimitriou, **F. Rosei**, S.S. Ray, G. Kiriakidis, Hierarchically porous Cu-, Co- and Mn-doped platelet-like ZnO nanostructures and their photocatalytic performance for indoor air quality control, *ACS Omega* **4**, 16429–16440 (2019).
318. F. De Marchi, G. Galeotti, M. Simenas, M.C. Gallagher, E. Hamzehpoor, O. MacLean, R.M. Rao, Y. Chen, D. Dettmann, G. Contini, E.E. Tornau, M. Ebrahimi, D.F. Perepichka, **F. Rosei***, Temperature-induced molecular reorganization on Au(111) driven by oligomeric defects, *Nanoscale* **11**, 19468–19476 (2019).
317. J. Liu, H. Zhang, G.S. Selopal[†], S. Sun, H. Zhao, **F. Rosei***, Visible and Near-Infrared, Multi-Parametric, Ultrasensitive Nanothermometer Based on Dual-Emission Colloidal Quantum Dots, *ACS Phot.* **6**, 2479–2486 (2019).
316. D. Cui[†], J.M. MacLeod, **F. Rosei***, Planar Anchoring of C₇₀ Liquid Crystals Using a Covalent Organic Framework Template, *Small* **15**, 1903294 (2019). [[Inside Back Cover](#)]
315. C. Wang, D. Barba*, G.S. Selopal[†], H. Zhao, J. Liu, H. Zhang, S. Sun, **F. Rosei***, Enhanced Photocurrent Generation in Proton Irradiated ‘Giant’ CdSe/CdS Core/Shell Quantum Dots, *Adv. Func. Mater.* **29**, 1904501 (2019).
314. H. Zhang, J. Liu, C. Wang, G.S. Selopal[†], D. Barba, Z.M. Wang, S. Sun, H. Zhao, **F. Rosei***, Near-infrared Colloidal Manganese Doped Quantum Dots: Photoluminescence mechanism and Temperature Response, *ACS Phot.* **6**, 2421–2431 (2019).
313. G.S. Selopal[†], R. Chahine, M. Mohammadnezhad, F. Navarro-Pardo[†], D. Benetti, H. Zhao, Z.M. Wang, **F. Rosei***, Highly Efficient and Stable Spray Assisted Nanostructured Cu₂S/Carbon Paper Counter Electrode for Quantum Dot Sensitized Solar Cells, *J. Power Sources* **436**, 226849 (2019).
312. I. Deen, **F. Rosei**, Silk-Fibroin derived polypeptides additives to promote hydroxyapatite nucleation in dense collagen hydrogels, *PLOS One* **14**, e0219429 (2019).
311. A. La Monaca, A. Paoletta, A. Guerfi, **F. Rosei**, K. Zaghib*, Electrospun Ceramic Nanofibers as 1D Solid Electrolytes for Lithium Batteries, *Electroch. Comm.* **104**, 106483 (2019).
310. M. Wang, Y. Zhang, M. Ng, M. Lin, X. Li, K.K. Bhakoo, A.Y.C. Chang, **F. Rosei**, F. Vetrone*, Morphology Control of Lanthanide Doped NaGdF₄ Nanocrystals via One-Step Thermolysis, *Chem. Mater.* **31**, 5160–5171 (2019).
309. T. Yang, T. Qian*, X. Shen, M. Wang, S. Liu, J. Zhong, C. Yan*, **F. Rosei***, Single-cluster Au as an Usher for Deeply Cyclable Li Metal Anode, *J. Mater. Chem. A* **7**, 14496–14503 (2019).
308. D. Benetti, E. Jokar, C.-H. Yu, A. Fathi, H. Zhao, A. Vomiero, E. Wei-Guang Diao*, **F. Rosei***, Hole-extraction and photostability enhancement in highly efficient inverted perovskite solar cells through carbon dot-based hybrid material, *Nano Energy* **62**, 781–790 (2019).
307. K. Wang, X. Tong, Y. Zhou, H. Zhang, F. Navarro Pardo[†], G.S. Selopal[†], G. Liu, J. Tang, Y. Wang, S. Sun, D. Ma, Z.M. Wang, F. Vidal, H. Zhao*, X. Sun*, **F. Rosei***, Efficient Solar-driven Hydrogen Generation Using Colloidal Heterostructured Quantum Dots, *J. Mater. Chem. A* **7**, 14079–14088 (2019).
306. W. Huang, S. Li, S. Bouzidi, L. Lei, Z. Zhang, P. Xu, S.G. Cloutier, **F. Rosei***, R. Nechache*, Epitaxial patterned Bi₂FeCrO₆ nanos island arrays with room temperature multiferroic properties, *Nanoscale Adv.* **1**, 2139–2145 (2019). [[Back Cover](#)]
305. N. Komba, G. Zhang, Q. Wei, X. Yang, J. Prakash, R. Chenitz, **F. Rosei***, S. Sun*, Iron (II) phthalocyanine/N-doped graphene: a highly efficient non-precious metal catalyst for oxygen reduction, *Int. J. Hydrogen Energy* **44**, 18103–18114 (2019).
304. G. Galeotti, F. De Marchi, T. Taerum, L.V. Besteiro[†], M. El Garah, J. Lipton-Duffin, M. Ebrahimi*, D.F. Perepichka*, **F. Rosei***, Surface-mediated assembly, polymerization and degradation of thiophene-based monomers, *Chem. Sci.* **10**, 5167–5175 (2019).
303. M.E. Lombardo*, F. Carfi Pavia, I. Vitranò, G. Ghersi, V. Brucato, **F. Rosei**, V. La Carrubba, PLLA scaffolds with controlled architecture as potential microenvironment for in vitro tumor model, *Tissue and Cell* **58**, 33–41 (2019).

302. Z. Wang, X. Liu, Y. Lu, Z. Wang, C. Bortolini, M. Chen, S. Wei, W. Li, J. Zhu, H. Ju, **F. Rosei**, M. Dong*, L. Wang*, Direct On-surface Synthesis of Gold-phthalocyanine via Cyclization of Cyano-groups with Gold Adatoms, *Mater. Chem. Front.* **3**, 1406–1410 (2019).
301. W. Huang, C. Harnagea, X. Tong, D. Benetti, S. Sun, M. Chaker, **F. Rosei***, R. Nechache*, Epitaxial Bi₂FeCrO₆ Multiferroic Thin Film Photoanodes with Ultrathin p-Type NiO layers for Improved Solar Water Oxidation, *ACS Appl. Mater. Int.* **11**, 13185–13193 (2019).
300. G. Galeotti, M. Di Giovannantonio, A. Cupo, S. Xing, J. Lipton-Duffin, M. Ebrahimi, G. Vasseur, B. Kierren, Y. Fagot-Revurat, D. Tristant, V. Meunier, D.F. Perepichka, **F. Rosei***, G. Contini*, Unexpected Organometallic Intermediate in Surface-confined Ullmann Coupling, *Nanoscale* **11**, 7682–7689 (2019).
299. D. Selloum, A. Henni, A. Karar, A. Tabchouche, N. Harfouche, O. Bacha, S. Tingry, **F. Rosei**, Effects of Fe concentration on properties of ZnO nanostructures and their application to photocurrent generation, *Solid State Sciences* **92**, 76–80 (2019).
298. H. Zhao*, H. Zhang, G. Liu, X. Tong, J. Liu, G.S. Selopal†, Y. Wang, Z.M. Wang, S. Sun, **F. Rosei***, Ultra-small Colloidal Heavy-metal-free Nanoplatelets for Efficient Hydrogen Generation, *Appl. Cat. B* **250**, 234–241 (2019).
297. F. De Marchi, G. Galeotti, M. Simenas, P. Ji, L. Chi, E.E. Tornau, A. Pezzella, J.M. MacLeod*, M. Ebrahimi*, **F. Rosei***, Self-assembly of 5,6-dihydroxyindole-2-carboxylic acid: polymorphism of a eumelanin building block on Au(111), *Nanoscale* **11**, 5422–5428 (2019).
296. A. Möllmann, D. Gedamu, P. Vivo, R. Frohnhoven, D. Stadler, T. Fischer, I. Ka, M. Steinhorst, R. Nechache, **F. Rosei**, S.G. Cloutier, T. Kirchartz, S. Mathur*, Highly compact TiO₂ films by spray pyrolysis and application in perovskite solar cells, *Adv. Eng. Mater.* **21**, 1801196 (2019).
295. M. Mohammadnezhad, G.S. Selopal†*, N. Alsayyari, R. Akilimali, F. Navarro-Pardo†, Z.M. Wang, B. Stansfield, H. Zhao*, **F. Rosei***, CuS/graphene nanocomposite as a transparent conducting oxide and Pt-free counter electrode for dye-sensitized solar cells, *J. Elec. Soc.* **166**, H3065–H3073 (2019).
294. F. Navarro-Pardo†, X. Tong, X. Tong, G.S. Selopal†, S.G. Cloutier, S. Sun, A.C. Tavares, H. Zhao*, Z.M. Wang*, **F. Rosei***, Graphene Oxide/Cobalt-based Nanohybrid Electrodes for Robust Hydrogen Generation, *Appl. Cat. B* **245**, 167–176 (2019).
293. M. Celikin†, D. Barba, K. Tagziria, E. Haddad, A. Ruediger, **F. Rosei***, Enhanced stability of higher UV-densified Fiber Bragg Gratings after thermal regeneration, *Optics Comm.* **435**, 345–349 (2019).
292. G.S. Selopal†, M. Mohammadnezhad, F. Navarro-Pardo†, F. Vidal, H. Zhao*, Z.M. Wang*, **F. Rosei***, Colloidal Heterostructured Quantum Dots Sensitized Carbon Nanotubes-TiO₂ Hybrid Photoanode for High Efficiency Hydrogen Generation, *Nanoscale Horiz.* **4**, 404–414 (2019). [[Inside Back Cover](#)]
291. C. Regmi, Y.K. Kshetri, D. Dhakal, J.K. Sohng, **F. Rosei**, S.W. Lee, Insight into phosphate doped BiVO₄ heterostructure for multifunctional photocatalytic performances: A combined experimental and DFT study, *Appl. Surf. Sci.* **466**, 787–800 (2019).
290. G.S. Selopal†, H. Zhao, G. Liu, H. Zhang, X. Tong, K. Wang, J. Tang, X. Sun, S. Sun, F. Vidal, Y. Wang, Z.M. Wang, **F. Rosei***, Interfacial Engineering in Colloidal “Giant” Quantum Dots for High-Performance Photovoltaics, *Nano Energy* **55**, 377–388 (2019).
289. N. Komba, Q. Wei, G. Zhang, **F. Rosei***, S. Sun*, Controlled Synthesis of Graphene via Electrochemical Route and Its Use as Efficient Metal-free Catalyst for Oxygen Reduction, *Appl. Cat. B* **243**, 373–380 (2019).
288. D. Cui, M. Ebrahimi*, J.M. Macleod*, **F. Rosei***, Template-driven dense packing of pentagonal molecules in monolayer films, *Nanolett.* **18**, 7570–7575 (2018).
287. D. Benetti, D. Cui, H. Zhao, **F. Rosei***, A. Vomiero*, Direct measurement of electronic band structure in single quantum dots of metal chalcogenide composites, *Small* **14**, 1801668 (2018). [[Outside Front Cover](#)]
286. H. Zhao*, J. Liu, F. Vidal, A. Vomiero*, **F. Rosei***, Tailoring the Interfacial Structure of Colloidal “Giant” Quantum Dots for Optoelectronic Applications, *Nanoscale* **10**, 17189–17197 (2018).
285. D. Gedamu, I. Asuo, D. Benetti, M. Basti, I. Ka, S. Cloutier, **F. Rosei**, R. Nechache, Solvent-Antisolvent Ambient Processed Large Grain Size Perovskite Thin Films for High-Performance Solar Cells, *Sci. Rep.* **8**, 12885 (2018).
284. F. De Marchi, G. Galeotti, M. Simenas, E.E. Tornau, A. Pezzella, J. MacLeod, M. Ebrahimi, **F. Rosei***, Room-temperature surface-assisted reactivity of a melanin precursor: silver metal-organic coordination versus covalent dimerization on gold, *Nanoscale*, **10**, 16721 (2018).
283. H.H. Zama, D. Barba, B. Aissa, E. Haddad, **F. Rosei***, Cure kinetics of poly (5-ethylidene-2-norbornene) with 2nd generation Hoveyda-Grubbs’ catalyst for self-healing applications, *Polymer* **153**, 1 (2018).
282. D. Cui, J.M. MacLeod*, **F. Rosei***, Probing functional self-assembled molecular architectures with solution/solid scanning tunnelling microscopy, *Chem. Comm.* **54**, 10527–10539 (2018). [[Outside Front Cover](#)]
281. K. Basu, H. Zhang, H. Zhao*, S. Bhattacharya, F. Navarro Pardo†, P. Kumar Datta, L. Jin, S. Sun, F. Vetrone, **F. Rosei***, Highly stable Photoelectrochemical Cells for Hydrogen Production using SnO₂-TiO₂/Quantum Dots Heterostructured Photoanode, *Nanoscale* **10**, 15273–15284 (2018).
280. D. Goronzy, M. Ebrahimi, **F. Rosei**, Arramel, Y. Fang, A. Wee, D. De Feyter, S. Tait, C. Wang, P. Beton, P. Weiss, D.F. Perepichka, Supramolecular Assemblies on Surfaces: Nanopatterning, Functionality, and Reactivity, *ACS Nano* **12**, 7445–7481 (2018).
279. X. Tong, X.-T. Kong, C. Wang, Y. Zhou, F. Navarro-Pardo†, D. Barba, D. Ma, S. Sun, A.O. Govorov, H. Zhao, Z.M. Wang, **F. Rosei***, Optoelectronic Properties in Near-infrared Colloidal Heterostructured Pyramidal “Giant” Core/shell Quantum Dots, *Adv. Sci.* **5**, 1800656 (2018).

278. R. Akilimali, G.S. Selopal,^{†,*} D. Benetti, I. Serrano Esparza, P. Algarabel, J.M. de Teresa, Z.M. Wang, B. Stansfield, H. Zhao,^{*} **F. Rosei**,^{*} Hybrid TiO₂-Graphene Nanoribbon photoanodes to improve the photoconversion efficiency of dye sensitized solar cells, *J. Power Sources* **396**, 566–573 (2018).
277. H. Zhao^{*}, D. Benetti, X. Tong, H. Zhang, Y. Zhou, G. Liu, D. Ma, S. Sun, Z.M. Wang, Y. Wang^{*}, **F. Rosei**,^{*} Efficient and stable tandem luminescent solar concentrators based on carbon dots and perovskite quantum dots, *Nano Energy* **50**, 756–765 (2018).
276. Y. Zhou, H. Zhao, D. Ma, **F. Rosei**,^{*} Harnessing the Properties of Colloidal Quantum Dots in Luminescent Solar Concentrators, *Chem. Soc. Rev.* **47**, 5866–5890 (2018).
275. H. Sameie, A.A. Sabbagh Alvani, N. Naseri, **F. Rosei**, G. Mul, B.T. Mei, Photocatalytic Activity of ZnV₂O₆/Reduced Graphene Oxide Nanocomposite: From Theory to Experiment, *J. Elec. Soc.* **165**, H353–H359 (2018).
274. L.V. Besteiro,[†] X.-T. Kong, Z. Wang, **F. Rosei**, A.O. Govorov^{*}, Plasmonic Glasses and Films Based on Alternative Inexpensive Materials for Blocking Infrared Radiation, *Nanolett.* **18**, 3147–3156 (2018).
273. M. Mohammadnezhad, G. Singh Selopal,^{*,†} Z.W. Wang, B. Stansfield, H. Zhao,^{*} **F. Rosei**,^{*} Towards long-term thermal stability of dye sensitized solar cells using multi-walled carbon nanotubes, *Chem. Plus. Chem.* **83**, 682–690 (2018). [[Cover Feature](#)]
272. W. Huang, J. Chakrabartty, C. Harnagea, D. Gedamu, I. Ka, M. Chaker, **F. Rosei**,^{*} R. Nechache^{*}, Highly-sensitive switchable heterojunction photodiode based on epitaxial Bi₂FeCrO₆ multiferroic thin films, *ACS Appl. Mater. Int.* **10**, 12790–12797 (2018).
271. R. Adhikari[†], K. Basu, Y. Zhou, F. Vetrone, D. Ma, S. Sun, F. Vidal, H. Zhao^{*}, **F. Rosei**,^{*} Heterostructured Quantum Dot Architectures for Efficient and Stable Photoelectrochemical Hydrogen Production, *J. Mater. Chem. A* **6**, 6822–6829 (2018).
270. J. Chakrabartty, C. Harnagea, M. Celikin[†], **F. Rosei**,^{*} R. Nechache^{*}, Improved photovoltaic performance from inorganic perovskite oxide thin films with mixed crystal phases, *Nature Phot.* **12**, 271–276 (2018).
269. H. Sameie, A.A. Sabbagh Alvani^{*}, N. Naseri, S. Du, **F. Rosei**, First-Principles Study on ZnV₂O₆ and Zn₂V₂O₇: Two New Photoanode Candidates for Photoelectrochemical Water Oxidation, *Ceramics Int.* **44**, 6607–6613 (2018).
268. Y. Wang, D. Gao, C. Li, C. Li, **F. Rosei**,^{*} D. Ma^{*}, G. Chen^{*}, Dual Template Engaged Synthesis of Hollow Ball-in-Tube Asymmetrical Structured Ceria, *Part. and Part. Syst. Character.* **35**, 1700367 (2018).
267. F. Navarro-Pardo[†], H. Zhao[†], Z.M. Wang, **F. Rosei**,^{*} Structure/Property Relations in “Giant” Semiconductor Nanocrystals: Opportunities in Photonics and Electronics, *Acc. Chem. Res.* **51**, 609–618 (2018).
266. Y. Huang, A. Skripka, L. Labrador-Páez, F. Sanz-Rodríguez, P. Haro Gonzalez, D. Jaque Garcia, **F. Rosei**, F. Vetrone^{*}, Upconverting Nanocomposites with Combined Photothermal and Photodynamic Effects, *Nanoscale* **10**, 791–799 (2018).
265. Y. Zhou, D. Benetti, X. Tong, L. Jin, Z.M. Wang, D. Ma, H. Zhao^{*}, **F. Rosei**,^{*} Colloidal Carbon Dots based Highly Stable Luminescent Solar Concentrators, *Nano Energy* **44**, 378–387 (2018).
264. D. Barba^{*}, C. Wang, A. Nelis, G. Terwagne, **F. Rosei**,^{*} Blocking germanium diffusion inside silicon dioxide using a co-implanted silicon barrier, *J. Appl. Phys.* **123**, 161540 (2018).
263. X. Tong, X.-T. Kong, Y. Zhou, F. Navarro-Pardo[†], G. Singh Selopal[†], S. Sun, A.O. Govorov, H. Zhao^{*}, Z.M. Wang^{*}, **F. Rosei**,^{*} Near-infrared, Heavy Metal-free Colloidal “Giant” Core/Shell Quantum Dots, *Adv. En. Mater.* **8**, 1701432 (2018).
262. D. Cui, M. Ebrahimi, **F. Rosei**,^{*} J.M. MacLeod, Control of fullerene crystallization from 2D to 3D through combined solvent and template effects, *J. Am. Chem. Soc.* **139**, 16732–16740 (2017).
261. R. Lopez-Delgado, Y. Zhou, A. Zazueta-Raynaud, H. Zhao[†], J.E. Pelayo, A. Vomiero, M.E. Álvarez-Ramos, **F. Rosei**,^{*} A. Ayon, Enhanced conversion efficiency in Si solar cells employing photoluminescent down-shifting CdSe/CdS core/shell quantum dots, *Sci. Rep.* **7**, 14104 (2017).
260. H. Zhang, G.S. Selopal[†], Y. Zhou, X. Tong, D. Benetti, L. Jin, F. Navarro-Pardo[†], Z. Wang, S. Sun, H. Zhao^{†,*}, **F. Rosei**,^{*} Controlled Synthesis of Near-infrared Quantum Dots for Optoelectronic Devices, *Nanoscale* **9**, 16843–16851 (2017).
259. G. Sirigu, A. Camellini, H. Zhao[†], L. Jin, **F. Rosei**,^{*} A. Vomiero, M. Zavelani-Rossi, Dual emission and optical gain in PbS/CdS nanocrystals: role of shell volume and of core/shell interface, *Phys. Rev. B* **96**, 155303 (2017).
258. B. Aissa, M. Nedil, J. Kroeger, M.I. Hossain, K.A. Mahmoud, **F. Rosei**,^{*} Nanoelectromagnetic of the N-doped single wall carbon nanotube in the extremely high frequency band, *Nanoscale* **9**, 14192–14200 (2017).
257. J. Chakrabartty, D. Barba, L. Jin, D. Benetti, **F. Rosei**,^{*} R. Nechache, Photoelectrochemical Properties of BiMnO₃ Thin Films and Nanostructures, *J. Power Sources* **365**, 162–168 (2017).
256. J.M. MacLeod, J. Lipton-Duffin, T. Taerum, C. Fu, D.F. Perepichka, **F. Rosei**,^{*} A 2D Substitutional Solid Solution Through Hydrogen-Bonding of Molecular Building Blocks, *ACS Nano* **11**, 8901–8909 (2017).
255. F. Vetrone, **F. Rosei**,^{*} A low-loss origami Plasmonic waveguide, *Science* **357**, 452 (2017).
254. H. Zhao^{*}, **F. Rosei**,^{*} Colloidal Quantum Dots for Solar Technologies, *Chem* **3**, 229–258 (2017).
253. S. Chandra[†], R. Das, V. Kalappattil, T. Eggers, C. Harnagea, R. Nechache, M.-H. Phan^{*}, **F. Rosei**,^{*} H. Srikanth^{*}, Epitaxial Magnetite Nanorods with Enhanced Room Temperature Magnetic Anisotropy, *Nanoscale* **9**, 7858–7867 (2017).
252. H. Zhao^{*}, Y. Zhou, D. Benetti, D. Ma, **F. Rosei**,^{*} Perovskite Quantum Dots integrated in Large-area Luminescent Solar Concentrators, *Nano Energy* **37**, 214–223 (2017).
251. L. Tan, Y. Zhou, F. Ren, D. Benetti, F. Yang, H. Zhao[†], **F. Rosei**,^{*} M. Chaker, D. Ma^{*}, Ultrasmall PbS quantum dots: a facile and greener synthetic route and their high performance in luminescent solar concentrators, *J. Mater. Chem. A* **5**, 10250–10260 (2017).
250. G.S. Selopal[†], H. Zhao^{*}, X. Tong, D. Benetti, F. Navarro Pardo[†], Y. Zhou, D. Barba[†], F. Vidal, Z.M. Wang^{*}, **F. Rosei**,^{*} Highly Stable Colloidal “Giant” Quantum Dots Sensitized Solar Cells, *Adv. Func. Mater.* **27**, 1701468 (2017). ([Inside Back Cover](#))

249. O. Warschkow*, J.M. Bennett, J.A. Miwa, G.P. Lopinski, **F. Rosei**, D.R. McKenzie, N.A. Marks, Benzene and Pyridine on Silicon (001): A Trial Ground for Long-Range Corrections in Density Functional Theory, *J. Phys. Chem. C* **121**, 10484–10500 (2017).
248. W. Huang, C. Harnagea, D. Benetti, M. Chaker, **F. Rosei***, R. Nechache*, Multiferroic Bi₂FeCrO₆ based p-i-n Heterojunction Photovoltaic devices, *J. Mater. Chem. A* **5**, 10355–10364 (2017).
247. D. Benetti, R. Nouar, R. Nechache, H. Pepin, A. Sarkissian, **F. Rosei***, J.M. MacLeod, Combined magnetron sputtering and pulsed laser deposition of TiO₂ and BFCO thin films, *Sci. Rep.* **7**, 2503 (2017).
246. C. Wang, D. Barba, S. Slim, Y. Wang, **F. Rosei***, Enhanced Radiation Resistance of Near-Infrared Photoluminescence Emission Induced by Er/Si Nanoclustering, *Mater. & Design* **126**, 57–63 (2017).
245. G. Galeotti, M. Di Giovannantonio, J. Lipton-Duffin, M. Ebrahimi, S. Tebi, A. Verdini, L. Floreano, Y. Fagot-Revurat, D.F. Perepichka, **F. Rosei***, G. Contini, The role of halogens in on-surface Ullmann polymerization, *Faraday Disc.* **204**, 453–469 (2017).
244. G. Galeotti, M. Ebrahimi, J. Lipton-Duffin, J. MacLeod, S. Rondeau-Gagné, J.-F. Morin, **F. Rosei***, 2D supramolecular network of dibenzonitrilediacetylene on Ag(111) designed by intermolecular hydrogen bonding, *Phys. Chem. Chem. Phys.* **19**, 10602 (2017).
243. D. Cui, J.M. MacLeod, M. Ebrahimi, **F. Rosei***, Selective binding in different adsorption sites of a 2D covalent organic framework, *Cryst. Eng. Comm.* **19**, 4927–4932, (2017).
242. S. Li, J. Zhang, B.-P. Zhang, W. Huang, C. Harnagea, R. Nechache†, L. Zhu, S. Zhang, Y.-H. Lin, L. Ni, Y.-H. Sang, H. Liu, **F. Rosei***, Manipulation of charge transfer in vertically aligned epitaxial ferroelectric KNbO₃ nanowire array photoelectrodes, *Nano Energy* **35**, 92–100 (2017).
241. Y. Zhou, M. Celikin†, A. Camellini, G. Sirigu, X. Tong, L. Jin, K. Basu, X. Tong, D. Barba, D. Ma, S. Sun, F. Vidal, M. Zavelani-Rossi, Z.M. Wang, H. Zhao*, A. Vomiero*, **F. Rosei***, Ultra-Small Nanoplatelets: the Ultimate Tuning of Optoelectronic Properties, *Adv. En. Mater.* **7**, 1602728 (2017).
240. J. Zhang, Y. Huang, L. Jin, **F. Rosei**, F. Vetrone, J.P. Claverie, Efficient Upconverting Multiferroic Core@Shell Photocatalysts: Visible-to-Near-Infrared Photon Harvesting, *ACS Appl. Mater. Inter.* **9**, 8142–8150 (2017).
239. M. Ebrahimi, **F. Rosei***, Organic analogues of graphene, *Nature* **542**, 423–424 (2017).
238. F. Navarro-Pardo,† D. Benetti, J. Benavides, H.G. Zhao*,†, S.G. Cloutier, V.M. Castaño, A. Vomiero*, **F. Rosei***, Nanofiber-structured TiO₂ nanocrystals as a scattering layer in dye-sensitized solar cells, *ECS J. Sol. State Sci. Tech.* **6**, N32–N37 (2017).
237. A. Nwanya, C. Awada, D. Obi, K. Raju, K. Ozoemena, R. Osuji, A. Ruediger, M. Maaza, **F. Rosei**, F.I. Ezema*, Nanoporous copper-cobalt mixed oxide nanorod bundles as high performance pseudocapactive electrodes, *J. Electroan. Chem.* **787**, 24–35 (2017).
236. X. Tong, Y. Zhou, L. Jin, K. Basu, R. Adhikari†, G. Singh Selopal†, X. Tong, H. Zhao†, S. Sun, A. Vomiero, Z.M. Wang, **F. Rosei***, Heavy Metal-free, Near-infrared Colloidal Quantum Dots for Efficient Photoelectrochemical Hydrogen Generation, *Nano Energy* **31**, 441–449 (2017).
235. F. Navarro-Pardo,† L. Jin, R. Adhikari,† X. Tong, D. Benetti, K. Basu, S. Vanka, H.G. Zhao*,† Z.T. Mi, S. Sun, V.M. Castaño, A. Vomiero*, **F. Rosei***, Nanofiber-supported CuS nanoplatelets as a high efficiency counter electrode for quantum dot-based photoelectrochemical hydrogen production, *Mater. Chem. Front.* **1**, 65–72 (2017). (*Inside Front Cover*)
234. M. Di Giovannantonio, M. Tomellini, J. Lipton-Duffin, G. Galeotti, M. Ebrahimi, A. Cossaro, A. Verdini, N. Kharce, V. Meunier, G. Vasseur, Y. Fagot-Revurat, D. Perepichka*, **F. Rosei***, G. Contini*, A Mechanistic Picture and Kinetic Analysis of Surface-Confined Ullmann Polymerization, *J. Am. Chem. Soc.* **138**, 16696–16702 (2016).
233. H. Zhao†, L. Jin, Y. Zhou, B. Alotaibi, Z. Fan, A. Govorov, Z. Mi, S. Sun, **F. Rosei***, A. Vomiero, Green Synthesis of Near Infrared Core/shell Quantum Dots for Photocatalytic Hydrogen Production, *Nanotechnology* **27**, 495405 (2016).
232. L. Jin, G. Sirigu, X. Tong, A. Camellini, A. Parisini, G. Nicotra, H. Zhao†*, S. Sun, V. Morandi, M. Zavelani-Rossi, **F. Rosei***, A. Vomiero*, Engineering Interfacial Structure in “Giant” Quantum Dots for Photoelectrochemical Solar Energy Conversion, *Nano Energy* **30**, 531–541 (2016).
231. F. Navarro Pardo†, D. Benetti, H. Zhao†, V.M. Castaño, A. Vomiero, **F. Rosei***, Platinum/Palladium hollow nanofibers as high-efficiency counter electrodes for enhanced charge transfer, *J. Power Sources* **335**, 138–145 (2016).
230. M. Celikin†, D. Barba, B. Bastola, A. Ruediger*, **F. Rosei***, Development of regenerated fiber Bragg grating sensors with long-term stability, *Optics Express* **24**, 21897–21909 (2016).
229. Y. Wang, G. Song, Z. Xu, **F. Rosei**, D. Ma, G. Chen*, Interfacial Reaction-Directed Synthesis of Ceria Nanotube-embedded Ultra-small Pt Nanoparticle Catalyst with High Catalytic Activity and Thermal Stability, *J. Mater. Chem. A* **4**, 14148–14154 (2016).
228. S. Slim, **F. Rosei***, Breaking Symmetries in Supramolecular Optoelectronics, *Science* **353**, 1098–1099 (2016).
227. P. Lopez-Varo, L. Bertoluzzi, J. Bisquert*, M. Alexe, M. Coll, J. Huang, J.A. Jimenez-Tejada, T. Kirchartz, R. Nechache, **F. Rosei**, Y. Yuan, Physical aspects of ferroelectric semiconductors for photovoltaic solar energy conversion, *Phys. Rep.* **653**, 1–40 (2016).
226. R. Adhikari†, L. Jin, F. Navarro Pardo†, D. Benetti, B. Alotaibi, S. Vanka, H. Zhao†*, Z. Mi, A. Vomiero*, **F. Rosei***, High Efficiency, Pt-free Photoelectrochemical Cells for Solar Hydrogen Generation based on “Giant” Quantum Dots, *Nano Energy* **27**, 265–274 (2016).
225. H.G. Zhao†*, D. Benetti, L. Jin, Y. Zhou, **F. Rosei***, A. Vomiero*, Absorption Enhancement in “Giant” Core/Alloyed-Shell Quantum Dots for Luminescent Solar Concentrator, *Small* **12**, 5354–5365 (2016). (*Back Cover*)
224. M. Ebrahimi, **F. Rosei***, Stable multilevel memories, *Nature Phot.* **10**, 434–436 (2016).
223. C. Yan*, H. Zhao†, D.F. Perepichka*, **F. Rosei***, Lanthanide Ion Doped Upconverting Nanoparticles: Synthesis, Structure and Properties, *Small* **12**, 3888–3907 (2016).

222. H. Feng, Y. Wang*, C. Wang, F. Diao, W. Zhu, P. Mu, L. Yuan, G. Zhou, **F. Rosei**, Defects-induced Enhanced Photocatalytic Activities of Reduced α -Fe₂O₃ Nanoblades, *Nanotechnology* **27**, 295703 (2016).
221. Y. Huang, E. Hemmer, **F. Rosei**, F. Vetrone*, Multifunctional Liposome Nanocarriers Combining Upconverting Nanoparticles and Anticancer Drugs, *J. Phys. Chem. B* **120**, 4992–5001 (2016).
220. J. Chakrabartty, R. Nechache†, C. Harnagea, S. Li, **F. Rosei***, Enhanced Photovoltaic Properties in Bilayer BiFeO₃/Bi-Mn-O Thin Films, *Nanotechnology* **27**, 215402 (2016).
219. D. Benetti, K.T. Dembele, J. Benavides, H. Zhao†, S. Cloutier, I. Concina, A. Vomiero, **F. Rosei***, Functionalized multi-wall carbon nanotubes/TiO₂ composites as efficient photoanodes for dye sensitized solar cells, *J. Mater. Chem. C* **4**, 3555–3562 (2016).
218. A.C. Nwanya, I.C. Amaechi, D. Obi, K.I. Ozoemena, R.U. Osuji, C. Awada, A. Ruediger, M. Maaza, **F. Rosei**, F.I. Ezema*, Facile Synthesis of Nanosheet-like CuO Film and its Potential Application as a High-Performance Pseudocapacitor Electrode, *Electroch. Acta* **198**, 220–230 (2016).
217. K. Basu, D. Benetti, H. Zhao†, F. Vetrone, A. Vomiero*, **F. Rosei***, Enhanced photovoltaic properties in dye sensitized solar cells by surface treatment of SnO₂ photoanodes, *Sci. Rep.* **6**, 23312 (2016).
216. Y. Zhou, D. Benetti, Z. Fan, H. Zhao*, D. Ma, A.O. Govorov, A. Vomiero*, **F. Rosei***, Near Infrared, Highly Efficient Luminescent Solar Concentrators, *Adv. En. Mater.* **6**, 1501913 (2016). (*Frontispiece Cover*)
215. H. Zhao†, G. Sirigu, A. Parisini, A. Camellini, **F. Rosei**, V. Morandi, M. Zavelani-Rossi, A. Vomiero*, Dual emission in Asymmetric “Giant” PbS/CdS/CdS Core/Shell/Shell Quantum Dots, *Nanoscale* **8**, 4217–4226 (2016).
214. C. Fu, H.P. Lin†, J. Macleod, A. Krayev, **F. Rosei**, D.F. Perepichka*, Unravelling the Self-Assembly of Hydrogen Bonded NDI Semiconductors in 2D and 3D, *Chem. Mater.* **28**, 951–961 (2016).
213. R. Nechache†*, W. Huang, S. Li, **F. Rosei***, Photovoltaic properties of Bi₂FeCrO₆ films epitaxially grown on (100)-oriented Silicon substrates, *Nanoscale* **8**, 3237–3243 (2016).
212. L. Jin, B. AlOtaibi, D. Benetti, S. Li, H. Zhao†, Z. Mi, A. Vomiero*, **F. Rosei***, Near Infrared Colloidal Quantum Dots for Efficient and Durable Photoelectrochemical Solar-Driven Hydrogen Production, *Adv. Sci.* **3**, 1500345 (2016). (*Back Cover*)
211. C. Wang, Y. Wang*, X. Liu, H. Yang, J. Sun, L. Yuan, G. Zhou, **F. Rosei**, Structure versus properties in α -Fe₂O₃ nanowires and nanoblades, *Nanotechnology* **27**, 035702 (2016).
210. G. Vasseur, Y. Fagot-Revurat*, M. Sicot, B. Kierren, L. Moreau, D. Malterre, L. Cardenas†, G. Galeotti, J. Lipton-Duffin, **F. Rosei**, M. Di Giovannantonio, G. Contini, P. Le Fèvre, F. Bertran, L. Liang, V. Meunier, D.F. Perepichka, Quasi one-Dimensional Band Dispersion and Surface Metallization in Long Range Ordered Polymeric Wires, *Nature Comm.* **7**, 10235 (2016).
209. W. Huang, R. Nechache†, S. Li, M. Chaker, **F. Rosei***, Electrical and optical properties of epitaxial transparent conducting p-type SrTiO₃ thin films, *J. Am. Ceram. Soc.* **99**, 226–233 (2016).
208. D. Cui, J.M. MacLeod, M. Ebrahimi, D.F. Perepichka, **F. Rosei***, Solution and air stable host/guest architectures from a single layer covalent organic framework, *Chem. Comm.* **51**, 16510–16513 (2015).
207. B. Aissa*†, M. Nedil, J. Kroeger, T. Haddad, **F. Rosei***, Memory operation devices based on light-illumination ambipolar carbon-nanotube thin-film-transistors, *J. Appl. Phys.* **118**, 124507 (2015).
206. M. Cloutier, D. Mantovani, **F. Rosei***, Antibacterial coatings: challenges, perspectives and opportunities, *Trends Biotechnol.* **33**, 637–652 (2015).
205. H. Zhao*†, A. Vomiero*, **F. Rosei***, Ultrasensitive, Biocompatible, Self-Calibrating, Multi-Parametric Temperature Sensors, *Small* **11**, 5741–5746 (2015). (*Frontispiece Cover*)
204. M. Celikin†, D. Barba, M. Chicoine, F. Schiettekatte, A. Ruediger, **F. Rosei***, Co-mediated Nucleation of Erbium/Silicon Nanoclusters in Fused Silica, *J. Mater. Res.* **30**, 3003–3010 (2015).
203. L. Dinca, J. Macleod, J. Lipton-Duffin, C. Fu, D. Ma, D.F. Perepichka, **F. Rosei***, Tailoring the Reaction Path in the On-Surface Chemistry of Thienoacenes, *J. Phys. Chem. C* **119**, 22432–22438 (2015).
202. I. Concina, C. Manzoni, G. Grancini, M. Celikin†, A. Souidi†, **F. Rosei**, M. Zavelani-Rossi, G. Cerullo, A. Vomiero*, Modulating Exciton Dynamics in Composite Nanocrystals for Excitonic Solar Cells, *J. Phys. Chem. Lett.* **6**, 2489–2495 (2015).
201. S. Li, B. AlOtaibi, W. Huang, Z. Mi, N. Serpone, R. Nechache*, **F. Rosei***, Epitaxial Bi₂FeCrO₆ Multiferroic Thin Film as a New Visible Light Absorbing Photocathode Material, *Small* **11**, 4018–4026 (2015).
200. A.A. Zarandi, A.A. Sabbagh Alvani*, R. Salimi, H. Sameie, S. Moosakhani, D. Poelman, **F. Rosei**, Self-organization of an optomagnetic CoFe₂O₄-ZnS nanocomposite: preparation and characterization, *J. Mater. Chem. C* **3**, 3935–3945 (2015).
199. G. Chen*, **F. Rosei**, D. Ma, Template Engaged Synthesis of Hollow Ceria-Based Composites, *Nanoscale* **7**, 5578–5591 (2015).
198. Y. Huang, **F. Rosei**, F. Vetrone*, A Single Multifunctional Nanoplatfrom Based on Upconversion Luminescence and Gold Nanorods, *Nanoscale* **7**, 5178–5185 (2015).
197. F. De Marchi, D. Cui, J. Lipton-Duffin, C. Santato, J. MacLeod, **F. Rosei***, Self-assembly of indole 2-carboxylic acid at graphite and gold surfaces, *J. Chem. Phys.* **142**, 101923 (2015).
196. J. MacLeod, J. Lipton-Duffin, D. Cui, S. De Feyter, **F. Rosei***, Substrate effects in the supramolecular assembly of 1,3,5-benzene tricarboxylic acid on graphite and graphene, *Langmuir* **31**, 7016–7024 (2015). (*Front Cover*)
195. L.E. Dinca, F. De Marchi, J.M. MacLeod, J. Lipton-Duffin, R. Gatti, D. Ma, D.F. Perepichka, **F. Rosei***, Pentacene on Ni(111): room-temperature molecular packing and temperature-activated conversion to graphene, *Nanoscale* **7**, 3263–3269 (2015). (*Hot paper*)

194. B. Aissa[†], M. Nedil, M.A. Habib, E.H. Abdul-Hafidh, **F. Rosei**, High-performance Thin-Film-Transistors based on semiconducting-enriched single-walled carbon nanotubes processed by electrical-breakdown strategy, *Appl. Surf. Sci.* **328**, 349–355 (2015).
193. J.M. Bennett, N.A. Marks, J.A. Miwa, G.P. Lopinski, **F. Rosei**, D.R. McKenzie, O. Warschkow, Reaction Pathways for Pyridine Adsorption on Silicon (001), *J. Phys. Condens. Matter.* **27**, 054001 (2015).
192. X. Zhang, P. Guan, L. Malic, M. Trudeau, **F. Rosei**, T. Veres*, Nanoporous Twinned PtPd with Highly Catalytic Activity and Stability, *J. Mater. Chem. A* **3**, 2050–2056 (2015).
191. L. Jin, H. Zhao[†], D. Ma, A. Vomiero*, **F. Rosei***, Dynamics of semiconducting nanocrystals uptake into mesoporous TiO₂ thick films by electrophoretic deposition, *J. Mater. Chem. A* **3**, 847–856 (2015).
190. K.T. Dembele, G.S. Selopal, R. Milan, C. Trudeau, D. Benetti, A. Soudi[†], M.M. Natile, G. Sberveglieri, S. Cloutier, I. Concina,* **F. Rosei***, A. Vomiero*, Graphene below the Percolation Threshold in TiO₂ for Dye-Sensitized Solar Cells, *J. Mater. Chem. A* **3**, 2580–2588 (2015). ([Front Cover](#))
189. C.P. Brown, A.D. Whaithe, J.M. MacLeod, J. Macdonald, **F. Rosei***, With great structure comes great functionality: understanding and emulating spider silk, *J. Mater. Res.* **30**, 108–120 (2015).
188. R. Nechache[†]*, C. Harnagea, S. Li, L. Cardenas, W. Huang, J. Chakrabartty, **F. Rosei***, Bandgap tuning of multiferroic oxide solar cells, *Nature Phot.* **9**, 61–67 (2015). ([Highly Cited](#))
187. G. Rinke, S. Rauschenbach*, S. Schrettl, T.N. Hoheisel, J. Blohm, R. Gutzler, **F. Rosei**, H. Frauenrath, K. Kern*, Soft-Landing Electrospray Ion Beam Deposition of Sensitive Oligoynes on Surfaces in Vacuum, *Int. J. Mass. Spectrom.* **377**, 228–234 (2015).
186. J. Lehr, F. de Marchi, L. Matus, J. MacLeod, **F. Rosei**, A.-M. Kietzig*, The influence of the gas environment on morphology and chemical composition of surfaces micro-machined with a femtosecond laser, *Appl. Surf. Sci.* **320**, 455–465 (2014).
185. R. Gatti, J.M. Macleod, J. Lipton-Duffin, A. Moiseev, D. Perepichka, **F. Rosei***, Substrate, Molecular Structure and Solvent Effects in 2D Self-Assembly via Hydrogen and Halogen Bonding, *J. Phys. Chem. C* **118**, 25505–25516 (2014).
184. L. Nikolova, M.J. Stern, J. MacLeod, B.W. Reed, H. Ibrahim, G.H. Campbell, **F. Rosei**, T.B. LaGrange, B.J. Siwick*, In situ investigation of explosive crystallization in a-Ge: Experimental determination of the interface response function using dynamic transmission electron microscopy, *J. Appl. Phys.* **116**, 093512 (2014).
183. H. Zhao, [†] H. Liang, F. Vidal, **F. Rosei**, A. Vomiero, D. Ma*, Size Dependence of Temperature-related Optical Properties of PbS and PbS/CdS Core/shell Quantum Dots, *J. Phys. Chem. C* **118**, 20585–20593 (2014).
182. D. Barba*, F. Martin, K. Tagziria, M. Nicklaus, E. Haddad, **F. Rosei***, A. Ruediger*, Photoluminescence mapping of oxygen-defect emission for nanoscale spatial characterization of Fiber Bragg Gratings, *J. Appl. Phys.* **116**, 064906 (2014).
181. M. Cloutier, C. Harnagea, P. Hale, O. Seddiki[†], **F. Rosei**, D. Mantovani*, Long-term stability of hydrogenated DLC coatings: Effects of ageing on the structural, chemical and mechanical properties, *Diamond Relat. Mater.* **48**, 65–72 (2014).
180. L.E. Dinca, J.M. MacLeod*, J. Lipton-Duffin, C. Fu, D. Ma, D.F. Perepichka, **F. Rosei***, Tip-induced C–H activation and oligomerization of thienoanthracenes, *Chem. Comm.* **50**, 8791–8793 (2014).
179. L. Cardenas,[†] J. MacLeod, J. Lipton-Duffin, D. Gezahegn, F. Popescu, M. Siaj, D. Mantovani, **F. Rosei***, Reduced Graphene Oxide Growth on 316L Stainless Steel for Medical Applications, *Nanoscale* **6**, 8664–8670 (2014).
178. R. Nechache,[†]* M. Nicklaus, N. Diffalah, A. Ruediger*, **F. Rosei***, Pulsed laser deposition growth of rutile TiO₂ nanowires on Silicon substrates, *Appl. Surf. Sci.* **313**, 48–52 (2014).
177. H. Zhao[†], Z. Fan, H. Liang, G.S. Selopal, B.A. Gonfa, L. Jin, A. Soudi[†], D. Cui, F. Enrichi, M.M. Natile, I. Concina, D. Ma, A.O. Govorov,* **F. Rosei***, A. Vomiero*, Controlling Photoinduced Electron Transfer from PbS@CdS Core@Shell Quantum Dots to Metal Oxide Nanostructured Thin Films, *Nanoscale* **6**, 7004–7011 (2014).
176. O. Seddiki[†], C. Harnagea, L. Levesque, D. Mantovani, **F. Rosei***, Evidence of antibacterial activity on titanium surfaces through nanotextures, *Appl. Surf. Sci.* **308**, 275–284 (2014).
175. D. Barba, R.S. Cai, J. Demarche, Y.Q. Wang, G. Terwagne, **F. Rosei**, F. Martin, G.G. Ross, Influence of silicon dangling bonds on germanium thermal diffusion within SiO₂ glass, *Appl. Phys. Lett.* **104**, 111901 (2014).
174. M. Di Giovannantonio, M. El-Garah[†], J. Lipton-Duffin, V. Meunier, L. Cardenas[†], Y. Fagot-Revurat, A. Cossaro, A. Verdini, D.F. Perepichka, **F. Rosei***, G. Contini, Reply to “Comment on ‘Insight into Organometallic Intermediate and Its Evolution to Covalent Bonding in Surface-Confined Ullmann Polymerization’”, *ACS Nano* **8**, 1969–1971 (2014).
173. J.A. Lipton-Duffin, J.M. MacLeod, M. Vondráček, K.C. Prince, R. Rosei, **F. Rosei***, Thermal evolution of the submonolayer near-surface alloy of ZnPd on Pd(111), *Phys. Chem. Chem. Phys.*, **16**, 4764–4770 (2014).
172. J. Chakrabartty, R. Nechache[†], S. Li, M. Nicklaus, A. Ruediger, **F. Rosei***, Photovoltaic Properties of Multiferroic BiFeO₃/BiCrO₃ Heterostructures, *J. Am. Ceram. Soc.* **97**, 1837–1840 (2014).
171. J. Chakrabartty, R. Nechache[†], C. Harnagea[†], **F. Rosei***, Photovoltaic effect in multiphase Bi-Mn-O thin films, *Optics Express* **22**, A80–A89 (2014).
170. G. Chen[†], J. Zhang, A. Gupta, **F. Rosei**, D. Ma*, Shape-Controlled Synthesis of Ruthenium Nanocrystals and Their Catalytic Applications, *New J. Chem.* **38**, 1827–1833 (2014).
169. C. Yan*, **F. Rosei***, Hollow Micro/Nanostructured Materials Prepared by Ion Exchange Synthesis and Their Potential Applications, *New J. Chem.* **38**, 1883–1904 (2014).

168. R. Gutzler[†], L. Cardenas[†], J. Lipton-Duffin, M. El Garah[†], L.E. Dinca, C.E. Szakacs, C. Fu, M. Gallagher, M. Vondráček, M. Rybachuk[†], D.F. Perepichka*, **F. Rosei***, Ullmann-Type Coupling of Brominated Tetrathienoanthracene on Copper and Silver, *Nanoscale* **6**, 2660–2668 (2014).
167. J.M. MacLeod, **F. Rosei***, Molecular self-assembly on graphene, *Small* **10**, 1038–1049 (2014).
166. J. Toster, I. Kusumawardani, E. Eroglu, K.S. Iyer, **F. Rosei**, C.L. Raston*, Superparamagnetic imposed diatom frustules for the effective removal of phosphates, *Green Chem.* **16**, 82–85 (2014).
165. **F. Rosei***, T.W. Johnston, How to ‘Survive’ after Graduating in Materials Science VI: How to Write Winning Proposals, *J. Mater. Ed.* **35**, 127–134 (2013).
164. M. Di Giovannantonio, M. El-Garah[†], J. Lipton-Duffin, V. Meunier, L. Cardenas[†], Y. Fagot-Revurat, A. Cossaro, A. Verdini, D.F. Perepichka, **F. Rosei***, G. Contini, Insight into Organometallic Intermediate and its Evolution to Covalent Bonding in Surface-Confined Ullmann Polymerization, *ACS Nano* **7**, 8190–8198 (2013).
163. B. Aïssa[†], M. Nedil, E. Haddad, W. Jamroz, M.C.E. Yagoub, D. Therriault, Y. Coulibaly, **F. Rosei***, Fluidic patch antenna based on liquid metal alloy/Single-wall carbon-nanotubes operating at the S-band frequency, *Appl. Phys. Lett.* **103**, 063101 (2013).
162. C. Harnagea[†], M. Azodi, R. Nechache, C.-V. Cojocaru, V. Buscaglia, M. Buscaglia, P. Nanni, **F. Rosei**, A. Pignolet*, Characterization of individual multifunctional nanoobjects with restricted geometry, *Phase Transitions* **86**, 635–650 (2013).
161. H. Liang, D. Rossouw, H. Zhao, S. Cushing, H. Shi, A. Korinek, H. Xu, **F. Rosei**, W. Wang, N. Wu, G.A. Botton, D. Ma*, Asymmetric Silver “Nanocarrot” Structures: Solution Synthesis and their Asymmetric Plasmonic Resonances, *J. Am. Chem. Soc.* **135**, 9616–9619 (2013).
160. J. Toster, Q.L. Zhou, N.M. Smith, K.S. Iyer, **F. Rosei**, C.L. Raston*, In situ coating of diatom frustules with silver nanoparticles, *Green Chem.* **15**, 2060–2063 (2013).
159. S. Li, R. Nechache[†], I.A.V. Davalos, G. Goupil, L. Nikolova, M. Nicklaus, J. Laverdiere[†], A. Ruediger, **F. Rosei***, Ultrafast Microwave Hydrothermal Synthesis of BiFeO₃ Nanoplates, *J. Am. Ceram. Soc.* **96**, 3155–3162 (2013).
158. L. Cardenas[†], R. Gutzler[†], J. Lipton-Duffin, C. Fu, J.L. Brusso, L.E. Dinca, M. Vondráček, Y. Fagot-Revurat, D. Malterre, **F. Rosei***, D.F. Perepichka*, Synthesis and electronic structure of a two dimensional π -conjugated polythiophene, *Chem. Sci.* **4**, 3263–3268 (2013).
157. K.T. Dembele, G. Selopal, C. Soldano, R. Nechache[†], J. Rimada Herrera, I. Concina, G. Sberveglieri, **F. Rosei***, A. Vomiero*, Hybrid Carbon Nanotubes-TiO₂ Photoanodes for High Efficiency Dye Sensitized Solar Cells, *J. Phys. Chem. C* **117**, 14510–14517 (2013).
156. S. Li, J. Zhang, M.G. Kibria, Z. Mi, M. Chaker, D. Ma*, R. Nechache*, **F. Rosei***, Remarkably Enhanced Photocatalytic Activity of Laser Ablated Au Nanoparticles Decorated BiFeO₃ Nanowires under Visible-light, *Chem. Comm.* **49**, 5856–5858 (2013).
155. M. El Garah*, J. Lipton-Duffin, J.M. Macleod, R. Gutzler, F. Palmينو, V. Luzet, F. Chérioux, **F. Rosei***, Self-assembly of a halogenated molecule on oxide-passivated Cu(110), *Chem. Asian J.* **8**, 1813–1817 (2013).
154. J. Wünsche, L. Cardenas[†], **F. Rosei**, F. Cicoira, R. Gauvin, C.F.O. Graeff, S. Poulin, A. Pezzella, C. Santato*, In situ formation of dendrites in eumelanin thin films between gold electrodes, *Adv. Func. Mater.* **23**, 5591–5598 (2013). [[Front Cover](#)]
153. J.M. MacLeod*, J. Lipton-Duffin, A. Baraldi, R. Rosei, **F. Rosei***, Surface structure of Pd(111) with less than half a monolayer of Zn, *Phys. Chem. Chem. Phys.* **15**, 12488–12494 (2013).
152. G. Chen[†], H. Zhao[†], **F. Rosei**, D. Ma*, Effect of Redox Reaction Products on the Luminescence Switching Behavior in CePO₄/Tb Nanorods, *J. Phys. Chem. C* **117**, 10031–10038 (2013).
151. M. El Garah[†], J.M. MacLeod, **F. Rosei***, Covalently Bonded Networks through Surface-confined Polymerization, *Surf. Sci.* **613**, 6–14 (2013).
150. A. Dadvand, A.G. Moiseev, W.-H. Sun, F. Bélanger-Gariépy, **F. Rosei**, H. Meng, D.F. Perepichka*, 1,5-, 2,6- and 9,10-Distyrylanthracenes as Luminescent Organic Semiconductors, *J. Mater. Chem. C* **1**, 2817–2825 (2013).
149. L. Dinca, C. Fu, J.M. Macleod, J. Lipton-Duffin, J. Brusso, C. Szakacs, D. Ma, D.F. Perepichka*, **F. Rosei***, Unprecedented Transformation of Tetrathienoanthracene into Pentacene on Ni(111), *ACS Nano* **7**, 1652–1657 (2013).
148. J.M. MacLeod, Z. Ben Chaouch, D.F. Perepichka, **F. Rosei***, Two-Dimensional self-assembly of a symmetry-reduced tricarboxylic acid, *Langmuir* **29**, 7318–7324 (2013).
147. K.T. Dembele, R. Nechache[†], A. Vomiero, C. Santato, L. Nikolova, S. Licoccia, **F. Rosei***, Effect of Multi-Walled Carbon Nanotubes on the stability of Dye Sensitized Solar Cells, *J. Power Sources* **233**, 93–97 (2013).
146. R. Boulos, C. Harnagea, X. Duan, R.N. Lamb, **F. Rosei**, C.L. Raston*, Unzipping Oyster Shells, *RSC Advances* **3**, 3284–3290 (2013).
145. J.M. MacLeod[†], **F. Rosei***, Sustainable Sensors from Silk, *Nature Mater.* **12**, 98–100 (2013).
144. L. Nikolova, T. LaGrange, M.J. Stern, J. MacLeod, B.W. Reed, H. Ibrahim, G.H. Campbell, **F. Rosei**, B.J. Siwick, Complex crystallization dynamics in amorphous germanium observed with dynamic transmission electron microscopy, *Phys. Rev. B* **87**, 064105 (2013).
143. J. Zhang, G. Chen[†], M. Chaker, **F. Rosei**, D. Ma*, Gold nanoparticle decorated ceria nanotubes with significantly high catalytic activity for the reduction of nitrophenol and mechanism study, *Appl. Catal. B.* **132–133**, 107–115 (2013).
142. J. Toster, K.S. Iyer, W. Xiang, **F. Rosei**, L. Spiccia, C.L. Raston*, Diatom Frustules as Light Traps Enhance DSSC Efficiency, *Nanoscale* **5**, 873–876 (2013). [[Front Cover](#)]

141. B. Aïssa[†], K. Tagziria, E. Haddad, W. Jamroz, J. Loiseau, A. Higgins, M. Asgar-Khan, S.V. Hoa, P.G. Merle, D. Therriault, **F. Rosei**^{*}, The Self-Healing Capability of Carbon Fibre Composite Structures Subjected to Hypervelocity Impacts Simulating Orbital Space Debris, *ISRN Nanomaterials* 351205 (2012).
140. **F. Rosei**^{*}, T.W. Johnston, How to 'survive' after graduating in Materials Science V: presentations at conferences (oral and poster), *J. Mater. Ed.* **34**, 197–206 (2012).
139. S. Li, R. Nechache[†], C. Harnagea, L. Nikolova, **F. Rosei**^{*}, Single-crystalline BiFeO₃ nanowires and their ferroelectric behavior, *Appl. Phys. Lett.* **101**, 192903 (2012).
138. J. Lipton-Duffin[†], J. Miwa, S. Urquhart, G. Contini, A. Cossaro, L. Casalis, J.V. Barth, L. Floreano, A. Morgante, **F. Rosei**^{*}, Binding geometry of hydrogen-bonded chain motif in self-assembled PVBA gratings and layers on Ag(111), *Langmuir* **28**, 14291–14300 (2012).
137. H. Liang, G. Chen[†], S. Desinan[†], R. Rosei, **F. Rosei**, D. Ma^{*}, In situ facile synthesis of ruthenium nanocluster catalyst supported on carbon black for hydrogen generation from the hydrolysis of ammonia-borane, *Int. J. Hydrogen Energy* **37**, 17921–17927 (2012).
136. D. Obi, R. Nechache[†], C. Harnagea, **F. Rosei**^{*}, Mechanical and electrical properties of epitaxial Si nanowires grown by pulsed laser deposition, *J. Phys. Condens. Matter* **24**, 445008 (2012).
135. J. Sayago, **F. Rosei**^{*}, C. Santato^{*}, Blending Organic Building Blocks, *Nature Photonics* **6**, 639–640 (2012).
134. C. Fu, **F. Rosei**, D.F. Perepichka^{*}, 2D Self-assembly of fused oligothiophenes: molecular control of morphology, *ACS Nano* **6**, 7973–7980 (2012).
133. R. Gutzler[†], C. Fu, A. Dadvand, Y. Hua, J. MacLeod, **F. Rosei**^{*}, D. Perepichka^{*}, Halogen Bonds in 2D Supramolecular Self-Assembly of Organic Semiconductors, *Nanoscale* **4**, 5965–5971 (2012).
132. B. Aïssa^{*}, M. Nedil, H.A. Esam, N. Tabet, D. Therriault, **F. Rosei**^{*}, Ambipolar operation of hybrid SiC-carbon nanotube based thin film transistors for logic circuits applications, *Appl. Phys. Lett.* **101**, 043121 (2012).
131. R. Nechache[†], C. Harnagea, **F. Rosei**^{*}, Multiferroic nanoscale Bi₂FeCrO₆ material for spintronic-related applications, *Nanoscale* **4**, 5588–5592 (2012).
130. H. Liang, Z. Li, Z. Wang, W. Wang, **F. Rosei**, D. Ma, H. Xu^{*}, Enormous Surface Enhanced Raman Scattering from Dimers of Flower-like Silver Mesoparticle, *Small* **8**, 3400–3405 (2012).
129. G. Chen[†], S. Desinan[†], R. Rosei, **F. Rosei**, D. Ma^{*}, Hollow Ruthenium Nanoparticles with Small Dimensions Derived from Ni@Ru Core@shell Structure: Synthesis and Enhanced Catalytic Dehydrogenation of Ammonia Borane, *Chem. Comm.* **48**, 8009–8011 (2012).
128. B. Aïssa, R. Nechache, E. Haddad, W. Jamroz, P.G. Merle, **F. Rosei**^{*}, Ruthenium Grubbs' catalyst nanostructures grown by UV-excimer-laser ablation for self-healing applications, *Appl. Surf. Sci.* **258**, 9800–9804 (2012).
127. O. Moutanabbir, F. Ratto, S. Heun, K. Scheerschmidt, A. Locatelli, **F. Rosei**^{*}, Dynamic probe of atom exchange during monolayer growth, *Phys. Rev. B* **85**, 201416 (2012).
126. M. Azodi, C. Harnagea, V. Buscaglia, M. Buscaglia, P. Nanni, **F. Rosei**, A. Pignolet^{*}, Ferroelectric Switching in Bi₄Ti₃O₁₂ Nanorods, *IEEE Trans. On Ultrasonics, Ferroelectrics, and Frequency Control* **59**, 1903–1911 (2012).
125. G. Chen[†], **F. Rosei**, D. Ma^{*}, Interfacial Reaction-Directed Synthesis of Ce-Mn Binary Oxide Nanotubes and Their Applications in CO Oxidation and Water Treatment, *Adv. Func. Mater.* **22**, 3914–3920 (2012).
124. G. Chen[†], S. Desinan[†], R. Rosei, **F. Rosei**, D. Ma^{*}, Synthesis of Ni-Ru Alloy Nanoparticles and Their High Catalytic Activity in Dehydrogenation of Ammonia Borane, *Chem. Eur. J.* **18**, 7925–7930 (2012).
123. T. LaGrange^{*}, B.W. Reed, M. Santala, J. McKeown, A. Kulovits, J.M.K. Wiezorek, L. Nikolova, **F. Rosei**, B.J. Siwick, G.H. Campbell, Approaches for ultrafast imaging of transient materials processes in the transmission electron microscope, *Micron* **43**, 1108–1120 (2012).
122. J. Toster, I. Swaminathan, **F. Rosei**, C.L. Raston^{*}, Controlling Anatase Coating of Diatom Frustules by Varying the Binding Layer, *Cryst. Eng. Comm.* **14**, 3446–3450 (2012).
121. R. Nechache[†], C. Nauenheim, U. Lanke, A. Pignolet, **F. Rosei**, A. Ruediger^{*}, Coexistence of antiferromagnetic and ferromagnetic orders at remanent state in epitaxial multiferroic Bi₂FeCrO₆ nanostructures, *J. Phys. Cond. Matter* **24**, 142202 (2012).
120. B. Aïssa^{*}, N. Tabet, M. Nedil, D. Therriault, **F. Rosei**, R. Nechache[†], Electromagnetic Energy absorption potential and microwave heating capacity of SiC thin films in the 1–16 GHz frequency range, *Appl. Surf. Sci.* **258**, 5482–5485 (2012).
119. A. Dadvand, A.G. Moiseev, K. Sawabe, W.-H. Sun, B. Djukic, I. Chung, T. Takenobu, **F. Rosei**, D.F. Perepichka^{*}, Maximizing Field-Effect Mobility and Solid-State Luminescence in Organic Semiconductors, *Angew. Chem. Int. Ed. Eng.* **51**, 3837–3841 (2012).
118. C.P. Brown[†], C. Harnagea, H. Gill, Harinderjit, A. Price, E. Traversa, S. Licoccia, **F. Rosei**^{*}, Rough Fibrils Provide a Toughening Mechanism in Biological Fibres, *ACS Nano* **6**, 1961–1969 (2012).
117. R. Nechache[†], **F. Rosei**^{*}, Recent Progress in Nanostructured Multiferroic Bi₂FeCrO₆ Thin Films, *J. Solid State Chem.* **189**, 13–20 (2012).
116. J.M. MacLeod[†], C.V. Cojocar, F. Ratto, C. Harnagea, A. Bernardi, I. Alonso, **F. Rosei**^{*}, Modified Stranski-Krastanow growth in Ge/Si heterostructures via nanostenciled pulsed laser deposition, *Nanotechnology* **23**, 065603 (2012).
115. B. Aïssa, R. Nechache[†], D. Therriault, **F. Rosei**, M. Nedil, High-frequency electromagnetic properties of epitaxial Bi₂FeCrO₆ thin films grown by pulsed laser deposition, *Appl. Phys. Lett.* **99**, 183505 (2011).

114. R. Gutzler[†], L. Cardenas[†], **F. Rosei***, Kinetics and Thermodynamics in Surface-Confined Molecular Self-Assembly, *Chem. Sci.* **2**, 2290–2300 (2011).
113. **F. Rosei***, T.W. Johnston, How to ‘survive’ after graduating in Materials Science - IV: Writing Compelling Papers, *J. Mater. Ed.* **33**, 161–178 (2011).
112. G. Dubey, F. Rosei, G.P. Lopinski*, Highly sensitive electrical detection of TCNE on chemically passivated silicon-on-insulator, *Chem. Comm.* **47**, 10593–10595 (2011).
111. R. Gutzler[†], O. Ivasenko, C. Fu, J.L. Brusso, **F. Rosei***, D.F. Perepichka*, Halogen Bonds as Stabilizing Interactions in a Chiral Self-Assembled Molecular Monolayer, *Chem. Comm.* **47**, 9453–9455 (2011).
110. C.P. Brown[†], J.M. MacLeod[†], H. Amenitsch, F. Cacho-Nerin, H. Gill, A. Price, E. Traversa, S. Licoccia, **F. Rosei**, The critical role of water in spider silk and its consequence for protein mechanics, *Nanoscale* **3**, 3805–3811 (2011).
109. L. Cardenas, J. Lipton-Duffin, **F. Rosei***, Transformations of Molecular Frameworks by Host-Guest Response: Novel Routes Toward Two-Dimensional Self-Assembly at the Solid-Liquid Interface, *Jpn. J. Appl. Phys.* **50**, 08LA02 (2011).
108. J.M. MacLeod, **F. Rosei***, Expanding the scope of molecular self-organization studies through temperature control at the solution/solid interface, *Aust. J. Chem.* **64**, 1297–1298 (2011).
107. R. Nechache[†], C. Harnagea[†], S. Licoccia, E. Traversa, A. Ruediger, A. Pignolet, **F. Rosei***, Photovoltaic properties of Bi₂FeCrO₆ epitaxial thin films, *Appl. Phys. Lett.* **98**, 202902 (2011).
106. G. Chen[†], S. Desinan[†], R. Nechache[†], R. Rosei, **F. Rosei**, D. Ma, Bifunctional Catalytic/Magnetic Ni@Ru Core-Shell Nanoparticles, *Chem. Comm.* **47**, 6308–6310 (2011).
105. G. Dubey, F. Rosei, G.P. Lopinski*, Modulation of flat-band voltage on H-terminated silicon-on-insulator pseudo-metal-oxide-semiconductor field effect transistors by adsorption and reaction events, *J. Appl. Phys.* **109**, 104904 (2011).
104. R. Nechache[†], C.-V. Cojocaru, C. Harnagea, C. Nauenheim, M. Nicklaus, A. Ruediger*, **F. Rosei***, A. Pignolet*, Epitaxial patterning of Bi₂FeCrO₆ double perovskite nanostructures: Multiferroic at room temperature, *Adv. Mater.* **23**, 1724–1729 (2011).
103. C.P. Brown[†], **F. Rosei**, E. Traversa, S. Licoccia, Spider silk as a load bearing biomaterial: tailoring mechanical properties via structural modifications, *Nanoscale* **3**, 870–876 (2011).
102. L. Nikolova, T.B. LaGrange, B.W. Reed, M.J. Stern, N.D. Browning, G.H. Campbell, J.-C. Kieffer, B.J. Siwick, F. Rosei*, Nanocrystallization of amorphous Germanium films observed with nanosecond temporal resolution, *Appl. Phys. Lett.* **97**, 203102 (2010).
101. G. Dubey, F. Rosei, G.P. Lopinski*, Molecular Modulation of Conductivity on H-Terminated Silicon-on-Insulator Substrates, *Small* **6**, 2892–2899 (2010).
100. **F. Rosei***, T.W. Johnston, How to ‘survive’ after graduating in Materials Science III: The Peer Review System, *J. Mater. Ed.* **32**, 163–178 (2010).
99. C. Yan[†], A. Dadvand, **F. Rosei***, D.F. Perepichka*, Near-IR Photoresponse in New Up-Converting CdSe/NaYF₄:Yb,Er Nanoheterostructures, *J. Am. Chem. Soc.* **132**, 8868–8869 (2010).
98. J. Lipton-Duffin[†], J. Miwa, M. Kondratenko, F. Cicoira[†], B. Sumpter, V. Meunier*, D. Perepichka*, **F. Rosei***, Step-by-step growth of epitaxially aligned polythiophene by surface-confined reaction, *Proc. Nat. Acad. Sci. USA* **107**, 11200–11204 (2010).
97. L. Richert[†], F. Variola, **F. Rosei**, J.D. Wuest, A. Nanci, Adsorption of Proteins on Nanoporous Ti Surfaces, *Surf. Sci.* **604**, 1445–1451 (2010).
96. A. Ruediger, **F. Rosei***, AFM extends its reach, *Nature Nano.* **5**, 388–389 (2010).
95. M. Taheri*, S. McGowan, L. Nikolova, J.E. Evans, N. Teslich, J.P. Lu, T. LaGrange, **F. Rosei**, B.J. Siwick, N.D. Browning, In Situ Laser Crystallization of Amorphous Silicon: Controlled Nanosecond Studies in the Dynamic Transmission Electron Microscope, *Appl. Phys. Lett.* **97**, 032102 (2010).
94. F. Ratto, **F. Rosei***, Order and Disorder in the Heteroepitaxy of Semiconductor Nanostructures, *Mater. Sci. Eng. R* **70**, 243–264 (2010).
93. C. Santato, **F. Rosei***, Organic/Metal Interfaces: Seeing Both Sides, *Nature Chemistry* **2**, 344–345 (2010).
92. P. Castrucci, M. Scarselli, M. De Crescenzi, M.A. El Khakani, **F. Rosei**, Probing the electronic structure of carbon nanotubes by nanoscale spectroscopy, *Nanoscale* **2**, 1611–1625 (2010).
91. R. Nechache[†], C. Harnagea, A. Ruediger, **F. Rosei**, A. Pignolet, Effect of epitaxial strain on the structural and ferroelectric properties of Bi₂FeCrO₆ thin films, *Funct. Mater. Lett.* **3**, 83–88 (2010).
90. S. Jeeva, O. Lukyanova, A. Karas, A. Dadvand, **F. Rosei**, D.F. Perepichka*, Highly Emissive and Electrochemically Stable Thienylene Vinylene Oligomers and Copolymers: An Unusual Effect of Alkylsulfanyl Substituents, *Adv. Func. Mater.* **20**, 1661–1669 (2010).
89. C.-V. Cojocaru, R. Nechache[†], C. Harnagea[†], A. Pignolet*, **F. Rosei***, Nanoscale Patterning of Functional Perovskite-type Complex Oxides by Pulsed Laser Deposition through a Nanostencil, *Appl. Surf. Sci.* **256**, 4777–4783 (2010).
88. C. Yan[†], L. Nikolova, A. Dadvand, C. Harnagea, A. Sarkissian, D.F. Perepichka*, D. Xue*, **F. Rosei***, Multiple NaNbO₃/Nb₂O₅ Heterostructure Nanotubes: A New Class of Ferroelectric/Semiconductor Nanomaterials, *Adv. Mater.* **22**, 1741–1745 (2010).
87. J.M. MacLeod[†], O. Ivasenko, C. Fu, T. Taerum, **F. Rosei***, D.F. Perepichka*, Supramolecular ordering in oligothiophene-fullerene monolayers, *J. Am. Chem. Soc.* **131**, 16844–16850 (2009).

86. J.M. MacLeod^{*,†}, J. Lipton-Duffin[†], C. Fu, **F. Rosei**^{*}, Inducing nonlocal reactions with a local probe, *ACS Nano* **3**, 3347–3351 (2009).
85. M.A. El Khakani^{*}, V. Le Borgne, B. Aissa, **F. Rosei**, C. Scilletta, E. Speiser, M. Scarselli, P. Castrucci, M. De Crescenzi, Photocurrent generation in random networks of multiwall-carbon-nanotubes grown by an “all-laser” process, *Appl. Phys. Lett.* **95**, 083114 (2009).
84. F. Variola, A. Nanci, **F. Rosei**^{*}, Assessment of the titanium dioxide absorption coefficient by Grazing Angle Fourier Transform Infrared and Ellipsometric Measurements, *Appl. Spectrosc.* **63**, 1187–1190 (2009).
83. **F. Rosei**^{*}, T.W. Johnston, How to ‘Survive’ after Graduating in Materials Science II: Basic Advice, *J. Mater. Ed.* **31**, 293–310 (2009).
82. K. Dunn, J. Derr, T. Johnston, M. Chaker, **F. Rosei**^{*}, Multiexponential photoluminescence decay of blinking nanocrystal ensembles, *Phys. Rev. B* **80**, 035330 (2009).
81. F. Variola, A. Lauria, A. Nanci^{*}, **F. Rosei**^{*}, Influence of treatment conditions on the chemical oxidative activity of H₂SO₄/H₂O₂ mixtures for modulating the topography of titanium, *Adv. Eng. Mater.* **11**, B227–B234 (2009).
80. D.F. Perepichka^{*}, **F. Rosei**^{*}, Extending Polymer Conjugation into the Second Dimension, *Science* **323**, 216–217 (2009).
79. S. Barth^{*,†}, C. Harnagea, S. Mathur, **F. Rosei**^{*}, The Elastic Moduli of Oriented Tin Oxide Nanowires, *Nanotechnology* **20**, 115705 (2009).
78. **F. Rosei**^{*}, A. Pignolet, T.W. Johnston, How to ‘survive’ after graduating in Materials Science - I: Developing a Graduate Course on ‘Survival Skills for Scientists’, *J. Mater. Ed.* **31**, 65–80 (2009).
77. J. MacLeod[†], J. Lipton-Duffin[†], U. Lanke, S. Urquhart, **F. Rosei**^{*}, Shape transition in very large germanium islands on Si(111), *Appl. Phys. Lett.* **94**, 103109 (2009).
76. P. Castrucci, F. Tombolini, M. Scarselli, C. Scilletta, M. De Crescenzi, M. Diociaiuti, S. Casciardi, **F. Rosei**, M.A. El Khakani^{*}, Comparison of the local order in Highly Oriented Pyrolytic Graphite and bundles of single-wall carbon nanotubes by nanoscale extended energy loss spectra, *J. Phys. Chem. C* **113**, 4848–4855 (2009).
75. F. Vetrone[†], F. Variola, P. Tambasco de Oliveira, S.F. Zalzal, J.H. Yi, J. Sam, K. Bombonato-Prado, A. Sarkissian, D.F. Perepichka, J.D. Wuest, **F. Rosei**, A. Nanci^{*}, Nanoscale Oxidative Patterning of Metallic Surfaces to Modulate Cell Activity and Fate, *Nano Lett.* **9**, 659–665 (2009).
74. J. Lipton-Duffin[†], O. Ivasenko, D.F. Perepichka^{*}, **F. Rosei**^{*}, Synthesis of polyphenylene molecular wires by surface confined polymerization, *Small* **5**, 592–597 (2009). [[Front Cover](#)]
73. F. Variola, F. Vetrone[†], L. Richert[†], P. Jedrzejowski, J.H. Yi, S. Zalzal, S. Clair[†], A. Sarkissian, D.F. Perepichka, J.D. Wuest, **F. Rosei**^{*}, A. Nanci^{*}, Improving Biocompatibility of Implantable Metals by Nanoscale Modification of Surfaces: An Overview of Strategies, Fabrication Methods, and Challenges, *Small* **5**, 996–1006 (2009).
72. J. Derr^{*,†}, K. Dunn, D. Riabinina, F. Martin, M. Chaker, **F. Rosei**^{*}, Quantum confinement regime in Silicon nanocrystals, *Physica E* **41**, 668–670 (2009).
71. O. Ivasenko, J.M. MacLeod[†], K. Chernichenko, E. Balenkova, R.V. Shpanchenko, V.G. Nenajdenko, **F. Rosei**^{*}, D.F. Perepichka^{*}, Supramolecular assembly of heterocirculenes in 2D and 3D, *Chem. Comm.* 1192–1194 (2009). [[Inside Cover](#)]
70. A. Dadvand, F. Cicoira[†], K.Yu. Chernichenko, E.S. Balenkova, R.M. Osuna, **F. Rosei**, V.G. Nenajdenko, D.F. Perepichka^{*}, Heterocirculenes as a new class of organic semiconductors, *Chem. Comm.* 5354–5356 (2008).
69. Y. Naitoh, **F. Rosei**^{*}, A. Gourdon, E. Lægsgaard, I. Stensgaard, C. Joachim, F. Besenbacher^{*}, Scanning Tunneling Microscopy and Spectroscopy studies of individual Lander Molecules anchored on a Copper Oxide nanotemplate, *J. Phys. Chem. C* **112**, 16118–16122 (2008).
68. J.A. Miwa, F. Cicoira^{*,†}, J. Lipton-Duffin[†], D.F. Perepichka, C. Santato, **F. Rosei**^{*}, Self-assembly of rubrene on Cu(111), *Nanotechnology* **19**, 424021 (2008).
67. F. Ratto, S. Heun^{*}, O. Moutanabbir, **F. Rosei**^{*}, In situ nanoscale mapping of the chemical composition of surfaces and 3D nanostructures by photoelectron spectromicroscopy, *Nanotechnology* **19**, 265703 (2008).
66. J.A. Miwa, F. Cicoira[†], S. Bedwani, J. Lipton-Duffin[†], D. Perepichka, A. Rochefort, **F. Rosei**^{*}, Self-Assembly of Rubrene on Copper Surfaces, *J. Phys. Chem. C* **112**, 10214–10221 (2008).
65. B. Lu[†], T. Iimori, K. Sakamoto, K. Nakatsuji, **F. Rosei**, F. Komori^{*}, Fullerene on nitrogen-adsorbed Cu(001) nanopatterned surfaces: from preferential nucleation to layer-by-layer growth, *J. Phys. Chem. C* **112**, 10187–10192 (2008).
64. S. Clair[†], F. Variola, M. Kondratenko, P. Jedrzejowski, A. Nanci, **F. Rosei**^{*}, D.F. Perepichka^{*}, Self-assembled monolayer of alkanephosphoric acid on nanotextured Ti, *J. Chem. Phys.* **128**, 144705 (2008).
63. J.L. Brusso, O. Hirst, A. Dadvand, F. Cicoira, S. Ganesan, C. Robertson, R. Oakley, **F. Rosei**, D.F. Perepichka^{*}, Two-Dimensional Structural Motif in Thienoacene Semiconductors: Synthesis, Structure and Properties of Tetrathienoanthracene Isomers, *Chem. Mater.* **20**, 2484–2494 (2008).
62. F. Variola, J.H. Yi[†], L. Richert[†], J.D. Wuest, **F. Rosei**, A. Nanci^{*}, Tailoring the Surface Properties of Ti6Al4V by Controlled Chemical Oxidation, *Biomaterials* **29**, 1285–1298 (2008).
61. F. Cicoira[†], C. Santato, A. Dadvand, C. Harnagea[†], A. Pignolet, P. Bellutti, Z. Xiang, **F. Rosei**^{*}, H. Meng, D.F. Perepichka^{*}, Environmentally stable light emitting field effect transistors based on 2-(4-pentylstyryl)tetracene, *J. Mater. Chem.* **18**, 158–161 (2008).

60. F. Ciccoira[†], C. Santato, **F. Rosei**^{*}, Two-dimensional nanotemplates as surface cues for the controlled assembly of organic molecules, *Top. Curr. Chem.* **285**, 203–267 (2008). (*Invited Review*)
59. L. Richert[†], J.H. Yi[†], F. Vetrone[†], J.D. Wuest, **F. Rosei**, A. Nanci^{*}, Surface nanopatterning to control cell growth, *Adv. Mater.* **20**, 1488–1492 (2008).
58. F. Ratto, T.W. Johnston, S. Heun, **F. Rosei**^{*}, A numerical approach to quantify self-ordering among self-organized nanostructures, *Surf. Sci.*, **602**, 249–258 (2008).
57. C. Harnagea[†], C.V. Cojocaru, R. Nechache, O. Gautreau, **F. Rosei**, A. Pignolet^{*}, Towards ferroelectric and multiferroic nanostructures and their characterisation, *Int. J. Nanotech.* **5**, 930–962 (2008). (*Invited Review*).
56. G. Scappucci, F. Ratto, D. Thompson, T. Reusch, W. Pok, F. Ruess, **F. Rosei**, M.Y. Simmons^{*}, Structural and electrical characterization of room temperature ultra-high-vacuum compatible SiO₂ for gating scanning tunneling microscope-patterned devices, *Appl. Phys. Lett.* **91**, 222109 (2007).
55. G. Dubey, **F. Rosei**, G.P. Lopinski^{*}, Influence of Physisorbed water on the conductivity of hydrogen terminated silicon-on-insulator surfaces, *Appl. Phys. Lett.* **91**, 232111 (2007).
54. E. Peretto^{†,*}, M. Cini, S. Ugenti, P. Castrucci, M. Scarselli, M. De Crescenzi, **F. Rosei**, M.A. El Khakani, Electronic correlations in graphite and carbon nanotubes from Auger spectroscopy, *Phys. Rev. B* **76**, 233408 (2007).
53. H. Dang[†], T. Maris, J.H. Yi[†], **F. Rosei**, A. Nanci, J.D. Wuest^{*}, Ensuring Homology Between 2D and 3D Molecular Crystals, *Langmuir* **23**, 11980–11985 (2007).
52. F. Ciccoira[†], J.A. Miwa, D.F. Perepichka, **F. Rosei**^{*}, Molecular assembly of Rubrene on a metal/metal oxide nanotemplate, *J. Phys. Chem. A* **111**, 12674–12678 (2007).
51. C.V. Cojocaru, A. Bernardi, J. Reparaz, M.-I. Alonso, J. MacLeod[†], C. Harnagea[†], **F. Rosei**^{*}, Site-controlled Growth of Ge Nanostructures on Si(100) via Pulsed Laser Deposition Nanostenciling, *Appl. Phys. Lett.* **91**, 113112 (2007).
50. K.G. Nath[†], O. Ivasenko, J.M. MacLeod[†], A. Nanci, J.D. Wuest, D.F. Perepichka, **F. Rosei**^{*}, Crystal engineering in two dimensions: An approach to molecular nanopatterning, *J. Phys. Chem. C* **111**, 16996–17007 (2007).
49. J.M. MacLeod[†], O. Ivasenko, D.F. Perepichka, **F. Rosei**^{*}, Stabilization of exotic minority phases in a multicomponent self-assembled molecular network, *Nanotechnology* **18**, 424031 (2007).
48. D.F. Perepichka, **F. Rosei**^{*}, Metal nanoparticles: from ‘artificial atoms’ to ‘artificial molecules’, *Angew. Chem. Int. Ed.* **46**, 6006–6008 (2007).
47. D. Riabinina^{*}, C. Durand[†], **F. Rosei**^{*}, M. Chaker, Luminescent silicon nanostructures synthesized by laser ablation, *Phys. Stat. Sol. A* **204**, 1623–1638 (2007).
46. P. Castrucci, F. Tombolini, M. Scarselli, S. Bini, M. De Crescenzi, M. Diociaiuti, S. Casciardi, M.A. El Khakani^{*}, **F. Rosei**, Anharmonicity in single-wall carbon nanotubes as evidenced by means of extended energy loss fine structure spectroscopy analysis, *Phys. Rev. B* **75**, 035420 (2007).
45. N. Motta^{*}, F. Boscherini, A. Sgarlata, A. Balzarotti, G. Capellini, F. Ratto, **F. Rosei**^{*}, GeSi intermixing in Ge nanostructures on Si(111): An XAFS versus STM study, *Phys. Rev. B* **75**, 035337 (2007).
44. D. Riabinina^{*}, M. Chaker, **F. Rosei**, Correlation between plasma dynamics and porosity of Ge films synthesized by pulsed laser deposition, *Appl. Phys. Lett.* **89**, 131501 (2006).
43. F. Ratto, G. Costantini, A. Rastelli, O.G. Schmidt, K. Kern, **F. Rosei**^{*}, Alloying of self-organized semiconductor 3D islands, *J. Exp. Nanoscience* **1**, 279–305 (2006).
42. J.H. Yi[†], C. Bernard[†], F. Variola, S. Zalzal, J.D. Wuest, **F. Rosei**, A. Nanci^{*}, Characterization of a bioactive nanotextured surface created by directed chemical oxidation of titanium, *Surf. Sci.* **600**, 4613–4621 (2006).
41. D. Riabinina^{*}, C. Durand[†], J. Margot, M. Chaker, G. Botton, **F. Rosei**, Nucleation and growth of Si nanocrystals in an amorphous SiO₂ matrix, *Phys. Rev. B* **74**, 075334 (2006).
40. F. Ciccoira[†], J.A. Miwa, M. Melucci, G. Barbarella, **F. Rosei**^{*}, Ordered Assembly of α -Quinquethiophene on a Copper Oxide Nanotemplate, *Small* **2**, 1366–1371 (2006).
39. C.V. Cojocaru, C. Harnagea[†], A. Pignolet, **F. Rosei**^{*}, Nanostenciling of Functional Materials by Room Temperature Pulsed Laser Deposition, *IEEE Trans. on Nanotechnology* **5**, 470–477 (2006).
38. K.G. Nath^{†,*}, O. Ivasenko, J.A. Miwa, H. Dang[†], J.D. Wuest, A. Nanci, D.F. Perepichka^{*}, **F. Rosei**^{*}, Rational Modulation of the Periodicity in Linear Hydrogen-Bonded Assemblies of Trimesic Acid on Surfaces, *J. Am. Chem. Soc.* **128**, 4212–4213 (2006).
37. D. Riabinina^{*}, C. Durand[†], M. Chaker, N. Rowell, **F. Rosei**, A Novel approach to the synthesis of photoluminescent germanium nanoparticles by reactive laser ablation, *Nanotechnology* **17**, 2152–2155 (2006).
36. J.A. Miwa, S. Weigelt, H. Gersen, F. Besenbacher, **F. Rosei**, T.R. Linderoth^{*}, Azobenzene on Cu(110): Adsorption site dependent diffusion, *J. Am. Chem. Soc.* **128**, 3164–3165 (2006).
35. F. Ratto, A. Locatelli, S. Fontana, S. Kharrazi, S. Ashtaputre, S.K. Kulkarni, S. Heun^{*}, **F. Rosei**^{*}, Diffusion dynamics during the nucleation and growth of Ge/Si nanostructures on Si(111), *Phys. Rev. Lett.* **96**, 096103 (2006).
34. C. Santato, F. Ciccoira^{†,*}, P. Cosseddu, A. Bonfiglio, P. Bellutti, M. Muccini, R. Zamboni, **F. Rosei**, A. Mantoux, P. Doppelt, Organic Light-Emitting Transistors using concentric source/drain electrodes on a molecular adhesion layer, *Appl. Phys. Lett.* **88**, 163511 (2006).

33. R. Otero, **F. Rosei**, F. Besenbacher, Scanning Tunneling Microscopy Manipulation of Complex Organic Molecules on Solid Surfaces, *Ann. Rev. Phys. Chem.* **57**, 497–525 (2006).
32. **D. Riabinina***, C. Durand[†], M. Chaker*, **F. Rosei**, Photoluminescent silicon nanocrystals synthesized by reactive laser ablation, *Appl. Phys. Lett.* **88**, 073105 (2006).
31. **F. Ratto**, A. Locatelli, S. Fontana, **S. Kharrazi**, **S. Ashtaputre**, S.K. Kulkarni, S. Heun, **F. Rosei***, Chemical Mapping of Individual Semiconductor Nanostructures, *Small* **2**, 401–405 (2006).
30. F. Ciccoira[†], **F. Rosei***, Playing Tetris at the Nanoscale, *Surf. Sci.* **600**, 1–5 (2006).
29. D.F. Perepichka, **F. Rosei***, Silicon Nanotubes, *Small* **2**, 22–25 (2006).
28. **D. Riabinina***, **F. Rosei**, M. Chaker, Structural properties of Ge nanostructured films synthesized by laser ablation, *J. Exp. Nanoscience* **1**, 83–89 (2005).
27. **J.A. Miwa**, B.J. Eves[†], **F. Rosei**, G.P. Lopinski*, Selective adsorption of Pyridine at isolated reactive sites on Si(100), *J. Phys. Chem. B* **109**, 20055–20059 (2005).
26. P. Castrucci, M. Scarselli, M. De Crescenzi, M. Diociaiuti, P. Chistolini, M.A. El Khakani*, **F. Rosei**, Packing-induced electronic structure changes in bundled single-wall carbon nanotubes, *Appl. Phys. Lett.* **87**, 103106 (2005).
25. M. Sijaj, C. Maltais, E.M. Zahidi, H. Oudghiri–Hassani, J. Wang, **F. Rosei**, P.H. McBreen*, Carbon–Nitrogen Place Exchange on NO Exposed β -Mo₂C, *J. Phys. Chem. B* **109**, 15376–15382 (2005).
24. **C.V. Cojocaru**, **F. Ratto**, C. Harnagea[†], A. Pignolet, **F. Rosei***, Semiconductor and Insulator Nanostructures: Challenges and Opportunities, *Microel. Eng.* **80**, 448–456 (2005).
23. **C.V. Cojocaru**, C. Harnagea[†], **F. Rosei***, A. Pignolet, M.A.F. van den Boogart, J. Brügger, Complex Oxide Nanostructures by Pulsed Laser Deposition through Nanostencils, *Appl. Phys. Lett.* **86**, 183107 (2005).
22. **F. Ratto**, **F. Rosei***, S. Cherifi, A. Locatelli, S. Fontana, S. Heun, P.D. Szkutnik, A. Sgarlata, N. Motta, M. De Crescenzi, Composition of Ge(Si) islands in the growth of Ge on Si(111) by X-Ray spectromicroscopy, *J. Appl. Phys.* **97**, 043516 (2005).
21. **R. Dolbec**, **E. Irissou**, M. Chaker, D. Guay, **F. Rosei**, M.A. El Khakani*, Growth dynamics of pulsed laser deposited Pt nanoparticles on highly oriented pyrolytic graphite substrates, *Phys. Rev. B* **70**, (R) 201406 (2004).
20. P. Castrucci, M. Scarselli, M. De Crescenzi, M.A. El Khakani*, **F. Rosei**, N. Braidy, J.H. Yi, Effect of coiling on the electronic properties along single-wall carbon nanotubes, *Appl. Phys. Lett.* **85**, 3857–3859 (2004).
19. **F. Ratto**, **F. Rosei***, S. Cherifi, A. Locatelli, S. Fontana, S. Heun, P.D. Szkutnik, A. Sgarlata, N. Motta, M. De Crescenzi, Composition of Ge(Si) islands in the growth of Ge on Si(111), *Appl. Phys. Lett.* **84**, 4526–4528 (2004).
18. **F. Rosei***, Nanostructured Surfaces: Challenges and Frontiers in Nanotechnology, *J. Phys.: Condens. Matter.* **16**, S1373–S1436 (2004). (*Invited Review Article*)
17. R. Otero, Y. Naitoh, **F. Rosei**, P. Jiang, P. Thosttrup, A. Gourdon, E. Lægsgaard, I. Stensgaard, C. Joachim, F. Besenbacher, One-Dimensional Assembly and Selective Orientation of Lander Molecules on an O–Cu Template, *Angew. Chem. Int. Ed.* **43**, 2092–2095 (2004), [also *Angew. Chem.* **116**, 2144–2147 (2004)].
16. R. Otero, **F. Rosei**, Y. Naitoh, P. Jiang, P. Thosttrup, A. Gourdon, E. Laegsgaard, I. Stensgaard, C. Joachim, F. Besenbacher, Nanostructuring Cu surfaces using custom designed Molecular Molds, *Nano Lett.* **4**, 75–78 (2004).
15. A. Sgarlata, P.D. Szkutnik[†], A. Balzarotti, N. Motta, **F. Rosei**, Self-ordering of Ge islands on step-bunched Si(111) surfaces, *Appl. Phys. Lett.* **83**, 4002–4004 (2003).
14. N. Motta, A. Sgarlata, **F. Rosei**, P.D. Szkutnik, S. Nufriis, M. Scarselli, A. Balzarotti, Controlling the quantum dot nucleation site, *Mater. Sci. Eng. B* **101**, 77–88 (2003).
13. **F. Rosei**, M. Schunack, Y. Naitoh, P. Jiang, A. Gourdon, E. Laegsgaard, I. Stensgaard, C. Joachim, F. Besenbacher, Properties of Large Organic Molecules on Metal Surfaces, *Prog. Surf. Sci.* **71**, 95–146 (2003). (*Invited Review*)
12. **F. Ratto**, **F. Rosei***, Comment on: “Formation of two dimension Ge cluster superlattice on Si(111)–(7x7) surface [*Surf. Sci.* **506** (2002) L255]”, *Surf. Sci.* **530**, 221–224 (2003).
11. **M. Schunack**, **F. Rosei**, Y. Naitoh, P. Jiang, A. Gourdon, E. Lægsgaard, I. Stensgaard, C. Joachim, F. Besenbacher, Adsorption behavior of Lander molecules on Cu(110) studied by scanning tunnelling microscopy, *J. Chem. Phys.* **117**, 6259–6265 (2002).
10. **F. Rosei***, **P. Raiteri**, Stress induced surface melting during the growth of Ge wetting layer on Si(001) and Si(111), *Appl. Surf. Sci.* **195**, 16–19 (2002).
9. **F. Rosei**, **M. Schunack**, P. Jiang, A. Gourdon, E. Lægsgaard, I. Stensgaard, C. Joachim, F. Besenbacher, Organic molecules acting as templates on metal surfaces, *Science* **296**, 328–331 (2002).
8. **M. Schunack**, T.R. Linderoth, **F. Rosei**, E. Lægsgaard, I. Stensgaard, F. Besenbacher, Long jumps in the Surface Diffusion of Large Molecules, *Phys. Rev. Lett.* **88**, 156102 (2002).
7. **F. Rosei**, R. Rosei, Atomic Description of Surface Processes: Diffusion and Dynamics, *Surf. Sci.* **500**, 395–413 (2002). (*Invited Review*).
6. N. Motta, **F. Rosei**, A. Sgarlata, G. Capellini, S. Mobilio, F. Boscherini, Evolution of the intermixing process in Ge/Si(111) Self-assembled islands, *Mater. Sci. Eng. B* **88**, 264–268 (2002).
5. **F. Rosei***, S. Fontana, Comment on “Surface morphology and electronic structure of Ge/Si(111) 7x7 system”, [*Appl. Surf. Sci.* **173** p270 (2001)], *Appl. Surf. Sci.* **183**, 278–283 (2001).

4. F. Rosei*, N. Motta, A. Sgarlata, G. Capellini, F. Boscherini, *Erratum to Formation of the Wetting Layer in Ge/Si(111) studied by STM and XAFS (Thin Solid Films 369, 29 (2000))*, *Thin Solid Films* **397**, 296 (2001).
3. F. Boscherini, G. Capellini, L. Di Gaspare, M. De Seta, F. Rosei, N. Motta, A. Sgarlata, S. Mobilio, *Ge-Si intermixing in Ge quantum dots on Si*, *Thin Solid Films* **380**, 173–175 (2000).
2. F. Rosei*, N. Motta, A. Sgarlata, G. Capellini, F. Boscherini, *Formation of the Wetting Layer in Ge/Si(111) studied by STM and XAFS*, *Thin Solid Films* **369**, 29–32 (2000).
1. F. Boscherini, G. Capellini, L. Di Gaspare, F. Rosei, N. Motta, S. Mobilio, *Ge-Si intermixing in Ge quantum dots on Si(001) and Si(111)*, *Appl. Phys. Lett.* **76**, 682–684 (2000).

INVITED, KEYNOTE AND PLENARY INTERNATIONAL CONFERENCE PRESENTATIONS (356)

Plenary: 26, Keynote: 50, Tutorial: 11, Panelist: 5

356. F. Rosei (**Keynote**), *Multi-functional Materials for Emerging Sustainable Technologies*, ICNRD-2023, Singapore, Dec. 2023.
355. F. Rosei, *Multi-functional Materials for Emerging Sustainable Technologies*, PACRIM 15, Shenzhen (China), Nov. 2023.
354. F. Rosei, *Multi-functional Materials for Emerging Sustainable Technologies*, IEEE NMDC, Paestum (Italy), Oct. 2023.
353. F. Rosei, *Multi-functional Materials for Emerging Sustainable Technologies*, MS&T, Columbus (OH), Oct. 2023.
352. F. Rosei (**Keynote**), *Multi-functional Materials for Emerging Sustainable Technologies*, Chinanano, Beijing Aug. 2023.
351. F. Rosei, *Multi-functional Materials for Emerging Sustainable Technologies*, IMRC Cancun (Mexico), Aug. 2023.
350. F. Rosei (**Keynote**), *Multi-functional Materials for Emerging Sustainable Technologies*, IEEE 3M-Nano, Chengdu (China), Aug. 2023.
349. F. Rosei, *Solution Processed Nanomaterials for Solar Technologies*, ICMAT Symposium U, Singapore, June 2023.
348. F. Rosei, *Multi-functional Materials for Emerging Sustainable Technologies*, ICMAT Symposium W, Singapore, June 2023.
347. F. Rosei, *Multi-functional Materials for Emerging Sustainable Technologies*, 6th International Conference on Nanoenergy and Nanosystems (NENS), Beijing (China), June 2023.
346. F. Rosei, *Sustainable Development: Is it a contradiction in terms?*, *John Wheatley Award Talk*, APS April Meeting, Minneapolis, April 2023 (originally planned in March 2019, postponed due to health problems).
345. F. Rosei, *Surface confined conjugated polymers: organic analogues of graphene*, 2021 Gordon Research Conference: Chemical Reactions at Surfaces, Barga (Italy), Feb. 2023. (**post-poned to 2023 due to Corona Virus pandemic**).
344. F. Rosei, *Survival Skills for Scientists*, American Ceramic Society Winter Workshop, Daytona Beach, Jan. 2023.
343. F. Rosei (**Keynote**), *Multi-functional Materials for Emerging Technologies*, MRS Africa, Dakar (Senegal), Dec. 2022.
342. F. Rosei (**Keynote**), *Multi-functional Materials for Emerging Technologies*, Nano Africa, Cape Town (S. Africa), Oct. 2022.
341. F. Rosei (**Plenary**), *Materials for Sustainability and Sustainable Materials*, International Conference on Materials Science (3d-ICOMAS), Verona (Italy), Oct. 2022.
340. F. Rosei, *Nanoscale structure and modification of Biomaterials*, MS&T, Pittsburgh (PA), Oct. 2022. (Cancelled due to health problems)
339. F. Rosei, *Multi-functional Materials for Emerging Technologies*, MS&T, Pittsburgh (PA), Oct. 2022. (Cancelled due to health problems)
338. F. Rosei, *Materials for Sustainability and Sustainable Materials*, Physics for Sustainable Development, Rome (Italy), Sept. 2022.
337. F. Rosei, *Multi-functional Materials for Emerging Technologies*, iPlasma Nano, Seville (Spain) Sept. 2022 (Virtual).
336. F. Rosei, *Multi-functional Materials for Emerging Technologies*, Photorefractive Photonics and Beyond (PR22), Padova (Italy), Sept. 2022.
335. F. Rosei, *Multi-functional Materials for Emerging Technologies*, IMRC, Cancun (Mexico), Aug. 2022.
334. F. Rosei, (**Tutorial**) *Survival Skills for Scientists*, IMRC, Cancun (Mexico), August 2022.
333. F. Rosei, *Survival Skills for Scientists*, Student Evening at the European Ceramic Society, Krakow (Poland) July 2022.
332. F. Rosei (**Plenary**), *Multi-functional Materials for Emerging Technologies*, International Conference on Frontier Materials, Zhuhai (China), May 2022 (**Virtual**).
331. F. Rosei, *Multi-functional Materials for Emerging Technologies*, SPIE Photonics West, San Francisco, Jan. 2022
330. F. Rosei, *Multi-functional Materials for Emerging Technologies*, PACRIM 14, Vancouver, Dec. 2021 (**post-poned due to Corona Virus pandemic; held as virtual event**).
329. F. Rosei, *Nanoscale structure and modification of Biomaterials*, PACRIM 14, Vancouver, Dec. 2021 (**post-poned due to Corona Virus pandemic; held as virtual event**).
328. F. Rosei, *Multi-functional Materials for Emerging Technologies*, MS&T, Columbus (OH), Oct. 2021 (**Virtual** participation).
327. F. Rosei, (**Plenary**) *Multi-functional Materials for Emerging Technologies*, 3rd World Congress & Expo on Chemical Engineering & Catalysis, Montreal, July 2020. (**post-poned due to Corona Virus pandemic**).
326. F. Rosei, *Multi-functional Materials for Emerging Solar Technologies*, 1st Pan American Ceramics Congress, Panama, July 2020. (**post-poned due to Corona Virus pandemic**).
325. F. Rosei, *Nanoscale structure and modification of Biomaterials*, 1st Pan American Ceramics Congress, Panama, July 2020. (**post-poned due to Corona Virus pandemic**)

324. F. Rosei, *Multi-functional Materials for Emerging Technologies*, XVI Congreso Internacional de Investigación Científica (**Virtual** / Dominican Republic), June 2021.
323. F. Rosei, (**Plenary**) *Multi-functional Materials for Emerging Technologies*, International Conference and Exhibition on Nanotechnology, Dubai (UAE), June 2020. (**post-poned** due to Corona Virus pandemic)
322. F. Rosei, *Multi-functional Materials for Emerging Solar Technologies*, THERMEC, Vienna (Austria), May 2020 (**post-poned** due to Corona Virus pandemic).
321. F. Rosei, *Multi-functional Materials for Emerging Solar Technologies*, EMRS Symposium on Exotic materials and innovative concepts for photovoltaics, Strasbourg (France) May 2020 (**post-poned** to 2021 due to Corona Virus pandemic; Virtual event).
320. F. Rosei, *The role of science and technology in promoting sustainable development*, 2020 Forum on Science, Technology and Sustainable Development for the Better Future of Humankind, Nanjing, May 19-22, 2020. (**post-poned** due to Corona Virus pandemic).
319. F. Rosei, (**Keynote**) *Multi-functional Materials for Emerging Technologies*, 5th International Conference on Nanomaterials, Nanodevices, Fabrication and Characterization (ICNNFC'20), Lisbon (Portugal), April 2020. (**post-poned** due to Corona Virus pandemic).
318. F. Rosei, (**Keynote**) *Multi-functional Materials for Emerging Technologies*, International Conference on Nano Research and Development, Singapore, March 2020. (**post-poned** due to Corona Virus epidemic).
317. F. Rosei, (**Keynote**) *Multi-functional Materials for Emerging Technologies*, 2nd Sharjah Conference on Physics of Materials (SICPAM 2020), UAE, March 2020. (**post-poned** due to Corona Virus epidemic).
316. F. Rosei, *Multi-functional Materials for Emerging Solar Technologies, John Wheatley Award Talk*, APS March Meeting, Denver, March 2020 (rescheduled); (**post-poned** due to Corona Virus epidemic).
315. F. Rosei, *Multi-functional Materials for Emerging Technologies*, SPIE Photonics West, San Francisco, Feb. 2020 (my participation was canceled due to Corona Virus epidemic).
314. F. Rosei, *Multi-functional Materials for Emerging Solar Technologies*, ICACCS 44, Daytona Beach, Jan. 2020.
313. F. Rosei, *Nanoscale structure and modification of Biomaterials*, ICACCS 44, Daytona Beach, Jan. 2020.
312. F. Rosei, (**Plenary**) *Multi-functional Materials for Emerging Technologies*, African MRS, Arusha (Tanzania), Dec. 2019.
311. F. Rosei, (**Plenary**) *Nanoscale structure and modification of Biomaterials*, IEEE NANOMED, South Korea, Nov. 2019.
310. F. Rosei, (**Plenary**) *Multi-functional Materials for Emerging Technologies*, 17th Chinese Young Materials Science Conference, Shanghai, Nov. 2019.
309. F. Rosei, *Multi-functional Materials for Emerging Technologies*, European Academy of Sciences Annual Meeting, Madrid, October 2019. (*Blaise Pascal Medal in Materials Award Lecture*).
308. F. Rosei, *Multi-functional Materials for Emerging Technologies*, 236th ECS Meeting, Atlanta (GA, USA), Oct. 2019.
307. F. Rosei, *Multi-functional Materials for Emerging Technologies*, Optics and Applications to Sustainable Development, Carthage (Tunisia), Sept. 2019.
306. F. Rosei, (**Tutorial**) *Survival Skills for Scientists*, IMRC, Cancun, August 2019.
305. F. Rosei, *Nanoscale structure and modification of Biomaterials*, 7th International Symposium on Surfaces and Interfaces for Biomaterials, Quebec City (Canada), July 2019.
304. F. Rosei, *Nanoscale structure and modification of Biomaterials*, GFMAT-2 / Bio-4, Toronto (Canada), July 2019.
303. F. Rosei, *Multi-functional Materials for Emerging Technologies*, Energy, Materials and Photonics (EMP) Conference, Shanghai, July 2019.
302. F. Rosei, (**Keynote**) *Multi-functional Materials for Emerging Technologies*, IEEE INEC, Kuching (Malaysia), July 2019.
301. F. Rosei, *Multi-functional Materials for Solar Technologies*, ICMAT Symposium P, Singapore, June 2019.
300. F. Rosei, *Multi-functional Materials for Emerging Technologies*, ICMAT Symposium II, Singapore, June 2019.
299. F. Rosei, (**Plenary**) *Multi-functional Materials for Electronics and Photonics*, 5th Global Congress & Expo on Materials Science & Engineering, Osaka (Japan), June 2019 (Cancelled due to health problems).
298. F. Rosei, (**Keynote**) *Nanoscale structure and modification of Biomaterials*, CICC-11, Kunming (China), May 2019. (the lecture was given by one of my students, due to health problems).
297. F. Rosei, (**Keynote**) *Multiferroic photovoltaics: challenges and opportunities*, CICC-11, Kunming (China), May 2019. (the lecture was given by one of my students, due to health problems).
296. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, Qingdao International Academician Summit, Qingdao, May 2019.
295. F. Rosei, *Nanoscale structure and modification of Biomaterials*, TMS Meeting, San Antonio, March 2019. (the lecture was given by one of my students, due to health problems).
294. F. Rosei, *Multi-functional Materials for Emerging Solar Technologies, John Wheatley Award Talk*, APS March Meeting, Boston, March 2019 (postponed due to health problems).
293. F. Rosei, *Multiferroic photovoltaics: challenges and opportunities*, SPIE Photonics West, San Francisco, Feb. 2019 (Cancelled due to health problems).
292. F. Rosei, *Multi-functional Materials for Emerging Solar Technologies*, ICACCS 43, Daytona Beach, Jan. 2019.
291. F. Rosei, *Nanoscale structure and modification of Biomaterials*, ICACCS 43, Daytona Beach, Jan. 2019.

290. F. Rosei, **(Plenary)** *Multi-functional Materials for Emerging Solar Technologies*, Vth National Congress of Nanotechnology (CNN5), Pucon, Chile, Nov. 2018.
289. F. Rosei, **(Plenary)** *Multi-functional Materials for Emerging Solar Technologies*, NANOSMAT Africa, Cape Town (South Africa), Nov. 2018.
288. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, 11th International Photonics and OptoElectronics Meetings (POEM 2018), Wuhan (China), Oct. 2018.
287. F. Rosei, **(Keynote)** *Multi-functional Materials for Emerging Solar Technologies*, Asia NANO 2018, Qingdao (China), Oct. 2018.
286. F. Rosei, *Structure / property relationships in Biomaterials at the nanoscale*, MS&T Conference, Columbus, Oct. 2018.
285. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, Americas International Meeting on Electrochemistry and Solid State Science (ECS Meeting), Cancun, Oct. 2018.
284. F. Rosei, *Multi-functional Materials for Solar Technologies*, CCMST 2018, Beijing, Sept. 2018.
283. F. Rosei, *Multi-functional Materials for Solar Technologies*, Symposium on Solar Hydrogen Production, IMRC (Cancun), Aug. 2018.
282. F. Rosei, **(Tutorial)** *Survival Skills for Scientists*, IMRC, Cancun, August 2018.
281. F. Rosei, **(Keynote)** *Multi-functional Materials for Emerging Technologies*, ICANM2018: 6th International Conference and Exhibition on Advanced & Nano Materials, Quebec City, Aug. 2018.
280. F. Rosei, *Multi-functional Materials for Solar Technologies*, Symposium on Emerging Materials and Technologies for Solar Cells and Solar Fuel Technologies, 12th International Conference on Ceramic Materials and Components for Energy and Environmental Applications (CMCEE), Singapore, July 2018.
279. F. Rosei, *Structure / property relationships in Biomaterials at the nanoscale*, Symposium on Global Innovations in Biomaterials, Biomanufacturing, and Biotechnologies, 12th International Conference on Ceramic Materials and Components for Energy and Environmental Applications (CMCEE), Singapore, July 2018.
278. F. Rosei, *Multi-functional Materials for Emerging Solar Technologies*, Asia-Pacific Conference on Energy Storage and Conversion, Singapore July 2018.
277. F. Rosei, *Organic 2D Materials*, European MRS, Strasbourg (France), June 2018.
276. F. Rosei, **(Keynote)** *Multi-functional Materials for Electronics and Photonics*, 3rd Global Congress & Expo on Materials Science & Engineering, Rome (Italy), June 2018.
275. F. Rosei, **(Plenary)** *Multi-functional Materials for Emerging Technologies*, EMN Chengdu (China), May 2018.
274. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, CMOS Emerging Technologies, Whistler, May 2018.
273. F. Rosei, **(Keynote)** *Graphene and its use in biomedical and energy applications*, 5th International Forum on Graphene, Shenzhen (China), April 2018.
272. F. Rosei, *Structure / property relationships in Biomaterials at the nanoscale*, MRS Spring Meeting, Phoenix (AZ), April 2018.
271. F. Rosei, **(Keynote)** *Multi-functional Materials for Emerging Solar Technologies*, Innovations and Interdisciplinary Solutions For Underserved Areas, Kigali (Rwanda), March 2018.
270. F. Rosei, *Nanoscale structure and modification of Biomaterials*, TMS 2018, Phoenix (AZ), March 2018.
269. F. Rosei, *Nanoscale structure and modification of Biomaterials*, ICACCS 42, Daytona Beach, Jan. 2018.
268. F. Rosei, *Multi-functional Materials for Emerging Solar Technologies*, IEEE INEC, Kuala Lumpur (Malaysia), Jan. 2018.
267. F. Rosei, *Survival Skills for Scientists*, Symposium on Materials Education and Curriculum Development, African MRS, Gaborone (Botswana), Dec. 2017.
266. F. Rosei, *Multi-functional Materials for Emerging Solar Technologies*, Canada / South Africa Networking Workshop, iThemba Labs (Cape Town), Dec. 2017.
265. F. Rosei, **(Plenary)** *Survival Skills for Scientists*, CICC-10, Nanchang (China), Nov. 2017.
264. F. Rosei, **(Plenary)** *Multi-functional Materials for Electronics and Photonics*, CICC-10, Nanchang (China), Nov. 2017.
263. F. Rosei, **(Keynote)** *Multi-functional Materials for Electronics and Photonics*, ACTSEA 2017, Kaohsiung (Taiwan), Nov. 2017.
262. F. Rosei, *Survival Skills for Scientists*, TED^x NANO, Chinese Academy of Science, Beijing (China), Oct. 2017.
261. F. Rosei, *Multi-functional Materials for Solar Technologies*, 3rd International Conference on Nanoenergy and Nanosystems, Oct. 2017, Beijing (China).
260. F. Rosei, **(Plenary)** *Multi-functional Materials for Electronics and Photonics*, 13th IUPAC International Conference on Novel Materials and their Synthesis, Nanjing (China), Oct. 2017.
259. F. Rosei, *Nanoscale structure and modification of Biomaterials*, MS&T Conference, Pittsburgh (PA), Oct. 2017.
258. F. Rosei, *Multi-ferroic Materials for Solar Technologies*, Workshop on *New Horizons in Photovoltaics: Polar, Topological, Ferroelectric, Hot Carriers*, University of Pennsylvania, Philadelphia (PA), 31 Aug.–01 Sept. 2017.
257. F. Rosei, *New Reactions in Surface Chemistry*, Nanoscale Horizons Symposium, China Nano, Beijing, August 2017.
256. F. Rosei, **(Keynote)** *Multi-ferroic Materials for Solar Technologies*, China Nano, Beijing, August 2017.
255. F. Rosei, **(Keynote)** *Multi-ferroic Materials for Solar Technologies*, IUMRS-ICAM, Kyoto (Japan), August 2017.
254. F. Rosei, **(Tutorial)** *Survival Skills for Scientists*, IMRC, Cancun, August 2017.
253. F. Rosei, **(Keynote)** *Multi-functional Materials for Electronics and Photonics*, NANOMXCN Workshop, IMRC Cancun, Aug. 2017.

252. F. Rosei, **(Keynote)** *Multi-ferroic Materials for Solar Technologies*, IEEE 3M Nano, Shanghai, Aug. 2017.
251. F. Rosei, *Surface polymerization using the Ullmann coupling reaction*, Symposium on Molecular Phenomena at Surfaces, University of Warwick, Coventry (UK), July 27th 2017.
250. F. Rosei, *Exploring Molecular Assembly at Surfaces*, Faraday Discussion meeting on *Complex Molecular Surfaces and Interfaces*, Sheffield (UK), July 2017.
249. F. Rosei, **(Panelist)**, *Science and Innovation and their contribution to the Sustainable Development Goals*, Conference of the UNESCO Chairs in Natural Sciences, Geneva, July 2017.
248. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, ICMAT, Singapore June 2017.
247. F. Rosei, **(Panelist)**, *Industrial applications of Graphene*, 2nd International Forum on the Industrialization of Graphene, Chengdu, June 2017.
246. F. Rosei, **(Plenary)** *Graphene and its use in biomedical and energy applications*, 2nd International Forum on the Industrialization of Graphene, Chengdu, June 2017.
245. F. Rosei, *Nanoscale structure and modification of Biomaterials*, PACRIM 12, Kona (HI), May 2017.
244. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, EMN Conference on Metamaterials, Chengdu, May 2017.
243. F. Rosei, *Polymerization reactions confined to two dimensions*, ACS Spring Meeting, San Francisco, April 2017.
242. F. Rosei, *Exploring Molecular Assembly at Surfaces*, ACS Spring Meeting, San Francisco, April 2017.
241. F. Rosei, **(Keynote)** *Graphene and its use in biomedical and energy applications*, 4th International Forum on Graphene, Shenzhen (China), April 2017.
240. F. Rosei, **(Keynote)** *Multi-functional Materials for Solar Technologies*, TMS Annual Meeting, San Diego (CA), Feb. 2017.
239. F. Rosei, **(Keynote)** *Emerging Solar Technologies*, XVI World Renewable Energy Congress, Perth (Australia), Feb. 2017.
238. F. Rosei, *Multi-functional Materials for Solar Technologies*, SPIE Photonics West, San Francisco (CA), Feb. 2017.
237. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, ICACCS 41, Daytona Beach (FL), Jan. 2017.
236. F. Rosei, *Nanoscale structure and modification of Biomaterials*, ICACCS 41, Daytona Beach (FL), Jan. 2017.
235. F. Rosei, *Exploring Molecular Assembly at Surfaces*, Advanced Microscopy and Spectroscopy of Supramolecular and Macromolecular Systems on Surfaces, Hong Kong, Dec. 2016.
234. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, Asian Meeting on Ferroelectricity, Delhi (India), Nov. 2016.
233. F. Rosei, **(Panelist)**, *Biomaterials Processing*, MS&T Conference, Salt Lake City (UT), Oct. 2016.
232. F. Rosei, *Nanoscale Surface Modification of Biomaterials*, MS&T Conference, Salt Lake City (UT), Oct. 2016.
231. F. Rosei, **(Plenary)** *Multi-functional Materials for Electronics and Photonics*, IUPAC NMS-XII, Changsha (China), Oct. 2016.
230. F. Rosei, **(Plenary, Opening Lecture)** *Multi-functional Materials for Electronics and Photonics*, ACSIN, Rome (Italy), Oct. 2016.
229. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, 230th ECS / PRiME meeting, Honolulu (HI) Oct. 2016.
228. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, Advanced Architectures in Photonics, Mykonos (Greece), Sept. 2016.
227. F. Rosei, **(Tutorial)** *Survival Skills for Scientists*, IMRC, Cancun (Mexico), August 2016.
226. F. Rosei, **(Keynote)** *Multi-functional Materials for Electronics and Photonics*, Nano 2016, Quebec City, Aug. 2016.
225. F. Rosei, **(Tutorial)** *Survival Skills for Scientists*, College on multiscale computational modeling of materials for energy applications, ICTP (Trieste), July 2016.
224. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, ICEM 2016, Singapore, July 2016.
223. F. Rosei, *Survival Skills for Scientists*, 9th Int. Conf. on High T ceramic matrix composites, Toronto (Canada), June 2016.
222. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, 9th Int. Conf. on High T ceramic matrix composites, Toronto (Canada), June 2016.
221. F. Rosei, **(Panelist)**, *Renewable Energy as a Motor for Development*, 2nd Africa / Canada Business Convention, Montreal, June 2016.
220. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, IEEE INEC, Chengdu (China), May 2016.
219. F. Rosei, *Nanoscale structure and modification of Biomaterials*, MRS Spring Meeting, Phoenix (AZ), March 2016.
218. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, MRS Spring Meeting, Phoenix (AZ), March 2016.
217. F. Rosei, **(Keynote)** *Multi-functional Materials for Electronics and Photonics*, 2nd World Congress of Smart Materials, Singapore, March 2016.
216. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, SPIE Photonics West, San Francisco (CA), Feb. 2016.
215. F. Rosei, *Survival Skills for Scientists*, ICACCS 40, Daytona Beach (FL), Jan. 2016.
214. F. Rosei, *Nanoscale structure and modification of Biomaterials*, ICACCS 40, Daytona Beach (FL), Jan. 2016.
213. F. Rosei, **(Keynote)** *Multi-functional Materials for Electronics and Photonics*, The 19th SANKEN INTERNATIONAL SYMPOSIUM, Osaka (Japan), Dec. 2015.
212. F. Rosei, *Nanoscale Surface Modification of Biomaterials*, MRS Fall Meeting, Boston (MA), Nov. 2015.
211. F. Rosei, **(Plenary)** *Multi-functional Materials for Electronics and Photonics*, 3rd Zing Hydrogen and Fuel Cells Conference, Cancun (Mexico), Nov. 2015.

210. F. Rosei, *Energy and Society: What kind of Energy for the Future of Humanity?*, Symposium on Peace Education, Albert Einstein University, Mexico City (Mexico), Nov. 2015.
209. F. Rosei, **(Keynote)** *Multi-functional Materials for Electronics and Photonics*, IUMRS-ICAM, Jeju (South Korea), October 2015.
208. F. Rosei, *Carbon nanostructures and their use in biomedical and energy applications*, Graphene Canada (Montreal), Oct 2015.
207. F. Rosei, **(Plenary)** *Multi-functional Materials for Electronics and Photonics*, International Meeting on Advanced Materials and Processes for Environment, Energy and Health, Quebec City, October 2015.
206. F. Rosei, *Nanoscale Surface Modification of Biomaterials*, MS&T Conference, Columbus (OH), Oct. 2015.
205. F. Rosei, **(Keynote)** *Multi-functional Materials for Electronics and Photonics*, NanoS-E3, Kingscliff (Australia), Oct. 2015
204. F. Rosei, **(Keynote)** *Multi-functional Materials for Electronics and Photonics*, Annual Workshop on Nanotechnology, Renewable Energy & Sustainability, Xian (China), Sept. 2015.
203. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, EMN Open Access Week, Chengdu (China), Sept. 2015.
202. F. Rosei, **(Keynote)** *Multi-functional Materials for Electronics and Photonics*, Trends in Nanotechnology, Toulouse (France), Sept. 2015.
201. F. Rosei, **(Keynote)** *Multi-functional Materials for Electronics and Photonics*, China Nano, Beijing, Sept. 2015.
200. F. Rosei, **(Tutorial)** *Survival Skills for Scientists*, SYNCHRONICS/ECME, Strasbourg (France), September 2015.
199. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale*, ECME 2015, Strasbourg (France), Sept. 2015.
198. F. Rosei, *Nanoscale structure and modification of Biomaterials*, PACRIM Bioceramics Symposium, Jeju Island (S. Korea), Aug. 2015.
197. F. Rosei, **(Tutorial)** *Survival Skills for Scientists*, IMRC, Cancun (Mexico), August 2015.
196. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, META 2015, NYC, Aug. 2015.
195. F. Rosei, **(Keynote)** *Multi-functional Materials for Electronics and Photonics*, Molecular Materials Meeting, Singapore, Aug. 2015.
194. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, Weekly Frontier Forum of Science, Chengdu (China), July 2015 (Cancelled due to health problems).
193. F. Rosei, *Survival Skills for Scientists*, ICMAT 2015 Symposium FF, Singapore, July 2015.
192. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, ICMAT 2015 Symposium R, Singapore, July 2015.
191. F. Rosei, *The role of surfaces and interfaces in multifunctional materials*, Symposium on Advanced Multifunctional Nanomaterials and Systems for Photovoltaic and Photonic Technologies, CMCEE, Vancouver (Canada), June 2015.
190. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, Symposium on Photovoltaic Materials, Devices, and Systems, CMCEE, Vancouver (Canada), June 2015.
189. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, CMOS-ET, Vancouver (Canada), May 2015.
188. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, EMN Optoelectronics, Beijing, April 2015 (Cancelled due to expired visa).
187. F. Rosei, **(Tutorial)** *Survival Skills for Scientists*, TMS, Orlando (FL), March 2015.
186. F. Rosei, **(Keynote)** *Multi-functional Materials for Electronics and Photonics*, TMS, Orlando (FL), March 2015.
185. F. Rosei, **(Keynote)** *Exploring Molecular Assembly at Surfaces*, AMN-7, Nelson (New Zealand), Feb. 2015.
184. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, EMN/Ceramics, Orlando (FL), Jan. 2015.
183. F. Rosei, *Survival Skills for Scientists*, ICACCS 39, Daytona Beach (FL), Jan. 2015.
182. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, ICACCS 39, Daytona Beach (FL), Jan. 2015.
181. F. Rosei, *Nanoscale structure and modification of Biomaterials*, ICACCS 39, Daytona Beach (FL), Jan. 2015.
180. F. Rosei, **(Plenary)** *Multi-functional Materials for Electronics and Photonics*, ISEPD, Kathmandu (Nepal) Jan. 2015.
179. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, EMN Fall Meeting, Orlando (FL), Nov. 2014.
178. F. Rosei, *What type of Energy for the Future of Humanity?* WCC J. Vasconcelos Award Lecture, 31st World Cultural Council Award Ceremony and Aalto University Academic Summit, Espoo (Finland), Nov. 2014.
177. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, ALC Annual Workshop, Rabat (Morocco), Nov. 2014. (Cancelled due to health problems).
176. F. Rosei, *Nanoscale Surface Modification of Biomaterials*, MS&T Conference, Pittsburgh (PA), Oct. 2014.
175. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, EMN Open Access Week Meeting, Chengdu (Chengdu), Sept. 2014. (Cancelled due to health problems).
174. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, NRES, Xian (China), Sept. 2014. (Cancelled due to health problems).
173. F. Rosei, **(Keynote)** *Multi-functional Materials for Electronics and Photonics*, PIERS Conference, Guangzhou (China), Aug. 2014.
172. F. Rosei, *Nanoscale Surface Modification of Biomaterials*, IMRC Cancun (Mexico), Aug. 2014.
171. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, IMRC Cancun (Mexico), Aug. 2014.
170. F. Rosei, **(Keynote)** *Multi-functional Materials for Electronics and Photonics*, International Symposium on Functional Materials, Singapore, Aug. 2014. (Cancelled due to health problems).

169. F. Rosei, *Multi-functional Materials for Electronics and Photonics, International Symposium on Advanced Functional Materials*, Kuala Lumpur (Malaysia), Aug. 2014. (Cancelled due to health problems).
168. F. Rosei, *Multi-functional Materials for Electronics and Photonics, International Conference on Optical, Optoelectronic and Photonic Materials and Applications*, Leeds (UK), July 2014. (Cancelled due to health problems).
167. F. Rosei (**Keynote**) *Strategies for Controlled Assembly at the Nanoscale, UK Colloids 2014*, London (UK), July 2014.
166. F. Rosei, *Multi-functional Materials for Electronics and Photonics, CIMTEC 2014*, Montecatini (Italy), June 2014.
165. F. Rosei, *Exploring Molecular Assembly at Surfaces, Molecular Nanosystems Workshop*, Ascona (Switzerland), April 2014.
164. F. Rosei, *Multi-functional Materials for Electronics and Photonics, NGC 2014*, Phoenix (AZ), March 2014.
163. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, TMS 2014*, San Diego (CA), February 2014.
162. F. Rosei, *Multi-functional Materials and their use in photonic devices, Photonics West*, San Francisco (CA), February 2014.
161. F. Rosei, *Nanoscale Surface Modification of Biomaterials, 38th Int. Conf. on Advanced Ceramics and Composites*, Symposium on Next Generation Biomaterials, Daytona Beach (FL), Jan. 2014.
160. F. Rosei, *Multi-functional Materials and their use in photonic devices, I Nano Annual Meeting*, Aarhus (DK), Jan. 2014.
159. F. Rosei, *Nanoscale Surface Modification of Biomaterials, MRS Fall Meeting*, Boston (MA), Nov. 2013.
158. F. Rosei, *Using nanoscale building blocks to make electronic and photonic devices, THERMEC 2013*, Las Vegas (NV), Nov. 2013.
157. F. Rosei, *Multi-functional Materials and their use in photonic devices, 8th Multifunctional Materials (MFM) Workshop*, Ubatuba (Brazil), Nov. 2013.
156. F. Rosei, *Nanoscale Surface Modification of Biomaterials, MS&T Conference*, Montreal Oct. 2013.
155. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, Energy, Materials and Nanostructures (EMN)*, Chengdu (China), October 2013. (Cancelled due to health problems)
154. F. Rosei (**Keynote**) *Strategies for Controlled Assembly at the Nanoscale, 2nd International Conference on Materials Science*, Las Vegas (NV), October 2013.
153. F. Rosei (**Keynote**) *Multifunctional materials for electronics and photonics, Nano E3*, Airlie Beach (Australia), Sept. 2013.
152. F. Rosei (**Keynote**) *Strategies for Controlled Assembly at the Nanoscale, 15th ACC*, Singapore August 2013.
151. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, IMRC Cancun* (Mexico), August 2013.
150. F. Rosei, *Nanoscale Surface Modification of Biomaterials, PRICM 2013*, Waikoloa (HI), August 2013.
149. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, CMOS-ET*, Whistler (BC, Canada), July 2013.
148. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, ACIN*, Namur (Belgium), July 2013.
147. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, Symposium H, ICMAT 2013*, Singapore July 2013.
146. F. Rosei, *Functional materials and their electroactive properties, Symposium E, ICMAT 2013*, Singapore July 2013.
145. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, CCMR*, Jeju (S. Korea), June 2013.
144. F. Rosei, *Multi-functional Materials and their use in photonic devices, IC4N*, Corfu (Greece), June 2013.
143. F. Rosei, *New materials for photonics and photovoltaics, PACRIM 10*, San Diego (CA), June 2013.
142. F. Rosei, *Nanoscale Surface Modification of Biomaterials, PACRIM 10*, San Diego (CA), June 2013.
141. F. Rosei, *Functional materials and their electroactive properties, ECS Spring Meeting*, Toronto, May 2013.
140. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, TMS 2013*, San Antonio (TX), March 2013.
139. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, 37th Int. Conf. on Advanced Ceramics and Composites*, Symposium on Next generation Biomaterials, Daytona Beach (FL), Jan. 2013.
138. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, Energy, Materials and Nanostructures (EMN) West*, Houston (TX) Jan. 2013.
137. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, International Symposium on Functional Materials*, Perth (Australia), December 2012.
136. F. Rosei, *Multi-functional Materials and their use in photonic devices, IEEE Global Photonics Conference*, Singapore Dec. 2012.
135. F. Rosei, *Nanoscale Surface Modification of Biomaterials, MS&T Conference*, Pittsburgh (PA), Oct. 2012.
134. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, XI International Conference on Nanostructured Materials*, Rhodes (Greece), Aug. 2012.
133. F. Rosei, (**Tutorial**) *Survival Skills for Scientists, IMRC*, Cancun (Mexico), August 2012.
132. F. Rosei, *Exploring Molecular Assembly at Surfaces, IMRC Cancun* (Mexico), Aug. 2012.
131. F. Rosei, *Growth and characterization of multiferroic systems and their use in devices, 7th Multifunctional Materials Workshop*, Panama, Aug. 2012.
130. F. Rosei, *Time resolved nanoscale observation of amorphous semiconductor crystallization, Microscopy and Microanalysis*, Phoenix (AZ), Aug. 2012.
129. F. Rosei, *Materials Science in the Developing World: Challenges and Perspectives, 4th International Congress on Ceramics*, Chicago (IL), July 2012.
128. F. Rosei, *Survival Skills for Scientists, ICYMRS*, Singapore July 2012.
127. F. Rosei, *Multi-functional Organic Materials, International Workshop on Sensors and Electronic Devices*, Najran (Saudi Arabia), May 2012.

126. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale*, 4th Int. Conf. on Nanostructures, Kish (Iran) March 2012.
125. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale*, Third International Symposium on Plasma Nanoscience, Jurong (Malaysia), Feb. 2012.
124. F. Rosei, *Nanoscale Surface Modification of Biomaterials*, 36th Int. Conf. on Advanced Ceramics and Composites, Symposium on Next Generation Biomaterials, Daytona Beach (FL), Jan. 2012.
123. F. Rosei, *Survival Skills for Scientists*, Max Planck Discussion Meeting, Ringberg Castle (Germany) Jan. 2012.
122. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale*, Max Planck Discussion Meeting, Ringberg Castle (Germany) Jan. 2012.
121. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale*, MRS Africa, Victoria Falls (Zimbabwe), Dec. 2011.
120. F. Rosei, *Nanoscale Surface Modification of Biomaterials*, MRS Fall Meeting, Boston (MA), Nov. 2011.
119. F. Rosei, *Novel nanostructured functional materials*, MRS Fall Meeting, Boston (MA), Nov. 2011.
118. F. Rosei, *Nanoscale Surface Modification of Biomaterials*, MS&T 2011, Columbus (OH), Oct. 2011.
117. F. Rosei, *Exploring Molecular Assembly at Surfaces*, Nano E3 workshop and school, Stradbroke Island (Queensland, Australia), Sept. 2011.
116. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale*, IMRC 2011, Cancun (Mexico) 2011.
115. F. Rosei, **(Plenary)** *Novel nanostructured functional materials*, ISFM 2011, Sendai (Japan) August 2011.
114. F. Rosei, *Novel nanostructured functional materials*, PACRIM 2011, Cairns (Australia) July 2011.
113. F. Rosei, *Alternative Routes to Nanofabrication and Nanopatterning*, ICMAT 2011 Symp. H, Singapore June 2011.
112. F. Rosei, **(Keynote)** *Strategies for Controlled Assembly at the Nanoscale*, ICMAT 2011 Symp. JJ, Singapore June 2011.
111. F. Rosei, *Exploring Molecular Assembly at Surfaces*, IEEE INEC, Tao-Yuan, Taiwan, June 2011.
110. F. Rosei, *Exploring Molecular Assembly at Surfaces*, CMOS ET 2011, Whistler (BC, Canada), June 2011.
109. F. Rosei **(Plenary)** *Survival Skills for Scientists*, Inter Tech Conference for Young Scientists, Poznan (Poland), May 2011.
108. F. Rosei, *Nanoscale Surface Modification of Biomaterials*, Imagine Nano, Bilbao (Spain), April 2011.
107. F. Rosei, *Two dimensional self-assembly at the solid-liquid interface*, ACS Spring Meeting, Anaheim (CA), March 2011.
106. F. Rosei, *Survival Skills for Scientists*, COST Meeting, Hasselt (Belgium), March 2011.
105. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale*, COST Meeting, Hasselt (Belgium), March 2011.
104. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale*, 35th Int. Conf. on Advanced Ceramics and Composites, Nanotechnology Symposium, Daytona Beach (FL), Jan. 2011.
103. F. Rosei, *Modifying Biomaterial Surfaces to Control Cell Growth*, 35th Int. Conf. on Advanced Ceramics and Composites, Symposium on Next Generation Biomaterials, Daytona Beach (FL), Jan. 2011.
102. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale*, Molecular Materials Meeting, Singapore Jan. 2011.
101. F. Rosei, *Two dimensional molecular self-assembly at the solid-liquid interface*, Pacifichem 2010, Honolulu (HI), Dec. 2010.
100. F. Rosei, *Exploring Molecular Assembly at Surfaces: from non-covalent self-assembly to surface confined polymerization*, 18th International Colloquium on Scanning Probe Microscopy, Atagawa Heights (Japan), Dec. 2010.
99. F. Rosei, *Exploring Molecular Assembly at Surfaces*, NANO X, Rome (Italy), Sept. 2010.
98. F. Rosei, *Exploring Molecular Assembly at Surfaces*, ICEM–IUMRS Symp. T, Seoul (S. Korea), Aug. 2010.
97. F. Rosei, *Synthesis and characterization of 1D functional oxide nanostructures*, ICEM–IUMRS Symp. S, Seoul (S. Korea), Aug. 2010.
96. F. Rosei, *Multi-functional one dimensional oxide nanostructures*, Thin Films 2010, Harbin (China), July 2010.
95. F. Rosei, *Nanostructured Carbon: Challenges and Opportunities*, NDNC 2010, Suzhou (China) May 2010.
94. F. Rosei, *Photoluminescent Group IV nanostructures synthesized by reactive pulsed laser deposition*, ECS Spring Meeting, Vancouver (Canada), April 2010.
93. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale*, 34th Int. Conf. on Advanced Ceramics and Composites, Nanotechnology Symposium, Daytona Beach (FL), Jan. 2010.
92. F. Rosei, *Nanoscale Surface Modification of Biomaterials*, 34th Int. Conf. on Advanced Ceramics and Composites, Symposium on Next Generation Biomaterials, Daytona Beach (FL), Jan. 2010.
91. F. Rosei, **(Keynote)** *Strategies for Controlled Assembly at the Nanoscale*, IEEE International Nanoelectronics Conference, Hong Kong, Jan. 2010.
90. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale*, MRS Africa 2009, Abuja (Nigeria) Dec. 2009.
89. F. Rosei, *Exploring Molecular Assembly at Surfaces*, Entretiens Jacques Cartier, Grenoble (France), Dec. 2009.
88. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale*, Entretiens Jacques Cartier, Lyon (France), Nov. 2009.
87. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale*, ACTSEA-2009, Taipei (Taiwan), Nov. 2009.
86. F. Rosei, *Survival Skills for Scientists*, 4th IWSP, Wroclaw (Poland) Sept. 2009.
85. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale*, 4th International Workshop on Surface Physics (IWSP), Wroclaw (Poland) Sept. 2009.
84. F. Rosei, *Survival Skills for Scientists*, ICAM 2009, Rio de Janeiro (Brazil), Sept. 2009.
83. F. Rosei, *Exploring Molecular Assembly at Surfaces*, ICAM 2009, Rio de Janeiro (Brazil), Sept. 2009.

82. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, Conference on Interactions Among Nanostructures*, St. Thomas (U.S. Virgin Islands), Sept. 2009.
81. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, ICCE-17*, Honolulu (HI), July 2009.
80. F. Rosei, *Exploring Molecular Assembly at Surfaces, ICMAT 2009 Symposium K*, Singapore July 2009.
79. F. Rosei, *Surface Nanopatterning to Control Cell Growth, ICMAT 2009 Symposium B*, Singapore July 2009.
78. F. Rosei, *Survival Skills for Scientists, ICMAT 2009 Symposium V*, Singapore July 2009.
77. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, International Conference on Advances in Functional Materials*, Jiu Zhai Gou (China), June 2009.
76. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, ISFM 2009*, S. Korea, June 2009.
75. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, PACRIM-8*, Vancouver (Canada) June 2009.
74. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, SPIE Meeting on Micro-Nanotechnology Sensors, Systems, and Applications*, Orlando (FL), April 2009.
73. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, Nanobiophysics and Chemistry Conference achievements 2009*, Antigua and Barbuda, Jan. 2009.
72. F. Rosei, *Surface Nanopatterning to Control Cell Growth, 33rd Int. Conf. on Advanced Ceramics and Composites*, Symposium on Next generation Bioceramics, Daytona Beach (FL), Jan. 2009.
71. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, 9th International Symposium on Ceramic Materials and Components for Energy and Environmental Applications*, Shanghai (China), Nov. 2008.
70. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, Symposium G*, MRS Brazil, Sept. 2008.
69. F. Rosei, **(Keynote)** *Strategies for Controlled Assembly at the Nanoscale, MSE Conference*, Nurnberg (Germany) Sept. 2008.
68. F. Rosei, *Alloying, self-ordering and stability of Ge/Si semiconductor nanostructures, Symposium on Group IV nanostructures, ICEM 2008*, Sydney (Australia), July 2008.
67. F. Rosei, *Survival Skills for Scientists, Symposium on Materials Education, ICEM 2008*, Sydney (Australia), July 2008.
66. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, Thin Films 2008*, Singapore July 2008.
65. F. Rosei, **(Keynote)** *Controlling Molecular Assembly at Surfaces, NanoSEA-2*, Rome (Italy) July 2008.
64. F. Rosei, **(Keynote)** *Surface Nanopatterning to Control Cell Growth, NanoBioEurope 2008*, Barcelona (Spain), June 2008.
63. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, Symposium on Molecular Electronics, IEEE Nanoelectronics Conference*, Shanghai (China), March 2008.
62. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, Nanotechnology Symposium, 32nd ICACC / ACerS meeting*, Daytona Beach (FL), Jan. 2008.
61. F. Rosei, **(Keynote)** *Strategies for Controlled Assembly at the Nanoscale, 4th MRS-Africa*, Dar Es Salaam (Tanzania), Dec. 2007.
60. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, PACRIM-7*, Shanghai (China), Nov. 2007.
59. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, VC-NST*, Fayetteville (AK), Oct. 2007.
58. F. Rosei, **(Keynote)** *Strategies for Controlled Assembly at the Nanoscale, Nano E3 Workshop*, Stradbroke Island (Australia) Sept. 2007.
57. F. Rosei, *Nanostructured materials synthesized by laser ablation, ICMAT 2007 Symp. M*, Singapore July 2007.
56. F. Rosei, *Organic Self-Assembly by High Resolution STM, ICMAT 2007 Symp. G*, Singapore July 2007.
55. F. Rosei, *Chemical Mapping of Semiconductor Nanostructures, ICMAT 2007 Symp. N*, Singapore July 2007.
54. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, ICMAT 2007 Symp. E*, Singapore July 2007.
53. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, Symp. K, E-MRS Spring Meeting*, Strasbourg (France) May 2007.
52. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, ISFM 2007*, Hangzhou (China), May 2007.
51. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, LDSD 2007*, S. Andres (Colombia), April 2007.
50. F. Rosei, *Strategies for the Controlled Assembly of NanoMaterials*, NGC, Phoenix (AZ) March 2007.
49. F. Rosei, **(Plenary)** *Strategies for the Controlled Assembly of Nanostructured Materials, International Congress of Industrial Chemistry*, Monterrey (Mexico), March 2007.
48. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, Thin Films 2006*, Singapore, Dec. 2006.
47. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, IWONN3*, Halong Bay (Vietnam), Dec. 2006.
46. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale, Symposium on Nanostructured Materials, MS&T*, Cincinnati (OH), Oct. 2006.
45. F. Rosei, *Chemical Mapping of Semiconductor Nanostructures, Workshop on Epitaxial Growth and Fundamental Properties of Semiconductor Nanostructures*, Bonassola (Italy), Sept. 2006.
44. F. Rosei, **(Keynote)** *Strategies for Controlled Assembly at the Nanoscale, Trends in Nanotechnology 2006*, Grenoble (France), Sept. 2006.
43. F. Rosei, *Controlled Patterning of Ferroelectric Nanostructures, Electroceramics X*, Toledo (Spain), June 2006.
42. F. Rosei, *Nanopatterning and nanostructuring for tissue engineering and regenerative medicine, NanoBioEurope 2006*, Grenoble (France) June 2006.
41. F. Rosei, **(Keynote)** *Properties of Organic Molecules at Metal Surfaces, ICON 2006*, Choroní (Venezuela), May 2006.
40. F. Rosei, *Properties of Organic Molecules at Metal Surfaces, APS March Meeting*, Baltimore (MD) 2006.

39. F. Rosei, *Strategy for controlled Assembly of Nanostructured Materials*, Nano Singapore 2006 (IEEE Conference on Nanoelectronics), Singapore, Jan. 2006.
38. F. Rosei, (**Plenary**) *Properties of Nanostructured Materials*, SPIE Conference on Microelectronics, MEMS and Nanotechnology, Brisbane (Australia), Dec. 2005.
37. F. Rosei, *Nanostructured Materials: Properties of Semiconductor Nanostructures and Carbon Nanotubes*, Singapore International Chemical Conference –4, Singapore, Dec. 2005.
36. F. Rosei, (**Plenary**) *Nanostructured Functional Materials: Challenges and Opportunities*, International Symposium on Functional Materials, Kuala Lumpur, Dec. 2005.
35. F. Rosei, *Properties of Organic Molecules at Metal Surfaces by High Resolution STM*, MRS Fall Meeting, Symposium CC, Boston, Dec. 2005.
34. F. Rosei, *Nanotechnology in Canada: Academic Research, Government Funding and Networks*, n-ABLE 2005, Saarbrücken (Germany), Sept. 2005.
33. F. Rosei, *Properties of Organic Molecules at Solid Surfaces*, IMRC Symposium on Nanotechnology, Cancun (Mexico) Aug. 2005.
32. F. Rosei, *Alloying and Stability of Ge/Si Nanostructures studied with synchrotron techniques*, IMRC Symposium on Synchrotron Radiation, Cancun (Mexico) Aug. 2005.
31. F. Rosei, *Critical Issues in the Growth of Ge(Si) Nanostructures on Si*, ICMAT 2005, Symp. H (Singapore), July 2005.
30. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale*, ICMAT 2005, Symp. B (Singapore), July 2005.
29. F. Rosei, *Nanostructured Materials: Challenges and Opportunities*, Insulating Films on Semiconductors, Leuven (Belgium), June 2005.
28. F. Rosei, *Strategies for controlled assembly at the nanoscale*, Chinanano2005, Beijing (China), June 2005.
27. F. Rosei, *Properties of Ge/Si nanostructures: alloying, stability and positioning*, ARPES2005–New Frontiers, Vancouver (BC), April 2005.
26. F. Rosei, *Strategies for controlled assembly at the nanoscale*, Nanotech Insight, Luxor (Egypt), Feb. 2005.
25. F. Rosei, *Strategies for controlled assembly of molecular nanostructures*, AVS workshop on 1D nanomaterials, Taipei (Taiwan) Jan. 2005.
24. F. Rosei, *Critical Issues in the growth of Ge–Si nanostructures*, PFAM XIII (Singapore, Dec. 2004).
23. F. Rosei, *New insight in the growth of Ge(Si) nanostructures*, The First Workshop on Nanoscale Sensing and Manipulation, Tien Lai Spring Resort (Taiwan), Nov. 2004.
22. F. Rosei, *Nanomaterials: from Quantum Dots to Organic Molecules*, IUMRS–ICA Symp. B, Taiwan Nov. 2004.
21. F. Rosei, *Critical Issues in the growth of Ge–Si nanostructures*, APPC–9, Hanoi (Vietnam) Oct. 2004.
20. F. Rosei, *Supramolecular assemblies at the nanoscale*, IWONN2, Hanoi (Vietnam) Oct. 2004.
19. F. Rosei, *Micro-Nanofabrication Infrastructure in Quebec*, Nanomaterials Crossroads 2004, Boucherville (QC, Canada) Oct. 2004.
18. F. Rosei, *Nanostructured Materials: from Quantum Dots to Organic Molecules*, NGCM 2004, Krakow (Poland), Sept. 2004.
17. F. Rosei, *Properties of Complex Molecules at Metal Surfaces*, E–MRS Fall Meeting, Symp. I, Warsaw (Poland), Sept. 2004.
16. F. Rosei, *Critical Issues in the growth of Ge–Si nanostructures*, ICCE–11, Hilton Head Island (SC) Aug. 2004.
15. F. Rosei, (**Plenary**) *Properties of Nanostructured Materials*, Nanotech 2004 (Singapore), July 2004.
14. F. Rosei, *Properties of Complex Molecules at Metal Surfaces*, APS March Meeting (Montreal 2004).
13. F. Rosei, *Adsorption Properties of Organic Molecules at Surfaces*, APF–9 (Japan, March 2004).
12. F. Rosei, *Organic Molecules at Surfaces: perspectives and challenges for Molecular Electronics*, ICONSAT, Kolkata (India), Dec. 2003.
11. F. Rosei, *Nanopatterned surfaces for controlled adsorption of molecular building blocks*, ICMAT 2003, Symp. N3 (Singapore, Dec. 2003).
10. F. Rosei, *Organic Molecules at Surfaces by High Resolution STM*, ICMAT, Symp. N2 (Singapore, Dec. 2003).
9. F. Rosei, *Critical Issues in the growth of Ge–Si nanostructures*, ICMAT 2003, Symp. H (Singapore, Dec. 2003).
8. F. Rosei, *Properties of Complex Molecules at Metal Surfaces*, Fall MRS, Symp. O (Boston, Dec. 2003).
7. F. Rosei, *Large Molecules on Metal Surfaces by High Resolution STM*, ECOSS 22, Prague (Czech Republic), Sept. 2003.
6. F. Rosei, *Large Molecules at Surfaces by High Resolution STM*, EUROMAT 2003 (Lausanne (Switzerland), Sept. 2003).
5. F. Rosei, *Organic Molecules on Metal Surfaces by High Resolution STM*, IPMM03 (Sendai, Japan, May 2003).
4. F. Rosei, *Largish Molecules on Metal Surfaces by High Resolution STM*, AMN-1 (Wellington, NZ, Feb. 2003).
3. F. Rosei, *Diffusion, Anchoring And Forced Assembly of Organic Molecules on a Metal Surface*, Fall MRS, Symp. W (Boston Dec. 2002).
2. F. Rosei, *Diffusion and anchoring of complex molecules on metal surfaces: possibilities and challenges in nanoengineering*, SSP9, Trest Castle (Czech Republic), Sept. 2002.
1. F. Rosei, *Anchoring of Large Organic Molecules to Monoatomic Steps on Metal Surfaces*, nn2001, Rome (Italy), Oct. 2001.

INVITED PRESENTATIONS AT “VIRTUAL” (ONLINE) CONFERENCES (21):

21. F. Rosei, *Multi-functional Materials for Emerging Technologies*, iCANX, Connecting the World and the Universe, March 2023. [**>21,000 attendees**]

20. F. Rosei, *Multi-functional Materials for Emerging Technologies*, CAP Brockhouse Medal Award Lecture, Feb. 2023.
19. F. Rosei (**Plenary**) *Multi-functional Materials for Emerging Technologies*, International Symposium on Green Energy Materials and Application Technology, Dec. 2022.
18. F. Rosei, (**Keynote**) *Multi-functional Materials for Emerging Technologies*, 2021 International Symposium on Advanced Functional Materials and Nano Energy, Aug. 2021.
17. F. Rosei, (**Tutorial**) *Survival Skills for Scientists*, IMRC, Cancun, August 2021.
16. F. Rosei, (**Keynote**) *Multi-functional Materials for Emerging Technologies*, IEEE 3M Nano, Xian (China), Aug. 2021.
15. F. Rosei, *Multi-functional Materials for Emerging Technologies*, World Conference on Nanomaterials, July 2021.
14. F. Rosei, *Multi-functional Materials for Emerging Technologies*, Fourth International Conference on Applied Surface Science (Virtual) June 28-July 1, 2021
13. F. Rosei, (**Keynote**) *Multi-functional Materials for Emerging Technologies*, World Conference on Nanotechnology and Materials (WCNM-2021), Kunming (China), April 2021.
12. F. Rosei, *Nanoscale structure and modification of Biomaterials*, Symposium on Devices for Medical Applications, 8th International Congress on Ceramics, Busan (S. Korea), Aug. 2020. (**post-poned to April 2021 due to Corona Virus pandemic**)
11. F. Rosei, *Nanoscale structure and modification of Biomaterials*, ICACCS 45, Daytona Beach, Feb. 2021 (Virtual).
10. F. Rosei, *Structure/property relationships in biomaterials at the Nanoscale*, Harbin International Neurosurgery Summit, Jan. 2021 (Virtual).
9. F. Rosei, *Multi-functional Materials for Emerging Technologies*, Nano-Bio Workshop, activity of the PhD Program in Science and Technology of Bio and Nanomaterials, Department of Molecular Science and Nanosystems, Università Ca' Foscari Venezia, Dec. 2020.
8. F. Rosei, *Multi-functional Materials for Emerging Technologies*, Perovskites – applications and recent advances, Webinar Event by IEEE NTC Young Professionals Canada, Dec. 2020
7. F. Rosei, (**Panelist**), *Green Deal – Technologies for Circular Economy*, European IndTech2020 conference, Mainz (Germany), October 2020 (Virtual).
6. F. Rosei, *Multi-functional Materials for Emerging Technologies*, 238th ECS Meeting, Honolulu, Hawaii, Oct. 2020 (Virtual).
5. F. Rosei, *Multi-functional Materials for Emerging Technologies*, 4th Conference on Micro-nano Optical Technology and Application, MOTA 2020, Sept. 2020.
4. F. Rosei, *Multi-functional Materials for Emerging Technologies*, International Symposium on Advanced Energy Materials, Sept. 2020.
3. F. Rosei, *Multi-functional Materials for Emerging Technologies*, Virtual Academic Seminar for the launch of the journal Smart Mat, Sept. 2020. [**>59,000 attendees**]
2. F. Rosei, *Multi-functional Materials for Emerging Technologies*, IEEE Photonics Society Distinguished Lecture (hosted by IEEE Photonics Berkeley Chapter), August 2020.
1. F. Rosei, *Multi-functional Materials for Emerging Technologies*, IAAM Fellow Lecture, Advanced Materials Lecture Series 2020, June 2020.

INVITED CONFERENCE PRESENTATIONS AT NATIONAL CONFERENCES (29)

29. F. Rosei, *Multi-functional Materials for Emerging Technologies*, (CSC Awards Lecture for T.K. Sham Award), Vancouver, June 2023.
28. F. Rosei, *Multi-functional Materials for Emerging Technologies*, Canadian Materials Science Conference, Toronto, June 2022.
27. F. Rosei (**Speaker and Panelist**), Engineering and Sustainable Development, IEEE Day, Montreal, October 2019.
26. F. Rosei, *Survival Skills for Scientists*, SPIE Student Focus Conference, University of Toronto, Sept. 2019.
25. F. Rosei, *Multi-functional Materials for Emerging Technologies*, SPIE Student Focus Conference, University of Toronto, Sept. 2019.
24. F. Rosei, *Multi-functional Materials for Emerging Technologies*, Canadian Semiconductor Science and Technology Conference, Saskatoon (Canada), July 2019.
23. F. Rosei (**Panelist**), *An Editorial Perspective*, CQMF Annual Meeting, Montreal, May 2018.
22. F. Rosei, (**Plenary**) *Multi-functional Materials for solar technologies*, Chemical Engineering Polytechnique-McGill joint research day, Montreal, March 27th, 2018.
21. F. Rosei (**Panelist**), Engineering and Sustainable Development, IEEE Day, Montreal, October 2017.
20. F. Rosei, *Exploring Molecular Assembly at Surfaces*, 99th CSC Annual Meeting (CSC John C. Polanyi Award Lecture), Halifax, June 2016.
19. F. Rosei, (**Keynote**) *Multi-functional Materials for Electronics and Photonics*, Nano Ontario, University of Ottawa, Nov. (2015).
18. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, ECS Canada Fall Meeting, Burnaby, October 2015 (ECS Canada Section Lash Miller Award Lecture)
17. F. Rosei, *Survival Skills for Scientists, the case of post-doctoral scholars*, Canadian Association of Post-Doctoral Administrators, St. John's (Newfoundland), Oct. 2014.
16. F. Rosei, *Multi-functional Materials for Electronics and Photonics*, 97th CSC Annual Meeting, Vancouver, June 2014 (CSC Awards Lecture for Excellence in Materials Chemistry)
15. F. Rosei, *Time resolved nanoscale phenomena by Dynamic Transition Electron Microscopy*, MSC Conference, Victoria, June 2013.
14. F. Rosei, *Nanostructured materials: strategies and perspectives*, CAP Herzberg Medal Award Lecture, Montreal, May 2013.

13. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale*, CSC Meeting, Quebec City, May 2013.
12. F. Rosei, *Multi-functional Materials and their use in photonic devices*, CAP Congress, Montreal, May 2013.
11. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale*, CAP Congress, Montreal, May 2013.
10. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale*, Surface Canada, London (ON), May 2013.
9. F. Rosei, *Exotic materials for solar energy conversion*, Photonics North, Montreal, June 2012.
8. F. Rosei, *Chemical Mapping of Semiconductor Surfaces*, PEEM workshop, Banff, Sept. 2009.
7. F. Rosei, *Exploring Molecular Assembly at Surfaces*, Junior Nanotechnology Network Workshop, McGill, June 2008.
6. F. Rosei, *Choosing a career in Science and Engineering; developing 'Survival Skills'*, Engineering Science Education Conference 2008, University of Toronto, Jan. 2008.
5. F. Rosei, *Strategies for Controlled Assembly at the Nanoscale*, CSACS/industry Symposium, Montreal, July 2007.
4. F. Rosei, *Chemical Mapping of Semiconductor Nanostructures*, MSC Conference, Edmonton June 2007.
3. F. Rosei, *Chemical Mapping at the Nanoscale*, CAP Congress 2006, St. Catharine's (ON), June 2006.
2. F. Rosei, *Critical Issues in Ge-Si nanostructures*, CLS User's Meeting, Saskatoon (SK), Nov. 2004.
1. F. Rosei, *Critical issues in Ge/Si nanostructures*, CAP Congress (Winnipeg), June 2004.

INVITED LECTURES AT NATIONAL AND INTERNATIONAL SCHOOLS (15)

15. F. Rosei, *Survival Skills for Scientists*, ECOSSE Satellite Workshop, Aarhus (Denmark) Aug. 2018.
14. F. Rosei, *Survival Skills for Scientists*, Nano E3 School and Workshop, Brisbane (QLD), Sept. 2017.
13. F. Rosei, *Survival Skills for Scientists*, IEEE Nano Summer School, Montreal (QC), June 2017.
12. F. Rosei, *Survival Skills for Scientists*, Nano E3 School and Workshop, Airlie Beach (QLD), September 2013.
11. F. Rosei, *Survival Skills for Scientists*, CASCA Annual Meeting, London (ON), May 2011.
10. F. Rosei, *Survival Skills for Scientists*, Sino Danish Summer School on Self-Assembly of Molecular Structures, Sonderborg (Denmark) July 2010.
9. F. Rosei, *Exploring Molecular Assembly at Surfaces*, Sino Danish Summer School on Self-Assembly of Molecular Structures, Sonderborg (Denmark) July 2010.
8. F. Rosei, *Advanced techniques for nanostructure and surface characterization*, Jesi (Ancona), Sept. 2008.
7. F. Rosei, *Scanning Probe Microscopy: Fundamentals and Applications*, IEEE Nanoelectronics Conference, Shanghai (China), March 2008.
6. F. Rosei, *Nanostructured Materials: Properties and Applications*, Hanoi (Vietnam), Dec. 2006.
5. F. Rosei, *Nanostructured Materials: Properties and Applications*, Jesi (Ancona, Italy), Sept. 2006.
4. F. Rosei, *Scanning Probe Microscopy techniques for investigating Nanostructured Materials*, AFM summer school, Brisbane (Australia), Dec. 2005.
3. F. Rosei, *Nanostructured Materials: from Quantum Dots to Organic Molecules*, RQEMP summer school, Montréal (QC), August 2004.
2. F. Rosei, *Properties of Complex Molecules at Metal Surfaces*, RQMP-AFM summer school, Montréal (QC), May 2004.
1. F. Rosei, *Properties of Organic Molecules adsorbed on metal Surfaces*, CIAR summer school on Nanoelectronics, Montréal (QC), July 2003.

UNIVERSITY LECTURES ON "SURVIVAL SKILLS FOR SCIENTISTS" (66)

Southern Illinois University (Carbondale, IL), Sigma Xi Distinguished Lecture, Feb. 2023; Ca' Foscari University Venice, Sept. 2022; *UNITEN* (Kuala Lumpur, Malaysia), IEEE Photonics Society Distinguished Lecture, July 2022; University of Houston (Houston, Texas), IEEE Photonics Society Distinguished Lecture, June 2022; University of Central Florida (Orlando, Florida), IEEE Photonics Society Distinguished Lecture, June 2022; iThemba Labs (Cape Town, South Africa), Feb. 2020; UTAR (Kuala Lumpur, Malaysia), Jan. 2020; Concordia University (Opening Lecture at the Annual Workshop on "Survival Skills for Scientists and Engineers"), May 2019; Beijing Institute of Technology, Nov. 2018; Suzhou University, Nov. 2018; Shanghai University, Sept. 2018; University of Alberta, Edmonton, Sept. 2018; University of Rome Tor Vergata, June 2018; Queen's University (Kingston, ON), March 2018; Univ. California, Davis, Feb. 2018; Univ. California Riverside, Feb. 2018; Suzhou University, Nov. 2017; CAS Nano Center Beijing, Oct. 2017; Univ. California Santa Barbara, Aug. 2017; Macquarie Univ. and Queensland Univ. of Technology (Australia), Nov. 2016; University of Jinan (China), Sept. 2016; University of Houston (USA), April 2016; Curtin University of Technology (Perth, Au), March 2016; UQ Trois Rivières, Jan. 2016; NSERC CREATE program PERSWADE (INRS/McGill/ETS/Polytechnique/Concordia), Jan. 2016; University of Victoria, Dec. 2015 (SPIE Visiting Lecture); University of Jinan, Oct. 2015; Washington State University, July 2015; Tehran Medical Univ., March 2015; KU Leuven (Belgium), Nov. 2014; Univ. of Rome Tor Vergata, June 2014; Colorado School of Mines (Golden, CO), April 2014; Simon Fraser Univ. (Vancouver), March 2014; Laval Univ. (Quebec City), Feb. 2014; Univ. of Aarhus (Denmark), Jan. 2014; Flinders Univ. (Adelaide, Australia), Swinburne Univ. (Melbourne, Australia), Sept. 2013; Univ. Cergy (France), Nov. 2012; Free Univ. Bolzano, Oct. 2010; Univ. of Cagliari, June 2010; Laval Univ., March 2010; Monash Univ., March 2010; National Taiwan Univ., Nov. 2009; Lakehead Univ., Oct. 2009; Univ. of Missouri Columbia, Oct. 2009; NTU Singapore, Aug. 2009; LaTrobe Univ., Melbourne (Au), May 2009; Macquarie Univ., Sydney (Au), April 2009; Memorial Univ. Newfoundland, St. Johns (NL), April 2009; University of Groningen (Netherlands), June 2008;

Norfolk State Univ., Norfolk (VA), Feb. 2008; Mount Allison Univ., New Brunswick, Jan. 2008; Univ. of Sydney, Sydney, Oct. 2007; Univ. of Technology Sydney, Sydney, Oct. 2007; Univ. of Saskatchewan, Saskatoon, Sept. 2007; NUSNNI/Physics, National Univ. of Singapore, July 2007; Univ. of Tokyo (Kashiwa Campus), Feb. 2007; National Univ. of Singapore (Chem. Dept.), Feb. 2007; Univ. of California, San Diego (USA), Feb. 2006; Georgiatech (Atlanta, GA), Oct. 2006; Washington State Univ. (Pullman, WA), Nov. 2005; Dartmouth College (NH), April 2005; Univ. of South Florida (Tampa), April 2005; Univ. of Guelph (ON), April 2005; Trinity College Dublin (Ireland), March 2005.

INVITED SEMINARS (264)

La Sapienza (Rome, Italy) May 1999 and Oct. 1999; *NTT Basic Res. Labs* (Atsugi, Japan), Sept. 1999 and Sept. 2000; *Univ. of Århus* (Denmark), May 2000; *IFW Dresden* (Germany), Feb. 2001; *PSI Villigen* (Switzerland), March 2001; *BUN–Nanomol Meeting*, Aspet (France), May 2001; *INRS* (Varenes, QC), Aug. 2001; *Univ. of Birmingham* (UK), Oct. 2001; *CEMES Toulouse* (France), Nov. 2001; *École Polytechnique de Montréal* (QC), Nov. 2001; *Orsay* (France), June 2002. **Colloquium**, *Queen's Univ.* (Kingston, ON), Oct. 2002; *Bell Labs* (NJ, USA), Oct. 2002; *Laval Univ.* (Québec, QC), Oct. 2002; *Univ. of WI* (Madison, WI), Nov. 2002; *Elettra Light Source* (Trieste, Italy), Nov. 2002; *CNR–ISMN* (Bologna, Italy), Nov. 2002; *Univ. Roma 2* (Roma, Italy), Nov. 2002; *McGill Univ.* (Montreal, QC), Dec. 2002; *NSC* (Taipei, Taiwan), March 2003; *ITRI* (Hsinchu, Taiwan), March 2003, *Canada–Korea partnering seminar* (Seoul, Korea), March 2003; **Colloquium**, *Univ. de Montréal* (Montréal, QC), March 2003; **Colloquium**, *McGill Univ.* (Montréal, QC), March 2003; *NRC–IMI* (Boucherville, QC), May 2003; *Yokohama City Univ.*, (Yokohama, Japan), May 2003; *NTT Basic Res. Labs* (Atsugi, Japan), May 2003; *Univ. of Rome III* (Rome, Italy), June 2003; *CNRS Grenoble* (France), Sept. 2003; *EPFL* (Switzerland), Sept. 2003; *Ohio Univ.* (Athens, OH), Oct. 2003; *NRC–SIMS* (Ottawa), Oct. 2003; *Univ. of Toronto*, Nov. 2003; *Univ. of Pune* (India), Dec. 2003; *ICTP Trieste* (Italy), February 2004; *ISSP Tokyo* (Japan), March 2004; *Corning* (NY), June 2004; *Univ. Roma 2* (Roma, Italy), July 2004; *Univ. of Århus* (Denmark), Sept. 2004; *Simon Fraser Univ.* (BC), Nov. 2004; *Univ. of British Columbia* (BC), Nov. 2004; *National Taiwan Univ.* (Taiwan), Nov. 2004; *MTEC–NSTDA* (Bangkok, Thailand), Dec. 2004; *ANU, QUT, UNSW* (Australia), Jan. 2005; *Univ. of Hawaii* (HI), Feb. 2005; *Trinity College Dublin* (Ireland), March 2005; *University of Guelph* (ON), April 2005; *Dartmouth College* (NH), April 2005; **Colloquium**, *University of South Florida* (Tampa), April 2005; *KU Leuven* (Belgium), June 2005; *Max Planck Institute* (Stuttgart, Germany), Sept. 2005; *WSU* (Pullman, WA), Oct. 2005; *Univ. of Queensland* (Brisbane, Au), Dec. 2005; *NANOTEC–NSTDA* (Bangkok, Thailand), Dec. 2005; *Univ. of Chulalongkorn* (Bangkok, Thailand), Dec. 2005; *Univ. of California*, San Diego (USA), Feb. 2006; *Brookhaven National Labs* (Upton, NY), March 2006; *ICMAB Barcelona*, June 2006; *Univ. de Montreal*, Oct. 2006; **Colloquium**, *Georgiatech*, Oct. 2006; *Seminar, Air Force Research Laboratory*, Dayton (OH), Nov. 2006; *Keio University*, Yokohama (Japan), Nov. 2006, *IMRE*, Singapore, Dec. 2006; *ISSP Univ. of Tokyo*, Dec. 2006; *Yokohama City Univ.*, Jan. 2007; *ISSP Univ. of Tokyo*, Jan. 2007; *RIKEN*, Jan. 2007; *Osaka Univ.*, Feb. 2007; *Kyoto Univ.*, Feb. 2007; *Univ. of Tokyo* (Hongo Campus) Feb. 2007; *ICYS–NIMS*, Feb. 2007; *NUS Singapore*, Feb. 2007; *ISSP Univ. of Tokyo*, Feb. 2007; *NSFC–NIMS*, Feb. 2007; *Univ. of Tsukuba COE21*, Feb. 2007; *Univ. of Shizuoka* (Hamamatsu), Feb. 2007; *Iowa State University* (Ames, IA), April 2007; *National University of Singapore* (NUSNNI/Physics), July 2007; *University of Melbourne*, Oct. 2007; *University of Western Australia*, Oct. 2007; *University of Sydney*, Oct. 2007; *University of Technology Sydney*, Oct. 2007; *CSIRO*, Oct. 2007; *Univ. of Rome ‘Tor Vergata’* (Physics), Dec. 2007; *University of Moncton*, Jan. 2008; *Mount Allison University*, Jan. 2008; *Nanyang Technological University* (Singapore), Feb. 2008; *University of Western Ontario*, London (ON) April 2008; *University of California, Riverside*, April 2008; *University of British Columbia, Vancouver*, May 2008; *University of Groningen, the Netherlands*, June 2008; *University of Queensland*, Brisbane, Aug. 2008; *Queensland University of Technology* (Brisbane) **IHBI (Spheres of Influence Lecture)**, Aug. 2008; *Monash University*, Melbourne, Sept. 2008; *McGill University*, Montreal, Oct. 2008; *Old Dominion University*, Norfolk (VA), Oct. 2008; *Dalhousie University*, Halifax (NS), Nov. 2008, *UWA* (Perth, Australia), Dec. 2008; *AFRL* (Dayton, OH), Jan. 2009; *UWA*, Feb. 2009; *NSU* (Norfolk, VA), March 2009; *MUN* (St. Johns & Corner Brook), April 2009; *UWA*, May 2009; *CSIRO* (Clayton), May 2009; *Latrobe Univ.* (Melbourne), May 2009; *MSE, Nanyang Technological University*, Aug. 2009; *Univ. of Missouri* (Columbia), Oct. 2009; *Lakehead Univ.* (Thunder Bay, ON), Oct. 2009; *NTU* (Taipei), Nov. 2009; *NSYSU* (Kaoshiung), Nov. 2009; *CNR–ISM* (Rome, Italy), Dec. 2009; *TUM* (Garching, Germany), Dec. 2009; *ISIS–ULP* (Strasbourg), Dec. 2009; *Monash University* (Melbourne), March 2010; *Univ. of Washington* (Seattle), March 2010; *Alfred Univ.* (NY), March 2010; *Laval Univ.* (Quebec), March 2010; *Univ. of Tokyo* (Hongo), *NIMS* (Tsukuba), *Univ. of Tokyo* (Kashiwa), April 2010; *Yokohama City University*, April 2010; *Northwestern University* (Evanston, IL), Sept. 2010; *Vanderbilt University* (Nashville, TN), Sept. 2010; *Universidad de los Andes* (Bogota, Colombia), Sept. 2010; **ASM India Lecture Tour Award**; *IIS Bangalore*, *IIT Bombay*, *IIT Delhi India*, Nov. 2010; *University of Fribourg* (Switzerland), Jan. 2011; *Univ. of Washington* (Seattle, USA), Feb. 2011; *Univ. of Köln* (Germany), March 2011; *IMRE* (Singapore), July 2011; *MPI Stuttgart Colloquium*, Nov. 2011; *Fritz Haber MPI Colloquium*, Nov. 2011; *iThema Labs* (Cape Town, South Africa, Dec. 2011); *Leibnitz IOM Leipzig*, Jan. 2012; *Leibnitz IFW Dresden*, Jan. 2012; *University of Ottawa*, March 2012; *Washington State University*, Sept. 2012; *Florida International Univ.* (Miami), Nov. 2012; *Univ. Cergy* (France), Nov. 2012; *UNSW Sydney*, Dec. 2012, *Northeastern University* (Boston), Feb. 2013; *California State University, Northridge* (Distinguished Speaker) Feb. 2013; *Concordia University* (Montreal), March 2013; *Tsinghua University*, Nankai University, UESTC (Chengdu), SUSTC (Shenzhen), *Souzhou University*, May 2013; *UCLA CNSI*, June 2013; *Queensland University of Technology* (Brisbane) **IFE (Grand Challenge Lecture)**, Sept. 2013; *Flinders Univ.* (Adelaide), Sept. 2013; **CAP Lecture Tour**, *Univ. of Toronto* (Jan. 2014), **ASM Chapter Brian Ives Award Lecture**, *Laval University* (Feb. 2014); **CAP Lecture Tour**, *Simon Fraser University*, *University of the Fraser Valley*, *Okanagan College Vernon*, *Okanagan College Kelowna* (March 2014); *UBC Vancouver* (March 2014); *Colorado School of Mines* (April 2014); *IPE, Chinese Academy of Sciences*, Beijing (May 2014); *Univ Milano Bicocca*, (June 2014); *Univ Rome La Sapienza* (June 2014); *Hong Kong University of Science and Technology*, Aug. 2014; *UOIT Oshawa* (**CSC Award lecture on**

excellence in materials chemistry), Sept. 2014; *MUN St. John's (CSC Award lecture on excellence in materials chemistry)*, Oct. 2014; *McGill University (SPIE Visiting Lecture)*, Nov. 2014; *KU Leuven (Chemistry and Physics)*, Nov. 2014; *IROST (Iran)*, March 2015; *Carleton University (Ottawa) (CSC Award lecture on excellence in materials chemistry)*, March 2015; *University of Ottawa (CSC Award lecture on excellence in materials chemistry)*, April 2015; *University of Toronto*, May 2015; *NTU/Singapore IEEE Chapter (IEEE NTC Distinguished Lecture)*, June 2015; *Queen's University (Kingston, ON) (CSC Award lecture on excellence in materials chemistry)*, Oct. 2015; *University of Beijing / IEEE Chapter (IEEE NTC Distinguished Lecture)*, Oct. 2015; *University of Jinan*, Oct. 2015; *University of Victoria*, Dec. 2015 (*SPIE Visiting Lecture*); *York University, Toronto (CSC Award lecture on excellence in materials chemistry)* Jan. 2016; *QUT Distinguished Lecture*, Brisbane March 2016; *RMIT, Melbourne* March 2016; *University of Houston (Physics) Colloquium*, April 2016; *University of Houston (ECE; IEEE NTC Distinguished Lecture)*, April 2016; *Harbin Institute of Technology*, April 2016; *University of Waterloo*, June 2016; *Elettra Synchrotron Radiation Facility*, July 2016; *iNano Distinguished Lecture*, *University of Aarhus* Aug. 2016; *China Distinguished Materials Scientist Forum*, *University of Science and Technology Beijing*, Sept. 2016; *University of Jinan (China)*, Sept. 2016; *ASM India Lecture Tour Award*: Mumbai, ASM India Chapter, Nov. 2016; *Colloquium*, *Monash University*, Nov. 2016; *Colloquium*, *University of Melbourne*, Nov. 2016; *FUNSOM (Suzhou University)*, Dec. 2016; *Suzhou University School of Energy, Physics and Optoelectronics*, Dec. 2016; *University of South Australia, Institute for Future Industries*, Feb. 2017; *University of Adelaide, Institute for Photonics and Applied Sensing*, Feb. 2017; *ICTP*, March 2017; *Univ. of Köln (Germany)*, May 2017; *Western University (London, ON)*, June 2017; *Chinese Academy of Sciences, Beijing* (Aug. 2017); *Univ. California, Irvine* (Sept. 2017); *Univ. California, Riverside* (Sept. 2017); *Univ. of Queensland, Brisbane* (Sept. 2017); *Univ. of Sydney* (Sept. 2017); *CAS Nano Center, CAS Institute of Chemistry, CAS Institute of Semiconductors, CAS Institute of Physics (Beijing)*, Oct. 2017; *Suzhou University*, Nov. 2017; *CUST (Changchun)*, Nov. 2017; *Changchun University*, Nov. 2017; *CAP Lecture Tour, Univ. of Victoria*, Feb. 2018; *CAP Lecture Tour, Kwantlen Polytechnic Univ.*, Feb. 2018; *UC San Diego*, Feb. 2018; *California State University, Northridge* Feb. 2018; *UC Santa Cruz*, March 2018; *Army Research Laboratory West, Los Angeles*, March 2018; *CAP Lecture Tour, Queen's Univ.*, March 2018; *CAP Lecture Tour, Royal Military College*, March 2018; *CAS Institute of Metal Research (Lee Hsun Award Lecture)*, *Shenyang*, April 2018; *CAS Changchun Institute of Applied Chemistry (Honourable Speaker for the Applied Chemistry Lecture Series)* Changchun, April 2018; *CAS Suzhou Institute of Nanotechnology, Suzhou*, April 2018; *SUSTech (Distinguished Guest Speaker)*, *Shenzhen*, April 2018; *CAS Shanghai Institute of Optics and Fine Mechanics*, April 2018; *CAS Shanghai Institute of Ceramics*, April 2018; *CAP Lecture Tour, Laval Univ.*, April 2018; *University of Rome Tor Vergata*, June 2018; *Karlsruhe Institute of Technology*, June 2018; *University of Alberta, Edmonton (OSA Traveling Lecturer)*, Sept. 2018; *Shanghai University*, Sept. 2018; *University of Science and Technology Beijing*, Sept. 2018; *Jilin Normal University (Changchun, China)*, Sept. 2018; *Research Center Juelich*, Oct. 2018; *University of Qingdao (China)*, Oct. 2018; *Suzhou University (China)*, Nov. 2018; *University of Stellenbosch (South Africa)*, Nov. 2018; *Suzhou University (China)*, July 2019; *Guilin University of Electronic Technology, Guilin (China)* July 2019; *McGill University, Montreal*, Aug. 2019; *University of Rome "La Sapienza" (Chemistry)*, *Rome*, Sept. 2019; *Jiangsu University, Zhenjiang (China)*, Sept. 2019; *UTAR (Kuala Lumpur, Malaysia)*, Jan. 2020; *Koc University (Istanbul)*, Feb. 2020; *EPFL*, Jan. 2021 (Virtual); *Univ. Ottawa*, Feb. 2021 (Virtual); *Univ. of Dayton (OH)*, Feb. 2021 (Virtual, IEEE Dist. Lecture); *Dongwu Master's Lecture Forum*, *Suzhou University (China)*, June 2021; *Qingdao University of Science and Technology, Qingdao (China)*, June 2021; *Skipper Lecture*, *CAS Institute of Process Engineering, Beijing (China)*, June 2021; *Gusu Lab, Suzhou (China)*, June 2021; *Università Ca' Foscari (Venezia, Virtual)*, Nov. 2021; *University of Toronto (Virtual)*, Jan. 2022; *Université de Sherbrooke (CAP Lecture Tour)*, Feb. 2022; *University of Houston (Houston, Texas)*, *IEEE Photonics Society Distinguished Lecture*, June 2022; *University of Waterloo (Waterloo, Ontario)*, *ECE Department Distinguished Lecture*, June 2022; *Università Ca' Foscari (Venezia)*, Sept. 2022; *Xinjiang University (Urumqi, China; Virtual)*, Sept. 2022; *Università di Trieste, Nov 9th 2022*; *CNR-IOM*, Nov. 2022; *Fondation MASCIR (Rabat, Morocco)*, Dec. 2022; *CAP Brockhouse Medal Award Lecture (Virtual)*, Jan. 2023.

OUTREACH ACTIVITIES

Public Lectures (36) and Lectures at International High Schools (13)

Nanoscale Structure and Properties of Biocompatible Materials. Given at: Mexican Academy of Engineering (Induction Ceremony and Presentation), Mexico City, Nov. 2017.

Energy and Society: What Energy for the Future of Humanity? Given at: Southern Illinois University (*Sigma Xi Distinguished Lecture*), Carbondale (IL), Feb. 2023; Italian Cultural Institute (Montreal), May 2018; CEGEP Ahuntsic (Montreal), Feb. 2018; California Nanosystems Institute (UCLA), Feb. 2018; Ministry of Foreign Affairs, Government of Madagascar (Dec. 2017); Ohio University (Athens, OH: Kennedy Series Lecture), April 2017; University of Adelaide, Flinders University, Macquarie University and Queensland University of Technology, November 2016; KU Leuven (Belgium), May 2016; Harbin Institute of Technology (Harbin, China), April 2016; Curtin University of Technology (Perth), RMIT (Melbourne), University of Sydney, University of New South Wales (Sydney), Griffith University (Brisbane), March 2016; University of Beijing, Oct. 2015; NTU School of EEE (Singapore), June 2015; ASM Ottawa Chapter, ASM Calgary Chapter, April 2015; ASM Vancouver Chapter, Jan. 2015; ASM Edmonton Chapter, Jan. 2015; ASM Montreal Chapter, Oct. 2014; ASM Ontario Chapter, Oakville (ON), May 2014 [*ASM Canada Brian Ives Lectureship Award*]; ARPICO Society, Vancouver, March 2014; Queensland University of Technology (Brisbane, Au), Sept. 2013; University of Western Ontario (London, ON), May 2011; Skywest lecture (UWA Albany Centre), May 2010; Monash University, Melbourne, March 2010; Lakehead University, Thunder Bay (ON), Oct. 2009; UWA, Perth (Au), May 2009; MUN, Corner Brook (NL), April 2009; MUN, St. Johns (NL), April 2009; Singapore Science Café, Singapore July 2008.

Energy and Society: What Energy for the Future of Humanity? International School of Trieste (Italy), May 2023; United World College of the Atlantic, St. Donat's Castle (Wales), Feb. 2022; United World College of East Africa, Arusha (Tanzania), Dec. 2019; United World College of China, Oct. 2017; Li Po Chun United World College of Hong Kong, Dec. 2016; United World College of the Adriatic, Duino (Trieste, Italy), Oct. 2008 and Oct. 2014; United World College of South East Asia, Singapore, Feb. 2008.

Nanostructured Materials & Nanotechnology Given at: United World College of South East Asia, Singapore, Dec. 2005; United World College of India, Pune, Dec. 2003; Upper Canada College, Nov. 2003; United World College of the Adriatic, Trieste, Nov. 2002 and Oct. 2014.

PROFESSIONAL SERVICE

Conference Organization and Committee Membership (136 in 27 countries)

1. **Member** of the International Scientific Advisory, *APHYS2003*, Badajoz (Spain), Oct. 2003.
2. **Member** of the Program Committee, *Nanomaterials Crossroads Workshop*, Montreal, Oct. 2003.
3. **Co-Chair**, *pre-APS meeting on Nanoscience and NanoMaterials*, Montreal, Mar. 2004.
4. **Co-Organizer** of the *Nanoscience Symposium*, ACFAS 2004, Montreal, May 2004.
5. **Co-Chair** of the *Symposium on Molecular Imaging*, held at UdeM, Montreal, May 2005.
6. **Co-Chair** of the *Symposium on Nanostructured Surfaces and Interfaces*, CSC in Saskatoon, May 2005.
7. **Co-Chair** of *Symposium R (nano-assemblies)*, MRS Fall Meeting, Boston Nov. 2005.
8. **Member** of the Int. Adv. Comm. of the *Int. Symposium on Functional Materials*, KL (Malaysia), Dec. 2005.
9. **Member** of the Scientific Comm. of the *Conf. on Low Dimensionality and Nanotechnology*, Morocco, Nov. 2006.
10. **Member** of the Int. Adv. Comm. of the 2nd *Int. Symposium on Functional Materials*, Hangzhou (China), 2007.
11. **Co-Chair** of the *Symposium for young scientists, Nano and Giga 2009*, Hamilton (ON), 2009.
12. **Member** of the Int. Adv. Comm. of the 3rd *Int. Symposium on Functional Materials*, Jinju (S. Korea), 2009.
13. **Member** of the Int. Adv. Comm., *Nano 2010*, Rome (Italy) Sept. 2010.
14. **Chair** of the *Workshop on Time Resolved Electron Microscopy*, Montreal, May 2011.
15. **Member** of the Int. Adv. Comm. of the 4th *Int. Symposium on Functional Materials*, Sendai (Japan), Aug. 2011.
16. **Chair** of the 1st post-MRS *Symposium on Advanced Materials and Nanotechnology*, Varennes (Canada), Dec. 2011.
17. **Co-Chair** of the *Symposium on Nanobiophotonics*, MRS Africa, December 2011 (Victoria Falls, Zimbabwe).
18. **Co-Chair** of the *Symposium on Advanced Materials for Photonics and Energy*, ICACS, Daytona Beach (FL), Jan. 2012.
19. **Co-Chair** of the Zing Conference *on Supramolecular Assemblies at Surfaces: Nanopatterning, Functionality, Reactivity*, Lanzarote (Spain), Feb. 2012.
20. **Co-Chair** of the *Symposium on Surface and Interface Characterization*, IMRC Cancun (Mexico), Aug. 2012.
21. **Chair** of the 2nd post-MRS *Symposium on Advanced Materials and Nanotechnology*, Varennes (Canada), Dec. 2012.
22. **Member** of the Int. Adv. Comm. of the 5th *Int. Symposium on Functional Materials*, Perth (Australia), Dec. 2012.
23. **Member** of the *Photonics Global Conference Technical Committee*, Singapore, Dec. 2012.
24. **Co-Chair** of the *Symposium on Advanced Materials for Photonics and Energy*, Daytona Beach (FL), ICACS 2013.
25. **Co-Chair** of the *Symposium on Metal Oxides and their applications*, MRS Spring Meeting, San Francisco (CA), April 2013.
26. **Co-Chair** of the *Symposium on Nanoscale Sensors, Devices & Systems*, IC4N, Corfu (Greece), June 2013.
27. **Co-Chair** of the *Symposium on Nanoceramics and Nanohybrids for Energy, Environment and Healthcare*, ICMAT 2013, July, Singapore.
28. **Co-Chair** of the *Symposium on Surfaces and Interfaces and their role in Materials Processing*, IMRC Cancun (Mexico), August 2013.
29. **Co-Chair** of the *Symposium on Synthesis and Structural and Functional Characterization of Thin Films and Self-assembled Nanostructures*, MS&T, Montreal, October 2013.
30. **Member** of the Int. Adv. Comm. of the 1st *International Conference on Electrical Information and Communication Technology*, Khulna (Bangladesh), Nov. 2013.
31. **Chair** of the *Symposium on Materials and Technologies for Energy Conversion, Saving and Storage*, African MRS, Addis Ababa (Ethiopia), Dec. 2013.
32. **Co-Chair** of the *Symposium on Advanced Materials for Photonics and Energy*, ICACS, Daytona Beach (FL), Jan. 2014.
33. **Co-Chair** of the *Symposium on Molecular Self-Assembly*, ACS Spring Meeting, Dallas (TX), March 2014.
34. **Co-Chair** of the *Symposium on Metal Oxides and their applications*, NGC meeting, Phoenix (AZ), March 2014.
35. **Chair** of the *Inaugural Symposium of the UNESCO Chair MATECSS*, Montreal, April 2014.
36. **Co-Chair** of the *EMN East Spring Meeting*, Beijing (China), May 2014.
37. **Co-Chair** of the *Workshop on Surface Chemistry*, Les Houches (France), May 2014.
38. **Symposium Chair**, *Tech4Dev Conference* 2014, EPFL (Lausanne, Switzerland), June 2014.
39. **Member** of the *CIMTEC Technical Committee*, CIMTEC, Montecatini Terme (Italy), June 2014.
40. **Member** of the Int. Adv. Comm. of the 6th *Int. Symposium on Functional Materials*, Singapore, Aug. 2014.
41. **Member** of the Int. Program Committee, *EMN Fall Meeting*, Orlando (FL), Nov. 2014.
42. **Co-Chair** of the *Symposium on Advanced Materials for Photonics and Energy*, ICACS, Daytona Beach (FL), Jan. 2015.

43. **Member** of the Program Committee, *Symposium on Synthesis and Photonics of Nanoscale Materials 2015, Photonics West*, San Francisco (CA), Feb. 2015.
44. **Member** of the International Advisory Committee of the *International conference on Energy Harvesting, Storage and Conversion*, Cochin (India), Feb. 2015.
45. **Co-Chair** of the *Symposium on Advances in Thin Films for Electronics and Photonics*, TMS, Orlando (FL), March 2015.
46. **Co-Chair** of the *EMN East Spring Meeting*, Beijing (China), April 2015.
47. **Member** of the Planning Committee, *Next Generation Solar 2015*, Toronto (ON, Canada), May 2015.
48. **Co-Chair** of the *Annual General Meeting of the Global Young Academy*, Chateau Montebello (QC, Canada), May 2015.
49. **Co-Chair** of *Symposium AA, Advanced Ceramics and Nanohybrids for Energy, Environment and Health* at ICMAT, Singapore, June-July 2015.
50. **Member** of the Int. Scientific Committee, *1st International Conference on Applied Surface Science*, Shanghai, July 2015.
51. **Co-Chair** of the *Symposium MATECSS*, IMRC (Cancun), August 2015.
52. **Member** of the Program Committee, *17th Canadian Semiconductor Science and Technology Conference*, Sherbrooke (QC), Aug. 2015.
53. **Co-Chair** of the *Symposium on Multiferroic Materials and their Application in Photovoltaics*, Santiago de Compostela (Spain), Sept. 2015.
54. **Member** of the Advisory Committee, *NanoS-E3 International Workshop and School on Nanotechnology*, Kingscliff (Australia), Sept./Oct. 2015.
55. **Co-Chair** of the *Symposium on Ceramic Materials and Processing for Advanced Applications*, Pacificchem, Honolulu (HI), Dec. 2015.
56. **Co-Chair** of the *Symposium on Nanostructured Oxides for Energy Harvesting and Water Splitting*, Pacificchem, Honolulu (HI), Dec. 2015.
57. **Co-Chair** of the *Symposium on Supramolecular Assemblies at Surfaces: Nanopatterning, Functionality, Reactivity*, Pacificchem, Honolulu (HI), Dec. 2015.
58. **Member** of the Int. Adv. Comm. of the *2nd International Conference on Electrical Information and Communication Technology*, Khulna (Bangladesh), Dec. 2015.
59. **Co-Chair** of the *Symposium on Advanced Materials for Photonics and Energy*, ICACS, Daytona Beach (FL), Jan. 2016.
60. **Member** of the International Organizing Committee, *1st International Energy & Environmental Materials Forum (IEEMF) and 3rd Inorganic & Nanomaterials Forum (INF)*, Gold Coast (Australia), Feb. 2016.
61. **Member** of the International Scientific Committee, *ICNS6*, Kish Island (Iran), March 2016.
62. **Symposium Chair**, *Tech4Dev Conference 2016*, EPFL (Lausanne), May 2016.
63. **Co-Chair** of the *Symposium on Laser Modification of Biomaterials*, World Biomaterials Congress, Montreal, May 2016.
64. **General Chair** of the *CMOS Emerging Technologies Conference*, Montreal, May 2016.
65. **Member** of the *CIMTEC Technical Committee*, CIMTEC, Perugia (Italy), June 2016.
66. **Co-Chair** of the *Symposium on Energy Conversion and Storage, 5th IC4N*, Porto Heli (Greece) June 2016.
67. **Co-Chair** of the *College on multiscale computational modeling of materials for energy applications*, ICTP (Trieste), July 2016.
68. **Co-Chair** of the *Energy, Materials and Photonics Conference*, Troyes (France), July 2016.
69. **Member** of the International Scientific Committee, *Nano2016*, Quebec City (QC, Canada), Aug. 2016.
70. **Co-Chair** of the *Symposium MATECSS*, IMRC (Cancun), August 2016.
71. **Member** of the International Scientific Committee, *4th Advanced Functional Materials and Devices meeting*, Suzhou (China), Aug. 2016.
72. **Member** of the International Advisory Committee, *8th International Conference on Low Dimensional Structures and Devices (LDSD 2016)*, Riviera Maya (Mexico) Aug. 2016.
73. **Member** of the International Advisory Committee, *4th Advanced Functional Materials and Devices Conference*, Singapore, Aug. 2016.
74. **Co-Chair** of the *Symposium on Multiferroic Materials and their Application in Photovoltaics*, Berlin (Germany), Sept. 2016.
75. **Member** of the International Advisory Board of the *Annual Workshop on Nanotechnology, Renewable Energy & Sustainability*, Xian (China), Oct. 2016.
76. **Member** of the Technical Program Committee, *2nd International Conference on Microsystems and Nanotechnology*, Shanghai (China), Nov. 2016.
77. **Co-Chair** of the *Symposium on Advanced Materials for Photonics and Energy*, ICACS, Daytona Beach (FL), Jan. 2017.
78. **Member** of the Technical Program Committee, *Microsystems and Nanotechnology Conference*, Shenzhen (China), May 2017.
79. **Co-Chair** of *Symposium on Photovoltaic and related materials and technologies*, at PACRIM, Kona (HI), May 2017.
80. **Co-Chair** of the *IEEE Summer School on Nanomaterials, Nanotools and Nanodevices*, Montreal, June 2017.
81. **Co-Chair** of *Symposium on Advanced Ceramics and Nanohybrids for Energy, Environment and Health* at ICMAT, Singapore, June-July 2017.
82. **Member** of the International Advisory Committee, *6th Advanced Functional Materials and Devices Conference*, Moscow (Russia), July 2017.

83. **Co-Chair** of the *Symposium MATECSS*, IMRC (Cancun), August 2017.
84. **Member** of the Program Committee, *18th Canadian Semiconductor Science and Technology Conference*, Waterloo (ON, Canada), Aug. 2017.
85. **Co-Chair** of the *Symposium on nanomaterials and nanotechnology (materials and processes)-related RF/microwave/electromagnetic devices and circuits*, at the IEEE MTT-S International Microwave Workshop Series on Advanced Materials and Processes, Pavia (Italy), Sept. 2017.
86. **Member** of the International Advisory Board, *ACTSEA 2017*, Kaohsiung (Taiwan), Nov. 2017.
87. **Co-Chair** of the *Symposium on Interfaces in Electrochemical Energy Storage*, MRS Fall Meeting, Boston (MA), Dec. 2017.
88. **Co-Chair** of the Session on *Piezoelectrics and photovoltaics for energy harvesting and conversion*, 6th ISIF, New Delhi, (India), Dec. 2017.
89. **Chair** of the *Symposium on Energy Conversion, Saving and Storage*, African MRS, Gaborone (Botswana) Dec. 2017.
90. **Member** of the Int. Adv. Comm. of the *3rd International Conference on Electrical Information and Communication Technology*, Khulna (Bangladesh), Dec. 2017.
91. **Co-Chair** of the *Symposium on Advanced Materials for Photonics and Energy*, ICACS, Daytona Beach (FL), Jan. 2018.
92. **Co-Chair** of the *Symposium on Nanoscale Luminescent Materials*, 233rd ECS Meeting, Seattle (WA), May 2018.
93. **Member** of the International Advisory Board, *Symposium on Advances in Electroceramics: Processing, Structure, Properties, and Applications* of the International Ceramics Congress (CIMTEC), Perugia (Italy), June 2018.
94. **Member** of the International Advisory Board, *6th International Solvothermal and Hydrothermal Association Conference*, Sendai (Japan) Aug. 2018.
95. **Member** of the International Advisory Committee, *International Symposium on Functional Materials (ISFM)*, Germany, Aug. 2018.
96. **Co-Chair** of the *Symposium MATECSS*, IMRC (Cancun), August 2018.
97. **Co-Chair** of the Canada / Italy *Symposium on Nanomaterials for Devices*, Varennes (QC), September 2018.
98. **Co-Chair** of the *Workshop on Green Electronics*, Ecole Polytechnique de Montreal, December 2018.
99. **Co-Chair** of the *Symposium on Advanced Materials for Photonics and Energy*, ICACS, Daytona Beach (FL), Jan. 2019.
100. **Co-Chair** of the *Symposium on Oxide-based Materials and Devices X*, SPIE Photonics West, San Francisco (CA), Feb. 2019.
101. **Co-Chair** of the *ACS Symposium on Supramolecular Assemblies at Surfaces*, ACS Spring Meeting, Orlando (FL), March 2019.
102. **Member** of the International Advisory Committee, *Chinese International Ceramics Conference II*, Kunming (China), May 2019.
103. **Co-Chair** of the Symposium on *Materials Education*, ICMAT, Singapore June 2019.
104. **Co-Chair** of the Symposium *Renewable Energy & Photo-Electrochemistry: from Basic Concepts and Materials to Real Devices*, International Society of Electrochemistry Annual Meeting, Durban (South Africa), August 2019.
105. Technical Program Committee **Member** of *IEEE IMWS-AMP 2019*, Bochum (Germany), August 2019.
106. **Co-Chair** of the *Symposium MATECSS*, IMRC Cancun (Mexico), August 2019.
107. **Co-Chair** of the *Symposium on Colloidal Quantum Dots for Emerging Technologies*, ACS Fall Meeting, San Diego (CA), August 2019.
108. **Co-Chair** of the *Symposium on Next Generation Biomaterials*, MS&T, Portland (OR), October 2019.
109. **Co-Chair** of the *Symposium on Challenges in Battery Technologies for Next-Generation Electric Vehicles and Grid Storage Applications*, MRS Fall Meeting, Boston (MA), Dec. 2019.
110. **Co-Chair** of the *Symposium on Materials for Energy Conversion, Saving and Storage*, African MRS, Arusha (Tanzania), Dec. 2019.
111. **Co-Chair** of the *Symposium on Advanced Materials for Photonics and Energy*, ICACS, Daytona Beach (FL), Jan. 2020.
112. **Member** of the Scientific Advisory Board, *International Conference on Nano Research and Development*, Singapore, March 2020.
113. **Member** of the International Advisory Board, *Functional Materials Society Meeting*, Suzhou (China), April 2020 (post-poned to Aug. 2021 and moved to Chongqing due to COVID19 pandemic).
114. **Co-Chair** of the *Symposium on Luminescent Nanoscale Materials*, ECS Spring Meeting, Montreal, May 2020. (canceled due to COVID19 pandemic)
115. **Member** of the International Advisory Committee, *Japan International conference on Carbon Materials and Materials Applied Sciences (JICCMAS)*, Osaka (Japan), May 2020.
116. **Co-Chair** of the *IEEE Nano conference*, Montreal, July 2020 (post-poned to July 2021 due to COVID19 pandemic).
117. **Co-Chair** of the *Symposium MATECSS*, IMRC (Cancun), August 2020. (post-poned to Aug. 2021 due to COVID19 pandemic; hybrid event).
118. **Member** of the Scientific Advisory Board of the *International Conference on Advanced Materials for Energy and Information Technology (AMEIT2020)*, Virtual Conference, Aug. 2020.
119. **Co-Chair** of the *Symposium on Materials for Energy Conversion and Storage*, SBPMat, Iguazu Falls (Brazil), Aug. 2020 (post-poned to Aug. 2021 due to COVID19 pandemic; virtual event).
120. **Co-Chair** of the *Symposium on Sustainable Electronics-Green Chemistry, Circular Materials, End-of-Life and Eco-Design*, MRS Fall Meeting, Boston (MA), Nov. 2021; hybrid event.

121. **Co-Chair** of the *Symposium on Supramolecular Assemblies at Surfaces: Nanopatterning, Functionality, Reactivity*, Pacifichem, Honolulu (HI), Dec. 2020 (**post-poned to Dec. 2021 due to COVID19 pandemic**). Virtual event.
122. **Co-Chair** of the *Symposium on Nanostructured Oxide for Energy Harvesting, Conversion and Storage*, Pacifichem, Honolulu (HI), Dec. 2020 (**post-poned to Dec. 2021 due to COVID19 pandemic**). Virtual event.
123. **Co-Chair** of the *Symposium on Advanced Materials for Photonics and Energy*, ICACS, Daytona Beach (FL), Feb. 2021 (Virtual).
124. **Member** of the Scientific Advisory Board of the *World Conference on Nanotechnology and Materials* (WCNM-2021), Kunming (China), April 2021.
125. **Co-Chair** of the *International Conference on Energy, Materials and Photonics 2021 (EMP21)*, Kunming (China) Aug. 2021.
126. **Member** of the Conference Program Organizing Committee, *AIP Publishing Horizons Conference on Energy Storage and Conversion* (Virtual), Aug. 2021.
127. **Co-Chair** of the *Symposium on Advanced Materials for Photonics and Energy*, ICACS, Daytona Beach (FL), Jan. 2022 (Virtual).
128. **Co-Chair** of the *Symposium on Nanoscale Luminescent Materials*, 241st ECS Meeting, Vancouver (Canada), May 2022.
129. **Co-Chair** of the *Symposium MATECSS*, IMRC (Cancun), August 2022.
130. **Co-Chair** of the *Symposium on Materials for Energy Conversion and Storage*, SBPMat, Iguazu Falls (Brazil), Sept. 2022 (**post-poned due to COVID19 pandemic; hybrid event**).
131. **Co-Chair** of the *Symposium on Low-Dimensional Nanoscale Electronic and Photonic Devices*, 242nd ECS Fall Meeting, Atlanta (GA), Oct. 2022.
132. **Co-Chair** of the *Symposium on Colloidal quantum dots for emerging technologies*, MRS Fall Meeting, Boston (MA), Nov. 2022.
133. **Co-Chair** of the *Symposium on Advanced Materials for Photonics and Energy*, ICACS, Daytona Beach (FL), Jan. 2023 (Hybrid).
134. **Co-Chair** of the *Symposium MATECSS*, IMRC (Cancun), August 2023.
135. **Co-Chair** of the *Symposium on Advanced Ceramics for Environmental Remediation*, EMRS Fall Meeting, Warsaw, Sept. 2023.
135. **Co-Chair** of the *Symposium on Materials for Energy Conversion and Storage*, SBPMat, Maceio (Brazil), Oct. 2023.
136. **Co-Chair** of the *Symposium on Low-Dimensional Nanoscale Electronic and Photonic Devices*, PRiME 2024, Honolulu (HI), Oct. 2024.

Journal Refereeing (101)

Science, Science Adv., Nature, Nature Mater., Nature Chem., Nature Nano., Nature Phot, Nature Phys., Nature Energy, Nature Comm., Angew. Chemie, Chem, Joule, Matter, Phys Rev Lett, NanoLetters, J Am Chem Soc, Adv Mater, Adv Func Mater, Adv Energy Mater, Adv. Opt. Mater., Chem Rev, Chem Soc Rev, Small, Chem Mater, Chem Comm, Med Chem Comm, Acc Chem Res, Nanoscale, ACS Energy Lett, ACS Appl Mater Interf, J Phys Chem B & C, Langmuir, Phys Rev B & E, Appl Phys Lett, ACS Nano, Biomaterials, Chem Eng J, J Chem Phys, J Mater Chem A & C, Chem Eur J, Green Chem, Dalton Trans., Nanotechnology, IEEE Trans. Nanotech., IEEE Trans. UFFC, IEEE Sensors, IEEE Trans. Semic. Manuf., ChemPhysChem, Chem Phys Lett, Surf Science, Appl Surf Sci, Surf Coat Tech, Carbon, Materials Today, Materials Today Chem., Adv. Mater. Tech., Adv. Healthcare Mater., Adv Eng Mater, Physica E, Org Electronics, J Vac Sci Tech, J. Phys. C & D, MRS Comm., Electrochem Comm, Phys Chem Chem Phys, Phys Stat Solidi, Acta Materialia, Acta Biomaterialia, Synth Met, Microel Eng., J All Comp, Mat Sci Eng C., Thin Solid Films, New J Phys, J Elect Spectr Rel Phen, Particle, Plasma Proc. & Polymers, Biotech & Bioeng., J Mater Res, J Eur Cer Soc, J Exp Nanoscience, J Nanosci Nanotech, Superlattices & Microstructures, JM3, J Electrochem Soc, J Sc Probe Micr, Sci Tech Adv Mat, J Kor Phys Soc, J Mater Sci, J Photochem Photobio, Colloids & Surfaces, Cryst Growth & Design, MRS Symp Proc, J Nanopart Res., Fullerenes, Nanotubes and Carbon Nanostructures, Int. J. Biomater.

Refereeing for Funding Agencies (31 in 16 countries)

NSF [*panelist*], DoE (US); European Science Foundation; EU FP6 [*panelist*]; EU-ERANano [*panelist*]; NSERC [*panelist*], NFRF [*panelist*], Ontario Research Fund [*panelist*], DFAIT, Canada Research Chairs, Killam Fellowships and Prizes (Canada Council for the Arts) [*panelist*]; FRQNT (Quebec); ASTAR, NRF, NUS (Singapore); CNR, CINECA (Italy); FOM (Netherlands); FWF (Austria); National Science Centre (Poland); ACS-PRF; DFG (Germany); FWO (Flanders); Czech Science Foundation (Czech Republic); Hong Kong Research Grants Council; City University of Hong Kong; ANR (France); Australian Research Council (ARC); SFI (Ireland); Mauritius Research Council; SNF (Swiss National Science Foundation); Shastri Institute (Canada/India).

Assessor in cases of Research Misconduct

Swedish National Board for Assessment of Research Misconduct

Ph.D. External Examiner (18 universities in 9 countries)

Trinity College Dublin (2005), Univ. British Columbia (2007), Univ. of Pune (2008), Laval Univ. (2009), Nanyang Technological Univ. (2009, 2011, 2012, 2017); Univ. Franche Comté (France, 2011); National Univ. Singapore (2011); Monash Univ. (2012); Univ. Toronto (2015, 2021, 2022); Univ. Aarhus (2016); Univ. Lahore (2016–2020); Lahore College for Women Univ. (2020); Univ. of Agriculture, Faisalbad (Pakistan, 2020); Anna University (Chennai, India 2021); Univ. Rome 2 (Italy); Polytechnique Montreal (2021); UNSW (2022); Univ. Waterloo (2022).

External Assessor (hiring, promotion, tenure) (22 institutions in 7 countries)

NUS, NTU, IMRE (Singapore); University of Regensburg (Germany); Portland State University, Colorado School of Mines, Northeastern University, Old Dominion University, University of Houston, Purdue University, University of California Riverside, Baylor University (USA); University of Basel (Switzerland); RMIT, University of Queensland, Monash University (Australia); Dalhousie University; Memorial University of Newfoundland; University of Toronto, York University, University of Ottawa (Canada); Univ. de Marseille (France).

SUPERVISION OF STUDENTS/RESEARCHERS

Position supervised	Total over career	Currently supervising
Research Assistants / Associates	6	2
Post-Doctoral Fellows	57	3
Visiting Scholars / Scientists	21	4
PhD Students	51	13
MSc Students	12	2
Undergraduate / summer students	44	-

Training of young scientists (MSc, PhD, summer students, exchange students, visiting scientists, post-doctoral fellows) per country (46) of origin:

Algeria	Australia	Bangladesh	Brazil	Brunei	Bulgaria	Canada	China	Colombia	Congo
7	4	3	3	1	1	23	33	1	1
Cuba	Czech Republic	Egypt	Ethiopia	France	Germany	Ghana	Greece	Haiti	India
1	1	1	2	10	7	1	2	1	16
Iran	Iraq	Italy	Macedonia	Mali	Mauritius	Mexico	Morocco	Nepal	New Zealand
8	2	20	1	1	1	2	2	1	1
Nigeria	Palestine	Romania	Russia	Saudi Arabia	Senegal	South Korea	Spain	Tanzania	Tunisia
1	2	3	1	1	1	1	3	1	1
Turkey	UK	Ukraine	USA	Venezuela	Vietnam				
2	2	2	1	1	1				

Summer and intern students (44):

Jonathan Borduas (Canada), Annie Bourdon (Canada), Laurence Timmerman (USA), Maxime Fradette (NSERC, Canada), Romain Perez (France), Chaoying Fu (China), Imen Saidi (Tunisia), Ryan Groome (Canada), Zied Ben Chaouch (Canada), Joanna Rowell (NSERC, Canada), Edoardo Zatterin (Italy), Ram Surya Gona (MITACS Globalink, India), Nikhil Gri (MITACS Globalink, Germany/Ukraine), Akshay Gupta (India), Orsen Zamor (MATECSS, Haiti/Canada), Riccardo Milan (Italy), Thierry Haddad (Canada), Abdellah Henni (Algeria), Mars Abdelkarim (Algeria), Nicola Rana (Italy), Raffaello Mazzaro (Italy), Jaskaran Singh Malhotra (MITACS Globalink, India), Tim Schaefer (Germany), Gurpreet Singh Selopal (India), Ines Serrano (Spain), Dimitra Papadaki (Greece), Erdem Irtim (Turkey), Oleksandr Dobrozhan (Ukraine), Pauline Karkel (France), Suzette Slim (NSERC, Canada), Gil Govin Cardoso (MITACS Globalink, Spain), Eva Schaefer (MITACS Globalink, Germany), Jacks Clinton (India), Bing Luo (CSC, China), Heng Guo (China), Isra Abichou (France), Ralph Chahine (NSERC, Canada), Nasser Alsayyari (MITACS Globalink, Saudi Arabia), Alma Paola Hernández González (MITACS Globalink, Mexico), Shanmugasundaram Kokilavani (MITACS Globalink, India), Karthik Suresh (MITACS Globalink, India), Brian Giam (MITACS Globalink, Hong Kong), Halima Hammami (Tunisia), Isabella Teck (MITACS Globalink, Germany/UK), Swedha Madhu (MITACS Globalink, India).

Impact in Training HQP:

Since joining INRS I supervised over **195** excellent trainees from **46** countries. All relations with my trainees aim to help them reach their true potential. My mentoring philosophy is embodied in two quotes: (i) *“Grim is the pupil who does not surpass his mentor”* (Leonardo DaVinci); (ii) *“But, how [can you inspire your team] to be better than they think they can be?”* (from the movie *Invictus*). I take pride in that **31** of my former trainees hold faculty positions in **14** countries, **8** are researchers in national labs, **19** more are staff scientists in industry. Over half my trainees received prestigious fellowships and awards (e.g. NSERC, FQRNT, FRSQ, CIHR, China Scholarship Council, Marie Curie, Vanier, Banting, von Humboldt) while working in my group or upon completion of their training.

M.Sc. and Ph.D. Students (63)

Student	Degree Program	Research Achievements	Fellowships / Awards during studies	Fellowships / Awards after studies	Present employment
(co-supervised)	PhD	Published 6 papers during PhD. In	NSERC eMPOWER Fellowship 2003	NSERC PDF award	Director of Technology

(previously at University of Sherbrooke)	Sept. 2002 – Nov. 2006	particular, as first author in <i>Appl. Phys. Lett.</i> (2), <i>Phys. Rev. B</i> and <i>Nanotechnology</i>		FQRNT PDF award at Univ. of Montreal	Transfer at MEI (government of Quebec)
(previously at Queen's University (Kingston, ON))	PhD June 2003 – Oct. 2008	Published 7 papers during PhD. In particular, as first author in <i>J. Am. Chem. Soc.</i> (Comm.), <i>J. Phys. Chem. B</i> , <i>J. Phys. Chem. C</i> , <i>Nanotechnology</i>	Canadian Scandinavian Foundation Fellowship for Denmark	Endeavour PDF Fellowship (Government of Australia)	<i>Associate Professor</i> at University of Aarhus, Denmark
(previously at University of Bucharest, Romania)	PhD July 2003 – Dec. 2007	Published 5 papers during PhD. In particular, as first author in <i>Appl. Phys. Lett.</i> (2) and <i>IEEE Trans. On Nanotechnology</i>		NSERC PDF award at McGill	Staff scientist at NRC in Boucherville
(previously at University of Trieste, Italy)	PhD Sept. 2003 – May 2007	Published 11 papers during PhD; as first author in <i>Phys. Rev. Lett.</i> , <i>Small</i> , <i>Appl. Phys. Lett.</i> , <i>J. Appl. Phys.</i> , <i>Nanotechnology</i> and <i>Surf. Sci.</i>	JISTEC Fellowship for Japan; Gov. of Canada award (CBIE); FQRNT fellowship ; Invited talk at APS March Meeting 2006	DAAD Exchange Fellowship in Germany, post-doctoral fellowship from CNR, Italy	Permanent staff scientist at CNR Firenze
(previously at Azad University of Karaj, Iran)	MSc May 2005 – Aug. 2007 Then PhD Sept. 2007 – Dec. 2012	Published as first author in <i>Chem. Comm.</i> , <i>Angew. Chem.</i> and <i>J. Mater. Chem. C</i> , co-authored papers in <i>Adv. Mater.</i> , <i>Adv. Func. Mater.</i> , <i>Chem. Mater.</i> , <i>J. Mater. Chem. C</i> , <i>J. Am. Chem. Soc.</i>	TNT travel grant 2008 and 2009; poster prize TNT 2010, Best paper award CSACS 2012		Research Associate at NRC (Ottawa) then Lab Manager at McGill University Since Jan. 2022, Research Scientist at Cummins Inc. (Ontario)
(previously at University Waterloo, ON)	MSc/PhD Sept. 2005 – Dec. 2011	Published as first author in <i>Appl. Phys. Lett.</i> , <i>Small</i> , <i>Chem. Comm.</i> and <i>J. Appl. Phys.</i>	NSERC MSc and PhD Scholarships, GSSSP award from NRC	NSERC PDF	Research Associate at NRC (Ottawa) then post-doc at Max Planck Institute in Stuttgart with K. Kern Current position: unknown (changed career)
(previously at University of Trieste, Italy)	PhD Sept. 2005 – Jan. 2010	Published 8 papers during PhD. In particular, as first author in: <i>Biomaterials</i> , <i>Small</i> , <i>Surf. Sci.</i> , <i>Adv. Eng. Mater.</i> , <i>Appl. Spectroscopy</i>	JISTEC Fellowship for Japan; Govt. of Canada award (CBIE); FQRNT fellowship		<i>Full Professor, University of Ottawa.</i> <i>Fabio started his own workshop on "Survival Skills for Scientists" at University of Ottawa in 2011.</i>

(previously Univ. South Australia)	MSc Sept. 2006 – Dec. 2008	Co-authored 2 papers during MSc. Published as 1 st author in <i>Phys. Rev. B</i>	Best MSc presentation at INRS graduate seminar		General Manager Operations at Gelion, then Independent Contractor (Australia)
(previously at University of Bamako, Mali)	MSc Sept. 2008 then PhD student, graduated Aug. 2016	Published as 1 st author in <i>J. Power Sources</i> , <i>J. Phys. Chem. C</i> and <i>J. Mater. Chem. A</i> (Front Cover)	Poster prize TNT 2008 and TNT 2009, TNT travel grant 2009 and 2010 PhD Presidential Fellowship (Government of Mali) FRQNT PhD Fellowship		Independent consultant in quality, health, safety and environment in ISO standards, Bamako (Mali)
(previously at INRS)	PhD Oct. 2007 April 2014	Co-authored a paper in <i>Appl. Phys. Lett.</i> , published as 1 st author in <i>Appl. Phys. Lett.</i> , <i>Phys. Rev. B</i> and <i>J. Appl. Phys.</i>	FQRNT PhD Fellowship, NSERC PhD (CGS) Fellowship, M. Smith NSERC Supplement , poster prize TNT 2009 and 2010, TNT travel grant 2009 and 2010		Instructor at John Abbott CEGEP in Montreal
(co-supervised) (previously Shandong University, China)	PhD Aug. 2009 – Feb. 2014	Published as 1 st author in <i>Small</i> , <i>Int. J. Hydrogen Energy</i> and <i>JACS</i>	FQRNT-MELS PhD Fellowship for foreign students	FQRNT PDF award	Post-doctoral Fellow at the Institute of Physics, Chinese Academy of Sciences (Beijing), then PDF with Ted Sargent at University of Toronto 1000 Talent Young awardee, Tianjin University
(previously Univ. of Bucharest, Romania)	PhD May 2010 – Dec. 2015	Published as 1 st author in <i>ACS Nano</i> , <i>Chem. Comm.</i> , <i>Nanoscale</i> and <i>J. Phys. Chem. C</i> .	FQRNT PhD Fellowship for foreign students		Staff scientist at Agilrom Scientific, Bucharest (Romania)
(co-supervised) (previously at Dresden Technical Univ.)	PhD May 2010 – June 2014	Published as 1 st author in <i>Adv. Funct. Mater.</i>	Vanier graduate scholarship		Head of Physics and Founder, CREDOXYS GmbH, Dresden (Germany)
(previously at Tianjin University, China)	PhD Sept. 2010 – Dec. 2014	Published as 1 st author in <i>Appl. Phys. Lett.</i> , <i>J. Am. Cer. Soc.</i> , <i>Small</i> and <i>Chem. Comm.</i>	Fellowship from China Scholarship Council (CSC), FQRNT PhD Fellowship for foreign students		Research Assistant Professor at South University of Science and Technology (Shenzhen), then Jinshan B Professor at Jiangsu University (Zhenjiang)

██████████, co-supervised	PhD, May 2012 – Feb. 2017	Published as 1 st author in <i>Nanoscale (twice)</i> and <i>J. Phys. Chem. B</i> .	FQRNT PhD Fellowship		Post-Doctoral Fellow at University of Pennsylvania then Post-Doctoral Fellow at NIH
██████████, co-supervised (previously at IIT Kharagpur, India)	PhD, May 2013 – Dec. 2018	Published as 1 st author in <i>Scientific Reports</i> , <i>Nanoscale</i> and <i>Electrochimica Acta</i>			Post-Doctoral Fellow at McGill University
██████████ i (previously at Univ. Roma 2, Italy)	MSc, Sept. 2012 – Sept. 2014	Published as 1 st author in <i>J. Phys. Chem. C</i>			Staff scientist at DALSA Teledyne (Bromont) then Process Engineer at Stathera (Montreal)
██████████	PhD Jan. 2013 – June 2018	Published as 1 st author in <i>J. Am. Cer. Soc.</i> , <i>Nanoscale Advances</i> , <i>J. Mater. Chem. A</i> and <i>ACS Appl. Mater. Inter.</i> (2)			Staff scientist at HG Tech in Wuhan (China)
██████████	PhD Jan. 2013 – March 2022	Published as 1 st author in <i>Polymer</i> , <i>Scientific Reports</i> and <i>Smart Mater. and Struct.</i>			Recently graduated; extended maternity leave
██████████	MSc May 2011 – Dec. 2014; then PhD, Jan. 2015 – April 2018	Published as 1 st author in <i>Optics Express</i> , <i>J. Am. Cer. Soc.</i> , <i>Nanotechnology</i> , <i>J. Power Sources</i> and <i>Nature Photonics</i>			Lecturer at CUET (Bangladesh), then staff scientist at Omniply (start-up company in Montreal), then Staff Scientist at Dalsa Teledyne
██████████ (previously at Tianjin University)	MSc January 2013 – direct passage to PhD program, graduated summer 2018	Published as 1 st author in <i>Chem. Comm.</i> (3), <i>Cryst. Eng. Comm.</i> , <i>J. Am. Chem. Soc. Small</i> (2) and <i>Nanoletters</i>	FQRNT PDF Fellowship to work with D.F. Perepichka at McGill University	Prix Relève étoile Louis-Berlinguet du FRQNT (2022)	Post-doctoral Fellow with Prof. Perepichka at McGill University, in progress
██████████ (previously at Tianjin University)	MSc Jan. 2013 – April 2015 Then PhD May 2015 – Jan. 2019	Published as 1 st author in <i>J. Mater. Chem. A</i> , <i>Adv. Sci.</i> (Back Cover) and <i>Nano Energy</i> ; review article in <i>Adv. En. Mater.</i>	FQRNT PhD Fellowship Next Generation Solar Conference Travel Grant CSC Post-doctoral Fellowship FQRNT Post-doctoral Fellowship		Post-doctoral Fellow (group leader) in my group, in collaboration with UESTC (in progress)
██████████ (previously at Univ. Roma 2, Italy)	PhD July 2013 – June 2019	Published as 1 st author in <i>Phys. Chem. Chem.</i>			Post-doctoral Fellow with Markus Lackinger at the

		<i>Phys., Faraday Discussions, Nanoscale, Chem. Sci. and Nature Materials</i>			Deutsches Museum (Munich)
(previously at Univ. Roma 2, Italy)	PhD July 2013 – June 2019	Published as 1 st author in <i>J. Chem. Phys., Nanoscale (2)</i> and 2 nd author in <i>Appl. Surf. Sci.</i>	Scholarship from the Society of Vacuum Coaters		Staff scientist at DALSA Teledyne (Bromont), then Researcher at Aktyvus Photonics (Lithuania)
(previously at University of Brescia, Italy)	PhD Jan. 2014 – April 2020 PDF May 2020 – Nov. 2022	Published as 1 st author in <i>J. Mater. Chem. C, Sci. Rep., Small, Nano Energy and Nature Energy (News and Views)</i>	Scholarship from the Society of Vacuum Coaters MITACS Fellowship with Trealt Technologies	FQRNT PDF Fellowship to work with D.F. Perepichka at McGill University	Post-doctoral Fellow (Marie Curie Fellow) with J. Durrant at Imperial College London, in progress
(co-supervised)	PhD, Sept. 2014 – November 2018	Published four articles as 1 st author in <i>Adv. En. Mater. (2), Nano Energy and Chem. Soc. Rev.</i>	PhD Excellence Scholarship, UNESCO Chair MATECSS		Professor at Sichuan University, Chengdu (China)
(co-supervised)	PhD, Sept. 2014 – Aug. 2019	Published as 1 st author in <i>Appl. Cat. B and Int. J. Hydrogen Energy (2)</i>	PhD Excellence Scholarship, UNESCO Chair MATECSS		Lecturer at University of Dar Es Salaam (Tanzania)
(co-supervised)	PhD, Sept. 2014 – Aug. 2021	Published as 1 st author in <i>Chem. Mater. and Chem. Sci.</i>			
	PhD Feb. 2014 – Dec. 2020	Published as 1 st author in <i>J. Power Sources, Catalysis Today and Chem. Eng. J.</i>			
(previously at Qingdao University, China)	PhD May 2015 – July 2021	Published as 1 st author in <i>Nanotechnology, Mater. & Design, Nanoscale and Adv. Funct. Mater.</i>			Lecturer at Yantai University (China), Apr. 2022 – Present
Mr Mohammadnezhad	PhD Sept. 2015 Jan. 2020	Published as 1 st author in <i>Chem Plus Chem, Journal of the Electrochemical Society (2), ACS Photonics and Electroch. Acta</i>	FRQNT PhD Fellowship		Research Engineer in industry (Silfab Solar Inc., Mississauga, ON)
(previously at UESTC, Chengdu, China)	PhD Sept. 2015 – Dec. 2018	Published as 1 st author in <i>Nano Energy, Adv. En. Mater. and Adv. Sci.</i>	Fellowship from China Scholarship Council (CSC)		Full professor at UESTC (Chengdu); UESTC 100-Talents Plan awards

(previously at Chengdu Green Energy Research Centre)	PhD Mar. 2016 – Mar. 2021	Published as 1 st author in <i>Nanoscale</i> , <i>ACS Photonics</i> and <i>Nano Energy</i>	PhD Excellence Scholarship, UNESCO Chair MATECSS Foreign Study Supplement in Taiwan (2018) FRQNT PhD Fellowship		Assistant Professor, School of Advanced Materials and Nanotechnology, Xidian University
(previously at Suzhou University)	PhD Sept. 2016 – May 2022	Published as 1 st author in <i>Small and Science China</i>	Scholarship from the Society of Vacuum Coaters		Since May 2022, Post-doctoral Fellow with Prof. Yabing Qi Okinawa Institute of Science and Technology, Japan
(previously at Suzhou University)	PhD Sept. 2016 – Aug. 2022	Published as 1 st author in <i>J. Mater. Chem. A</i> and <i>Nano Energy</i>			Post-doctoral Fellow at USTC (Suzhou campus)
Liu, Jiabin	PhD Jan. 2017 – Present	Published as 1 st author in <i>ACS Photonics</i> and <i>Appl. Surf. Sci.</i>	MITACS Fellowship in collaboration with Solstar Pharma		PhD student in my group, in progress
(previously at University of Jinan)	PhD May 2017 – Present	Published as 1 st author in <i>Appl. Cat. B</i>	Fellowship from China Scholarship Council (CSC) and FQRNT PhD Fellowship		PhD student in my group, 2+2 program with University of Jinan, in progress
(previously at University of Jinan)	PhD Sept. 2017 – March 2023	Published as 1 st author in <i>Appl. Cat. B and Small Methods</i>	Fellowship from China Scholarship Council (CSC) and FQRNT PhD Fellowship		PhD student in my group, 2+2 program with University of Jinan, in progress
(previously at University of Science and Technology, Beijing)	PhD Sept. 2017 – Present	Published as 1 st author in <i>J. Mater. Chem. A</i>	Fellowship from China Scholarship Council (CSC) and FQRNT PhD Fellowship		PhD student in my group, in progress
(previously at Suzhou University)	PhD Sept. 2017 – Sept. 2021	Published as 1 st author in <i>J. Mater. Chem. A</i> and <i>Nanolett.</i>	FQRNT PhD Fellowship	MITACS Post-doctoral Fellowship	MITACS post-doctoral fellow with Prof. Zhongwei Chen at University of Waterloo
(University of Palermo)	PhD Sept. 2017 – Jan. 2022	Published as 1 st author in <i>Tissue and Cells</i>	MITACS Fellowship in collaboration with Bioastra Technologies		Post-doctoral Fellow at Laval University with D. Mantovani
(previously at Suzhou University)	MSc Jan. 2018 – May 2019, then direct passage to the PhD program				MSc student in my group; direct passage to PhD program since June 2019, 2+2 program with Suzhou University, in progress
(transferred from)	PhD	Published as 1 st author in <i>PLOS</i>	MITACS PhD Fellowship in		

University; previously at McMaster University)	Feb. 2018 – July 2021	<i>One</i> and <i>J. Coll. Int. Sci.</i>	collaboration with Bioastra Technologies		
	PhD Oct. 2018 – Aug. 2022	Published as 1 st author in <i>J. Mater. Chem. A</i>	PhD Excellence Scholarship, UNESCO Chair MATECSS PhD scholarship from the NSERC CREATE SEED program		Just graduated
	PhD Jan. 2018 – Present	Published as 1 st author in <i>Electroch. Comm., J. Mater. Chem. A</i> and <i>Nanoscale</i>			PhD student in my group, in progress
	PhD May 2019 – Present	Published as 1 st author in <i>Small</i>	PhD scholarship from the NSERC CREATE SEED program		PhD student in my group, in progress
	PhD Sept. 2018 – Present	Published as 1 st author in <i>Aggregate</i>	MITACS Globalink PhD Scholarship		PhD student in my group, in progress
Putra Malaysia)	PhD Jan. 2020 – Present				PhD student in my group, in progress
(BSc at McGill University)	MSc Sept. 2020 – Dec. 2021		Lionel-Boulet MSc Excellence Scholarship NSERC MSc scholarship Best MSc presentation at INRS graduate seminar		Process engineer at ASML in San Diego (California)
	MSc May 2021 – Present		MSc scholarship from the NSERC CREATE SEED program		MSc student in my group, in progress
	PhD May 2021 – Present		Fellowship from China Scholarship Council (CSC)		PhD student in my group, in progress
	PhD Sept. 2021 – Present		Fellowship from China Scholarship Council (CSC)		PhD student in my group, in progress
(co-supervisor)	PhD Sept. 2021 – Present		PhD Excellence Scholarship, UNESCO Chair MATECSS		PhD student with Prof. D. Guay, co-supervised by me
	PhD Sept. 2021 – Present				PhD student in my group, in progress
	PhD May 2022 – Present				PhD student in my group, in progress
	MSc Sept. 2022 – Present		MITACS Globalink MSc Scholarship CREATE SEED MSc Scholarship		MSc student in my group, in progress

	MSc Jan. 2023 – Present		CREATE SEED MSc Scholarship		MSc student in my group, in progress
	PhD Jan. 2023 – Present				PhD student in my group, in progress

Post-Doctoral Researchers (56)

Fellow	Period	Research Achievements.	Fellowships Awards /	Present employment
(previously at University of Nagoya (Japan))	Sept. 2004–April 2006	Published two high impact papers as 1 st author in <i>J. Am. Chem. Soc.</i> and <i>J. Phys. Chem. C</i> (120 citations).		Senior Scientist at Corning Japan, then Supervisor (R&D) at Eurofins
o (previously at University of Firenze (Italy))	March 2005–Aug. 2005		Fellowship Fondazione della Riccia (Italy)	High School Teacher
(co-supervised, previously at University JF Grenoble)	July 2005–Aug. 2006	Co-authored papers in <i>Phys. Rev. B</i> and <i>Appl. Phys. Lett.</i>		Permanent research staff position at CEA/CNRS University JF Grenoble. Dr. Durand launched his own version of “Survival Skills for Scientists”.
(previously at EPFL)	Sept. 2005–Aug. 2007.	Published 10 papers during post-doctoral work. In particular, as 1 st author in <i>Small</i> , <i>J. Phys. Chem. A</i> , <i>J. Mater. Chem.</i> , <i>Topics Curr. Chem.</i>	Government of Canada Award (CBIE) ; Invited Talk at NSBD in Morocco (2006) and Nanotech Insight (2007)	<i>Full Professor at Ecole Polytechnique de Montreal.</i>
(previously at Concordia University)	Nov. 2005–April 2008.	Published 3 papers during post-doctoral work. In particular, as 1 st author in <i>Nanoletters</i> and <i>Small</i> .	NSERC PDF Fellow , NSERC Innovation Challenge Award; IUPAC Young Chemist Prize; Invited Talk at ICCE (2007) and Nanotech Insight (2007) Member of the College of the Royal Society of Canada Rutherford Medal in Chemistry (Royal Society of Canada) and Fellow of the Canadian	<i>Full Professor at INRS.</i>

			Academy of Engineering	
██████ (co-supervised) (previously at University JF Grenoble)	Sept. 2006–Sept. 2007	Published 2 papers during one year of post-doctoral work, one as first author in <i>Physica E</i> .		Human Frontiers Science Fellowship (Harvard); Assistant Professor Univ. of Paris (UP7)
██████ (PhD at EPFL)	Feb. 2007–Jan. 2008.	Published 2 papers during one year of post-doctoral work, including one as 1 st author in <i>J. Chem. Phys.</i>		Permanent research staff position at CNRS Marseilles
██████ (PhD at University of Saarbrücken)	May–Sept. 2007	Published 1 paper during 3 months of post-doctoral work, as 1 st author in <i>Nanotechnology</i> .		Independent junior group leader, Institute of Materials Chemistry, Vienna University of Technology, Vienna, Austria (2010 – 2018); Heisenberg Position, Physics Institute, Goethe University Frankfurt, Germany (2019 – Present)
██████ (co-supervised) (previously at University of Limoges)	Oct. 2004–Sept. 2006	Published 4 papers during post-doctoral work including one as 1 st author in <i>Surf. Sci.</i>		Research Associate at University of Montreal.
██████ (co-supervised) (previously at University of Strasbourg)	Nov. 2004–Aug. 2007.	Published 4 papers during post-doctoral work. In particular, as 1 st author in <i>Adv. Mater.</i> and <i>Surf. Sci.</i>	FRSQ Fellow PDF	Permanent research staff position at CNRS Strasbourg.
██████ (co-supervised) (previously at Ecole Polytechnique de Montreal)	Sept. 2008–April 2009		NSERC Fellow PDF	NSERC PDF Fellow in Switzerland, then head of Blue Brain Project Administration
██████ (previously at QUT Brisbane, Australia)	Oct. 2008–May 2010	Published two papers in <i>Nanoscale</i> and one in <i>ACS Nano</i> as 1 st author	FRSQ Fellow PDF	Associate Professor, University of Oxford, then Full Professor and Institute Director, Queensland

				University of Technology
██████████ (previously at Dalian Institute of Technology, China)	Nov. 2008–April 2010	Published 3 papers during post-doctoral work. In particular, as 1 st author in <i>Adv. Mater.</i> and a Communication in <i>J. Am. Chem. Soc.</i>	FQRNT PDF Fellow (also received FRSQ PDF, declined)	Humboldt Fellow at Max Planck Institute in Halle, Germany; then group leader at IFW Dresden, now <i>1000 talent young professor and Dean of the School of Energy</i> , Suzhou University (China)
██████████ (previously at University of Trieste (Italy))	May 2009–April 2011	Co-authored papers in <i>Chem. Comm.</i> , <i>Chem. Eur. J.</i>		High School Teacher in Udine (Italy)
██████████ (previously at McMaster University)	July 2009–Jan. 2011			Grants and Contracts Officer at Toronto Metropolitan University
██████████ (PhD at INRS)	Sept. 2009 – June 2015	Created a sub group in my group, focusing on multifunctional materials for optoelectronics. Provisional patent approved. Published as 1 st author in <i>Nature Photonics</i> , <i>Adv. Mater.</i> , <i>Appl. Phys. Lett.</i> , <i>Nanoscale</i> and <i>J. Phys. Condens. Matt.</i>	NSERC PDF Fellowship (also FQRNT PDF Fellowship (declined))	Post-doc then Research Associate and group leader in my group within Joint Laboratory with Univ. Rome 2 (group leader). Researcher at ETS (Montreal) 2015 – 2019. Presently CEO of Watt by Watt
██████████ (previously at QUT Brisbane, Australia)	Nov. 2009–March 2011		Marie Curie Fellowship at KU Leuven with S. De Feyter	<i>Lecturer at Griffith University</i> , Brisbane (Au).
██████████ (previously at LMU Munich, Germany)	Jan. 2010–Dec. 2011	Published as 1 st author in <i>Chem. Comm.</i> and <i>Nanoscale</i> , co-authored other papers including a review in <i>Chem. Sci.</i>		Group leader at MPI Stuttgart for Solid State Research with Klaus Kern, Then Research Scientist at Zentrum für Sonnenenergie in Stuttgart
██████████ (previously at University of Nancy)	Jan. 2010–Dec. 2013	Published as 1 st author in <i>Chem. Sci.</i> , as co-author in <i>ACS Nano</i> , <i>Adv. Func. Mater.</i> , <i>Nanoscale</i> and <i>Chem. Sci.</i>	FRSQ PDF Fellow	Post-doc in my group, then staff Scientist at CNRS (Lyon) from Jan. 2014

██████████ (previously at Murdoch University, Australia)	Feb.–April 2010			High School Teacher
██████████ (previously at Laval University, Quebec City (QC), Canada)	April 2010– Dec. 2012	Published as 1 st author in <i>Appl. Surf. Sci.</i>	FQRNT PDF Fellow	Unknown
██████████ (China)	Sept. 2010 – Aug. 2013	Published as 1 st author in <i>Adv. Func. Mater.</i> , <i>Chem. Comm.</i> (2), <i>Chem. Eur. J.</i> , <i>J. Phys. Chem. C</i>		<i>Associate Professor</i> at University of Jinan (China)
██████████ (previously at Free University Berlin)	Sept. 2010–Aug. 2012		Banting PDF Fellow	Post-doc in my group, then Research Associate with my colleague F. Legare.
██████████ (PhD MUN, Canada), co-supervised	Dec. 2010 – March 2012			Started a company
██████████ (PhD in France)	April 2011 – Dec. 2013	Published as 1 st author in <i>Surf. Sci.</i> and <i>Chem. Asian J.</i>		Post-doc at University of Strasbourg with P. Samori, then Post-doc at Univ. of Troyes, in progress.
██████████ (PhD University of Trento, Italy)	July 2012 – Sept. 2014.	Created a sub group in my group, focusing on Excitonic Solar Technologies (Dye Sensitized Solar Cells, Quantum Dot Solar Cells, Photoelectrochemical Cells for Hydrogen production and Luminescent Solar Concentrators).	Marie Curie Outgoing International Fellow	Visiting scientist (group leader) in my group. Since October 2014, Chair Professor at Lulea University of Technology (Sweden); since Jan. 2019, Professor at Università Ca' Foscari, Venezia, Italy
██████████ (Algeria, PhD at INRS in 2010)	Sept. 2012 – Dec. 2015	Published as 1 st author in <i>Appl. Phys. Lett.</i> (2) and <i>Appl. Surf. Sci.</i>		<i>Associate Professor</i> , College of Science and Engineering, Hamad Bin Khalifa University, Qatar Foundation, Doha, Qatar, July 2015 – Present
██████████ (China, PhD at INRS with D. Ma)	Sept. 2012 – Dec. 2017	Published as 1 st author in <i>Nanoscale</i> (2), <i>J. Phys. Chem. C</i> , <i>Small</i>	NSERC PDF Fellowship then MITACS PDF	<i>Professor</i> at Qingdao University since Sept. 2017

██████████ (previously University of Sherbrooke)	Co-supervised, Sept. 2012 – Dec. 2015		FRQNT PDF and CEGEP scholarship	Private sector employment
██████████ (PhD at Univ. of Shanghai, China)	Nov. 2012 – June 2014		FRQNT PDF Fellow, FRSQ PDF Fellow	Private sector employment.
██████████ (PhD in Germany, previously at LBNL)	Nov. 2012 – May 2013			Product Line Manager at Asylum Research
██████████ (PhD at WSU Pullman)	Jan. 2013 – Oct. 2014			Co-Founder and VP R&D at IRYSTEC
██████████ (PhD at UQAM)	Jan. 2013 – Dec. 2014			Post-doc in my group (collaboration with IREQ), then staff scientist position at IREQ.
██████████ (PhD at University of Bordeaux, France)	Oct. 2013 – 2016			R&D staff in industry, Sce France
██████████ (PhD at McGill)	Feb. 2014 – May 2016	Published as 1 st author in <i>J. Mater. Res., Optics Express</i> and <i>Optics Comm.</i>		<i>Lecturer</i> at University College Dublin (Ireland) since Jan. 2018
██████████ (PhD at University of South Florida)	June 2014 – June 2016	Published as first author in <i>Nanoscale</i>		<i>Assistant Professor</i> at Appalachian State University, Boone (North Carolina), USA
██████████ (PhD Indian Institute of Technology, Madras)	July – Aug. 2014			<i>Assistant Professor, Indian Institute of Technology</i>
██████████, visiting scientist (PhD University of Nigeria)	Sept. – Nov. 2014 Then again in 2016 and 2018		APS Grant (three times)	<i>Full Professor, University of Nigeria, Nsukka</i>
██████████, ██████████, ██████████ (PhD UNAM, Mexico)	Nov. 2014 – Dec. 2019	Published as 1 st author in <i>J. Power Sources</i> and <i>Mater. Chem. Front., ECS Journal of Solid State Science and Tech., Acc. Chem. Res., Adv. Func. Mater.</i> and <i>Appl. Cat. B</i>	Conacyt PDF Fellow FRQNT PDF Fellow	Senior R&D Scientist at Electro Carbon (Montreal)
██████████ (PhD Sun Moon University, South Korea)	Dec. 2014 – March 2018	Published as 1 st author in <i>Nano Energy</i> and <i>J. Mater. Chem. A</i>	NSERC PDF	Principal Consultant at WorldEdit Biopharma Consulting
██████████ (PhD University of Brescia)	Feb. 2016 – June 2022	Published as 1 st author in <i>Adv. Func. Mater.</i> (2),		Since July 2022, <i>Assistant Professor</i> at

		<i>Nano Energy, Adv. Sci.</i> and <i>Nanoscale Horizons</i>		Dalhousie University (Halifax, NS)
University of Sherbrooke)	April 1 st 2015 – March 31 st 2016			Staff scientist in industry
Dawit Gedamu (PhD Germany)	May 1 st 2015 – June 30 th 2017	Published as 1 st author in <i>Scientific Reports</i>		Yield Engineer at Intel Corporation
(PhD Laval University)	Sept. 1 st 2016 – Jan. 2018		CIHR PDF	Scientific advisor of the director of the Cervo research Centre, Université Laval
(PhD Koç University, Istanbul, Turkey)	Oct. 1 st 2017 – Sept. 2018	Published as 1 st author in <i>ACS Appl. Mater. Int.</i>	TUBITAK PDF	Lab Manager at NTU Singapore.
Lucas Besteiro (PhD Universidad de Santiago de Compostela, Spain)	Oct. 1 st 2017 – Sept. 30 th 2020	Published as 1 st author in <i>Nanoletters</i> .		Scientist in a Research Institute in Vigo (Spain)
(PhD at INRS with Prof. M.A. El Khakani)	Jan. 1 st 2019 – Aug. 2021	Published as 1 st author in <i>ACS Photonics</i> and <i>Chem. Eng. J.</i>	FRQNT PDF Fellowship	Chief Technology Officer at Watt by Watt
(PhD at Indian Institute of Science with D.D. Sarma)	Nov. 1 st 2018 – Oct. 31 st 2020	Published as 1 st author in <i>J. Chem. Phys.</i>		<i>Assistant Professor</i> at Ramananda College, Bishnupur (Bankura University)
(PhD at Politecnico di Milano, Italy)	Apr. 1 st 2019 – Aug. 31 st 2021			Post-doc at Temple University (USA).
(PhD at INRS with Prof. F. Legare)	Dec. 1 st , 2018 – Dec. 31 st 2020			Staff scientist at MPB Technologies
(PhD at University of Groningen, the Netherlands)	September 2020 – October 2021	Published as 1 st author in <i>Nano Energy</i>		NREL (Golden, Colorado, USA), then <i>Assistant Professor</i> at Penn State
	November 2020 – October 2021		MITACS Fellowship in partnership with Maxwellian, Inc.	Post-doc at ETS / Aeponyx, then Silicon photonics chip designer at Ciena.
	April 2021 – June 2022		FRQNT PDF Fellowship	Post-doc at University of Windsor, in progress.
	Oct. 2021 – Sept. 2022		MITACS Fellowship in	Research scientist at Watt by Watt.

			partnership with Watt by Watt	
	Sept. 2021 – Present		M. Hildred Blewett Fellowship , American Physical Society	Post-doc (group leader) in my group, as of Oct. 1 st 2022, Research Associate, in progress
	July 2022 – Present		FRQNT PDF Fellowship	Post-doc in my group, in progress
	Jan. 2023 – Present		FRQNT PDF Fellowship	Post-doc in my group, in progress

Research Assistants / Associates (6)

(previously at INRS)	May–Aug. 2004 Research Assistant		NSERC PhD Scholarship	Staff scientist at IREQ
(previously at Queen's University (Kingston, ON))	July 2006–Oct. 2008 (post-doc) Then 2009 – Dec. 2014 Research Associate	Published multiple papers during post-doctoral work; as 1 st author in <i>J. Am. Chem. Soc.</i> , <i>Nanotechnology</i> , <i>ACS Nano</i> , <i>Appl. Phys. Lett.</i>	NSERC PDF Fellowship , FRQNT PDF Fellowship (declined).	Associate Professor at QUT (Brisbane, Australia), awarded a Discovery Early Career Research Award by the ARC (2017) Head of the School of Physics and Chemistry from 2020
(previously at Queen's University (Kingston, ON))	July 2006–Oct. 2008 (post-doc) Then 2009 – Dec. 2014 Research Associate	Published multiple papers during post-doctoral work. In particular, as 1 st author in <i>Small</i> , <i>Proc. Nat. Acad. Sci.</i> and <i>Langmuir</i>		Associate Professor and Principal Research Fellow at QUT (Brisbane, Australia)
(PhD University of Sherbrooke)	Nov. 2013 – Present Research Associate	Created a sub group in my group, focusing on erbium doped fiber amplifiers, fiber bragg gratings and other aerospace materials. Published as 1 st author in <i>Appl. Phys. Lett.</i> and <i>J. Appl. Phys.</i>		Research Associate (group leader) in my group, in progress
(PhD University of Waterloo)	Dec. 2014 – Dec. 2017 Research Associate	Published as 1 st author in <i>Nature News & Views</i> and <i>Nature Photonics News & Views</i>		Senior Scientist at Technical University Munich, Germany, then Assistant Professor and

				Tier 2 Canada Research Chair at Lakehead University from July 2019
██████████ (PhD University of Toronto)	Aug. 2018 – Dec. 2021 Research Associate	Published as 1 st author a Perspective in <i>Science</i> .		Research Scientist at CBN Nano Technologies

Visiting Scholars / Scientists (21)

██████████ (previously at University of Geneva)	May 2006–July 2007 Visiting Fellow	Published four papers during visiting period. In particular, as 1st author in Appl. Phys. Lett.	Government of Canada Award (CBIE); Invited Talk at Nanotech Insight in Egypt (2007)	<i>Full Professor at Ecole Polytechnique de Montreal and Tier 1 Canada Research Chair.</i>
██████████ (PhD at EPFL in Switzerland)	June 2010 – May 2011 Visiting Scientist			<i>Staff scientist at Tekna (Sherbrooke)</i>
██████████ (PhD in Italy)	Nov. – Dec. 2012 Visiting Scientist	Published as 1st author in J. Phys. Chem. Lett.		<i>Full Professor at Lulea University of Technology (Sweden).</i>
██████████ (PhD in Greece)	June – Aug. 2013 Visiting Scientist			<i>Researcher at Foundation for Research & Technology Hellas, Crete</i>
██████████ (PhD in Spain)	Aug. 2013 Visiting Scientist			<i>Project Manager at BASF, then Director of NRW Chapter Sociedad CERFA</i>
██████████ (PhD at Ain Smas University, Cairo, Egypt, Professor at Al-Azhar University, Gaza)	October 2019 Visiting Scholar		Exchange Fellowship from FRQNT in the framework of the Quebec/Palestine collaborative program	<i>Professor at Al-Azhar University, Gaza (Palestine)</i>
██████████ (PhD student at Xian Jiaotong University in China)	Jan. 22 nd – Dec. 31 st 2018 Visiting Scholar	Published as 1 st author in <i>Nano Energy</i>	Fellowship from China Scholarship Council (CSC)	Graduated from Xian Jiaotong University (China).
██████████ (PhD student at University of Electronic Science and Technology of China)	Jan 30 th 2018 – Dec. 31 st 2018 Visiting Scholar	Published as 1 st author in <i>J. Mater. Chem. C</i>		Post-doc at State Key Laboratory of Oil and Gas Reservoir and Exploitation, Southwest Petroleum University, Chengdu, (China)

██████████ (PhD student at Northeastern University in China)	PhD Oct. 2018 – July 2021 Visiting Scholar	Published as 1 st author in <i>Nano Energy</i>		Graduated from Northeastern University (China), Jan. 2022
██████████ (Sorbonne University (Paris))	April 2018 – Aug. 2018, Visiting Student			Process Engineer
██████████, Harbin University of Science and Technology (China)	Jan. 2018 – Dec. 2018 Visiting Fellow			Professor at HUST (China).
Hugo Gajardoni de Lemos, University of ABC (San Carlos, Brazil)	Dec. 2018 – Jan. 2020 Visiting PhD student	Published as 1 st author in <i>Solar Energy</i>	CAPES Fellowships (Coordenação de Aperfeiçoamento de Pessoal de Nível Superior) and CNPq Foundation (Conselho Nacional de Desenvolvimento Científico e Tecnológico)	PhD student at University of ABC (San Carlos, Brazil)
██████████ University of ABC (San Carlos, Brazil)	Sept. 2019 – Feb. 2020 Visiting PhD student	Published as 1 st author in <i>ACS Appl. Nanomat.</i>	CAPES Fellowship	Post-doctoral Fellow with Carlos Graeff at Universidade Estadual Paulista (UNESP)
██████████, Institute of Materials Science and Technology (IMRE), Department of Physics, University of Havana	October 2017, Visiting Fellow			<i>Professor at University of Havana, Cuba</i>
██████████ Kasdi Merbah University, Ouargla Algeria	December 2017, Visiting Fellow	Published as 1 st author in <i>Solid State Sciences</i>		<i>Lecturer at Kasdi Merbah University, Algeria</i>
██████████ Liaocheng University	March 2022 – Feb. 2023		CSC scholarship	Visiting scholar in my group
██████████ (PhD student at the University of Genova, Italy)	June – Aug. 2022			PhD student at Univ. of Genova
██████████ Agricultural University	Sept. 2022 – Present		CSC scholarship	Professor at Jilin Agricultural University
██████████, Professor at Al-Azhar University, Gaza	July – August 2022 Visiting Scholar		Exchange Fellowship from FRQNT in the framework of the Quebec/Palestine collaborative program	<i>Professor at Al-Azhar University, Gaza (Palestine)</i>
██████████ Sulfath, Professor at Saveetha university (India)	Oct. 2022 – Apr. 2023 Visiting Scholar		Fellowship from DST	Professor at Saveetha university

			(Government of India)	
<div>Bin Esa, Universiti Brunei Darussalam</div>	Dec. 2022 – March 2023 Visiting Scholar		Fellowship from Government of Brunei	PhD student at Universiti Brunei Darussalam

RESEARCH FUNDING* SINCE 2002**\$18 337 244**

*calculated by dividing shared grants by number of PIs

- Operating funds \$8 790 919
- Equipment/Infrastructure funds \$9 546 325

Funding currently / recently held

Title, PI and co-applicants	Amount awarded	Support type	Funding Agency/program	Period
<i>Canada Research Chair (Tier I) in Nanostructured Materials (individual)</i>	\$1.4M	Operating funds for basic research	Canada Research Chairs	2016–2023
<i>Multifunctional materials: structure and properties</i>	\$340k	Operating funds for basic research	NSERC Discovery Grant	2018–2023
<i>Multifunctional materials: structure and properties</i>	\$120k	Operating funds for basic research	DGDND – DND/NSERC Discovery Grants Supplements	2018–2021
<i>Infrastructure for Advanced Imaging (PI F. Rosei, with 9 others across Canada)</i>	\$14.8M	Funds to acquire a Dynamic Transmission Electron Microscope	CFI and MDEIE	2013–2015
<i>Tandem luminescent solar concentrators based on rare earth doped SiAlON and quantum dot thin films, with WattbyWatt Inc, PI F. Rosei</i>	\$200k	Operating costs	NSERC Alliance & PSO International Quebec	2021–2022
<i>“Development of high power photoactive Erbium and Erbium-Ytterbium doped fibers for ultra-fast satellite telecommunications”, with MPB Communications Inc., Pi-SOLTECH, PI F. Rosei with C. Chilian</i>	\$700.5k	Operating costs	NSERC & PRIMA Quebec	2021–2024
<i>Towards sustainable development: improving hydrogen production and integrating it in the global energy system, PI F. Rosei with D. Podmetina and J. Meadowcroft</i>	\$250k	Operating costs	NFRF	2021–2023
<i>Modules solaires de 3eme génération à base de perovskites organométalliques, performants et à faible coût, PI F. Rosei in collaboration with X. Tong (UESTC, Chengdu, Chine)</i>	\$190k	Operating costs	Ministère de l'économie et de l'Innovation du Québec (MEI), Programme innovation – volet 1 – Soutien aux projets d'innovation – Appel de projets Québec-Chine	2021–2024
<i>Critical and Urgent Upgrade for Ultra High Vacuum Scanning Probe Microscopy Facility, PI F. Rosei</i>	\$150k	Equipment grant	NSERC RTI	2020–2021
<i>COVID-19 Prevention: “Hybrid Polymer / Photoactive Ceramic Self-Disinfecting Coating” in collaboration with Bioastra Technologies Inc. PI F. Rosei</i>	\$50k	Operating costs	NSERC Alliance	2020–2021
<i>COVID-19 Prevention: “Hybrid Polymer / Photoactive Ceramic Self-Disinfecting Coating” in collaboration with Bioastra Technologies Inc. PI F. Rosei</i>	\$30k	Operating costs	MITACS scholarship and grant (matching funds)	2020–2021

<i>Plasmonic optical biosensor for COVID-19 detection, in collaboration with Maxwellian, Inc. PI F. Rosei</i>	\$50k	Operating costs	NSERC Alliance	2020–2021
<i>Plasmonic optical biosensor for COVID-19 detection, in collaboration with Maxwellian, Inc. PI F. Rosei</i>	\$45k	Operating costs	MITACS scholarship and grant (matching funds)	2020–2021
<i>Photoelectrochemical biosensing for COVID-19: virus and antibodies, in collaboration with Solstar Pharma, PI F. Rosei</i>	\$50k	Operating costs	NSERC Alliance	2020–2021
<i>Photoelectrochemical biosensing for COVID-19: virus and antibodies, in collaboration with Solstar Pharma, PI F. Rosei</i>	\$45k	Operating costs	MITACS scholarship and grant (matching funds)	2020–2021
<i>Synthèse d'encre actives pour des cellules photovoltaïques de nouvelle génération à base de pérovskites organométalliques avec Pi-Sol Technologies, PI F. Rosei</i>	\$45k	Operating costs	MITACS scholarship and grant (matching funds) in collaboration with PiSol	2020–2021
<i>New solid electrolyte architecture for lithium metal-based battery, PI F. Rosei</i>	\$450k	Support for Post-docs, PhD students and associated costs.	NSERC Collaborative Research and Development Grant with IREQ	2018–2021
<i>Synthèse dynamique en surface de polymères -conjugués bidimensionnels, PI F. Rosei with D.F. Perepichka</i>	\$240k	Support for Post-docs, PhD students and associated costs.	FRQNT equipe	2020–2023
<i>Development of CuO-doped phosphate glass in Hydrogel matrix for bone Regeneration in collaboration with Bioastra Technologies Inc., PI F. Rosei</i>	\$30k	Operating costs	MITACS scholarship and grant	2020–2021
<i>Fast, Atomic-Scale Investigation of Assembly and Reaction at Surfaces, PI F. Rosei</i>	\$123k	Equipment grant	NSERC Research Tools and Instruments	2020
<i>Nouvelles réactions de surface pour la synthèse de nanomatériaux semi-conducteurs à base de carbone, PI F. Rosei with D.F. Perepichka</i>	\$205k	Support for Post-docs, PhD students and associated costs.	FRQNT equipe	2017–2020
<i>Matériaux naturels abondants pour l'électronique verte, PI C. Santato, with F. Rosei and one other</i>	\$205k	Support for Post-docs, PhD students and associated costs.	FRQNT equipe	2017–2020
<i>Collaborative Research and Training Experience in Sustainable Electronics and Eco-Design (CREATE SEED), PI C. Santato, with F. Rosei and eight others</i>	\$1.65M	Training program for graduate students	NSERC CREATE	2020–2026
<i>Highly flexible perovskite oxide nanostructures-based hybrid nanogenerators for autonomous wearable devices and body metric applications (PI F. Rosei with R. Nechache and T. Falk)</i>	\$622k	Support for Post-docs, PhD students and associated costs.	NSERC Strategic Project Grant	2016–2019
<i>Nanoscale spatio-temporal characterization of multiferroic materials for optimization of structure and function (individual)</i>	\$250k	Funds for basic research	NSERC Steacie Fellowship	2014–2016
<i>(Nanoscale spatio-temporal characterization of multiferroic materials for optimization of structure and function) (individual)</i>	\$180k	Funds for release from teaching and administration	NSERC Steacie Fellowship Support	2014–2016

<i>Infrastructure for the synthesis and characterization of nanostructured metal functionalized multiferroic materials (individual)</i>	\$250k	Equipment grant: In situ XPS and cluster deposition tool	Steacie Fellowship Equipment	2014
<i>Monolithic Integration of Nanostructured III/V semiconductors and perovskite oxides into photonic devices (individual)</i>	\$102k	Support for Post-docs, PhD students and associated costs.	NSERC Collaborative Research and Development Grant plus MEIE passport innovation	2016–2017
<i>Innovative erbium doped fiber amplifiers for radiation and harsh environment (individual)</i>	\$80k	Support for Post-docs, PhD students and associated costs.	PRIMA Quebec	2015–2017
<i>Carbon Nanomaterials-based composites for hybrid organic photovoltaic devices (individual)</i>	\$285k	Support for Post-docs, PhD students and associated costs.	NSERC Collaborative Research and Development Grant with Plasmionique and MPB Technologies, plus CIP (Quebec)	2015–2018
<i>Optical process control for plasma-assisted deposition of functional nanoelectronic thin films (P.I. F. Legare, with F. Rosei and A. Ruediger)</i>	\$180k	Support for Post-docs, PhD students and associated costs.	NSERC Collaborative Research and Development Grant	2014–2016
<i>Synthesis and characterization of Nanostructured Materials (individual)</i>	\$300k	Support for graduate students plus associated costs	NSERC Discovery Grant	2013–2018
<i>Integration of optical sensors into smart composites and advanced instruments</i>	\$100k	Support for Post-docs, PhD students and associated costs.	NSERC CRD, in partnership with MPB Technologies and Plasmionique	2017–2019
<i>Intégration de senseurs optiques au sein de matériaux et de dispositifs pour la réalisation de revêtements composites et d'instruments intelligents (individual)</i>	\$100k	Support for Post-docs, PhD students and associated costs.	PRIMA Quebec, in partnership with MPB Technologies and Plasmionique	2017–2019
<i>Canada Research Chair in Nanostructured Organic and Inorganic Materials (individual, renewed for a second term)</i>	\$500k	Partial salary support plus 2 PhD students and associated costs	Canada Research Chairs Program	2008–2013
<i>Centre for Self-Assembled Chemical Structures, P.I. L. Reven, with F. Rosei and 20 others</i>	\$412.5k	Support for technicians, consumables	FQRNT Center CSACS	2008–2014
<i>Development of germanium fiber Bragg gratings and Er-doped fiber amplifiers for operation in harsh environments, PI F. Rosei with A. Ruediger and F. Schiettekatte</i>	\$585k	Support for Post-docs, PhD students, summer students and associated costs.	NSERC Strategic Project Grant	2013–2016
<i>Plasma Quebec, P.I. Joelle Margot, with F. Rosei and 20 others</i>	\$330k	Support for technicians, consumables	FQRNT Center Plasma Quebec	2008–2016
<i>Oxydes fonctionnels nanostructurés pour des applications innovantes dans les domaines photovoltaïque, des capteurs et dispositifs électroniques, PI F. Rosei with M. Chaker, D. Ma, F. Vetrone</i>	\$1.24M	Support for Post-docs, PhD students, MSc students and associated costs.	MDEIE (Quebec) PSR	2012–2015
<i>Nouveaux phénomènes électroniques dans les polymères conjugués 2D, D. Perepichka, H. Guo, F. Rosei</i>	\$153k	Support for PhD students and associated costs	FRQNT (Quebec)	2012–2015
<i>Structuration des surfaces par ablation laser pour l'obtention de propriétés de mouillage définies et l'augmentation de l'écoulement</i>	\$149k	Support for PhD students and associated costs	FRQNT (Quebec)	2012–2015

<i>des fluides, A.M. Kietzieg, R. Leask, F. Legare, F. Rosei</i>				
<i>Nouveaux nanomatériaux pour élargir l'étendue de conversion de l'énergie solaire, B. Lennox, C. Santato, F. Vetrone, D.F. Perepichka, F. Rosei</i>	\$228k	Support for PhD students and associated costs	FRQNT (Quebec)	2011–2014
<i>Photovoltaïque d'oxydes accordable et à haute performance, A. Ruediger, V. Aimez, F. Rosei</i>	\$222k	Support for PhD students and associated costs	FRQNT (Québec)	2011–2014
<i>Caractérisation des plasmas utilisés pour l'obtention de revêtements bactéricides: prédiction de la composition du revêtement à partir des caractéristiques spectroscopiques des plasmas, G. Laroche, D. Mantovani, F. Rosei</i>	\$170k	Support for PhD students and associated costs	FRQNT (Québec)	2012–2015
<i>Préparation et étude de semi-conducteurs bidimensionnels, J.F. Morin, F. Rosei</i>	\$193k	Support for PhD students and associated costs	FRQNT (Québec)	2012–2015
<i>Interactions entre eumélanine et ions: une approche bioélectronique, C. Santato, F. Cicoira, M. Mateescu, A. Ruediger, F. Rosei</i>	\$186k	Support for PhD students and associated costs	FRQNT (Québec)	2012–2015