

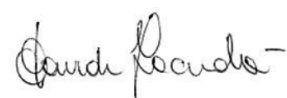
Davide Faccialà

Curriculum Vitae

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Date: Oct 09, 2023





Davide Faccialà

Curriculum Vitae

Personal Information

Date of birth April 25, 1989
Place of birth Catania
Citizenship Italian

Research Interests

Attosecond Science and High-order Harmonic Generation Spectroscopy.
Nonlinear Optics and Strong Field Physics.
Ultrafast XUV and X-ray Spectroscopy.
Atomic and Molecular Physics.

Present Position

from Dec 2021 **Staff researcher**, Istituto di Fotonica e Nanotecnologie - Consiglio Nazionale delle Ricerche (CNR-IFN), Milano, Italy.

- Research activity: Scientific responsible for the research activity on high-order harmonic generation spectroscopy of ultrafast dynamics in molecules and solids. Time-resolved photoelectron spectroscopy of ultrafast dynamics in molecules, ultrafast soft-X transient absorption and reflectivity spectroscopy, attosecond spectroscopy and photochemistry in the water window.
- Contract: Permanent contract.
- Period: Dec 01, 2021 - today

Past Experiences

from Aug 2021 to Nov 2021 **Senior post-doc researcher**, Istituto di Fotonica e Nanotecnologie - Consiglio Nazionale delle Ricerche (CNR-IFN), Milano, Italy.

- Research activity: Study of electronic dynamics in materials with attosecond spectroscopy based on high order harmonic generation
- Contract: Assegno di Ricerca funded by ELI-HU GOP (DFM.AD006.056) [see G1].
- Period: Aug 01, 2021 - Nov 30, 2021

- from Jul 2019 to Jul 2021 **Senior post-doc researcher**, Istituto di Fotonica e Nanotecnologie - Consiglio Nazionale delle Ricerche (CNR-IFN), Milano, Italy.
- Research activity: Development of a setup for attosecond transient absorption in biological molecules. High-order harmonic generation (HHG) in solids. Core-level Photoelectron Circular Dichroism in gaseous media.
 - Contract: Assegno di Ricerca funded by "Laboratorio Congiunto ATTOBIO" [see G2].
 - Period: Jul 15, 2019 - Jul 14, 2021
- from Jul 2017 to Jul 2019 **Post-doc researcher**, Istituto di Fotonica e Nanotecnologie - Consiglio Nazionale delle Ricerche (CNR-IFN), Milano, Italy.
- Research activity: Photo-Electron Circular Dichroism (PECD) and ultrafast pump-probe spectroscopy of complex chiral molecules. Development of a mid-IR laser for generating single attosecond pulses in the water-window energy region. High-order harmonic generation HHG spectroscopy driven by near-IR and mid-IR laser sources in atoms and molecules. Pump-probe HHG spectroscopy in two-color fields. Development of new laser facility for dynamic imaging of complex molecules. HHG in integrated photonic devices.
 - Contract: Assegno di Ricerca funded by ELI (The Extreme Light Infrastructure) [see G3].
 - Period: Jul 14, 2017 - Jul 13 2019
- from Nov 2016 to Jul 2017 **Post-doc researcher**, Istituto di Fotonica e Nanotecnologie - Consiglio Nazionale delle Ricerche (CNR-IFN), Milano, Italy.
- Research activity: Development of new laser facility for dynamic imaging of complex molecules and for time resolved HHG ultrafast spectroscopy of impulsively aligned and oriented molecules. HHG in integrated photonic devices. Pump-probe HHG spectroscopy in two-color fields. HHG spectroscopy driven by near-IR laser sources in atoms and molecules.
 - Contract: Assegno di Ricerca funded by RC StG Starting Research Grant UDYNI [see G4].
 - Period: Nov 01, 2016 - Jul 13, 2017 Framework Programme, [see Grant G4].

Education and Training

Education

- Mar 13, 2017 **PhD in Physics**, Politecnico di Milano, Italy.
- Research activity: High-order harmonic generation (HHG) spectroscopy driven by near-IR laser sources in atoms and molecules. Pump-probe HHG spectroscopy by tailored laser fields. Photo-ionization processes and ultrafast pump-probe spectroscopy of atoms and molecules at FERMI Free Electron Laser facility. HHG ultrafast spectroscopy of impulsively aligned and oriented molecules.
 - Qualification awarded: Dottore di Ricerca PhD in Fisica *cum Laude*.
 - Thesis: "Attosecond multi-electron dynamics probed by HHG in bichromatic fields" .
 - Adviser: Prof. Salvatore Stagira (Politecnico di Milano).
- Oct 03, 2013 **Master of Science in Engineering Physics**, Politecnico di Milano, Italy.
- Specialization: Photonics and Nano Optics.
 - Topics: Micro and Nanooptics, Photonics, Solid State Physics, Optical and Electronic Measurement Systems, Electronics, Management of Product Requirements, Computing System, Mathematical Methods for Engineering, Automation, Informatics for Scientific Applications, Electron Microscopy, Plasmas in Surface Engineering, Molecular Modeling of Materials.
 - Qualification awarded: Dottore Magistrale in Ingegneria Fisica, *110/110 cum Laude*.
 - Thesis: "Control of Ion-Electron Collisions for studying Molecular Orbitals through HHG".
 - Adviser: Prof. Salvatore Stagira (Politecnico di Milano).

- Sep 21, 2010 **Bachelor of Science in Engineering Physics**, Politecnico di Milano, Italy.
- Topics: Chemistry, Calculus and Analysis, Mechanics, Thermodynamics, Electromagnetism, Quantum Physics, Structure of Matter, Laser Science, Biomedical Optics, Optical Physics, Optical Technologies, Thermal Engineering, Statistics, Informatics, Electrical Engineering, Automation, Telecommunication, Mechanical Technologies, Economics and Business Management, Computer Science.
 - Qualification awarded: Dottore in Ingegneria Fisica
 - Thesis: 'Nonlinear Interferometric Measurement of the CEP of mid-IR laser pulses'.
 - Adviser: Prof. Salvatore Stagira (Politecnico di Milano).

- Jul 2007 **Diploma di Liceo Scientifico**, Istituto Facchetti, Treviglio BG, Italy.
- Qualification awarded: Diploma di Liceo Scientifico, *100/100 cum Laude*.

Staff-exchange programs abroad

- from Nov 2022 to Dec 2022 **Research and Innovation Staff Exchange Program (RISE) Chemical Dynamics Group**, Chemical Sciences, University of Auckland, 1150 Auckland, New Zealand.
- Fundings: period abroad funded by SONAR [see F6].
 - Topics: Time-resolved fluorescence spectroscopy in Opals and Bodipy
 - Group: Prof. Neil Broderick e Dr. Nina Novikova
 - Period: Nov 06 - Dec 24, 2022 (2 months)
- from Sep 2022 to Oct 2022 **Attochem Cost Action CA18222, Short-Term Scientific Mission Grant Max-Born-Institute**, Berlin, 12489. Germany.
- Fundings: period abroad funded by ATTOCHEM COST ACTION.
 - Topics: Photoelectron spectroscopy of chiral dynamics in bichromatic fields
 - Group: Prof. Olga Smirnova
 - Period: Sep 26 - Oct 10, 2022 (2 weeks)
- from Aug 2019 to Oct 2019 **Research and Innovation Staff Exchange Program (RISE) Chemical Dynamics Group**, Lawrence Berkeley National Laboratory (Berkeley Lab), Berkeley, CA 94720, United States.
- Fundings: period abroad funded by SONAR [see F6].
 - Topics: Transient absorption in atoms and molecules with attosecond pulse train
 - Group: Chemical Dynamics Group at Berkeley Lab led by O. Gessner
 - Period: Aug 30 - Oct 30, 2019 (2 months)
 - Results: Publications [5, 30], Conferences: [S29]

Training and soft-skills

- Nov 2016 **Management Essentials for PhDs PhD School**, Politecnico di Milano, Italy.
- Topics: Business Organization, IPR and Technology Transfer, Accounting and Performance Management, and Personal Development.
 - Period: Nov 05-09, 2016
 - Qualification awarded: Politecnico di Milano diploma in Management Essentials for PhDs.
- Jun 2015 **Ultrafast X-ray Summer School DESY**, Hamburg, Germany.
- Topics: X-ray Free Electron Lasers, mock beamtime proposal poster.
 - Period: Jun 22-25, 2015
- Jul 2014 **International School of Scientific Computation and MATLAB Università degli studi di Palermo**, Palermo, Italy.
- Topics: Scientific Computation, High Performance and Grid Computing, and Parallel Computing with MATLAB.
 - Period: Jul 22 - Aug 01, 2014

Teaching and Mentoring

Teaching Assistant

- from Feb 2023 to Jun 2023 **Experimental Physics I (10 ECTS)** *cod. 054215*, Dipartimento di Fisica, Politecnico di Milano, Italy.
- Main tasks: responsible for 40 hours of lectures for Bachelor students in Engineering Physics; providing support to students; planning final written exams.
 - Main topics: Classical Mechanics, Fluid Mechanics, and Thermodynamics.
 - Main instructor: Prof. Claudia Dallera.
- from Feb 2022 to Jun 2022 **Experimental Physics I (10 ECTS)** *cod. 054215*, Dipartimento di Fisica, Politecnico di Milano, Italy.
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 - Main instructor: Prof. Claudia Dallera.
- from Feb 2019 to Jun 2019 **Experimental Physics I (10 ECTS)** *cod. 054215*, Dipartimento di Fisica, Politecnico di Milano, Italy.
- Main tasks: responsible for 40 hours of lectures for Bachelor students in Engineering Physics; providing support to students; planning final written exams.
 - Main topics: Classical Mechanics, Fluid Mechanics, and Thermodynamics.
 - Main instructor: Prof. Claudia Dallera.
- from Feb 2018 to Jun 2018 **Experimental Physics I (10 ECTS)** *cod. 083024*, Dipartimento di Fisica, Politecnico di Milano, Italy.
- Main tasks: responsible for 40 hours of lectures for Bachelor students in Engineering Physics; providing support to students; planning final written exams.
 - Main topics: Classical Mechanics, Fluid Mechanics, and Thermodynamics.
 - Main instructor: Prof. Claudia Dallera.
- from Oct 2016 to Jan 2017 **Photonics I (10 ECTS)** *cod. 096030*, Dipartimento di Fisica, Politecnico di Milano, Italy.
- Main tasks: responsible for 20 hours of lectures for a class of about 120 Master of Science students in Engineering Physics; providing support to students; 1-hour matlab laboratory on Distributed Feedback Lasers.
 - Main topics: Photophysics of Semiconductors, Advanced Semiconductor Laser, Fiber Optical Amplifiers and Semiconductor Optical amplifiers, LEDs, Photon Detectors, Radiometry.
 - Main instructors: Prof. Mauro Nisoli and Prof. Gianluca Valentini.
- from Oct 2015 to Jan 2016 **Physics I (8 ECTS)** *cod. 083560*, Dipartimento di Fisica, Politecnico di Milano, Italy.
- Main tasks: responsible for 32 hours of lectures for a class of about 120 Bachelor students in Electrical Engineering; providing support to students; planning and grading final written exams.
 - Main topics: Classical Mechanics, Fluid Mechanics, and Thermodynamics.
 - Main instructor: Prof. Cosimo D'Andrea.

from Mar 2015 to Jun 2015 **Foundations of Electromagnetism (10 ECTS)** *cod. 084040*, Dipartimento di Fisica, Politecnico di Milano, Italy.

- Main tasks: responsible for 40 hours of lectures for a class of about 120 Bachelor students in Biomedical Engineering; providing support to students; planning and grading final written exams.
- Main topics: Static Fields, Electromagnetic Fields, Optics.
- Main instructor: Dr. Caterina Vozzi (CNR-IFN, Milano)

from Oct 2014 to Jan 2015 **Physics I (8 ECTS)** *cod. 083560*, Dipartimento di Fisica, Politecnico di Milano, Italy.

- Main tasks: responsible for 32 hours of lectures for a class of about 120 Bachelor students in Electrical Engineering; providing support to students; planning and grading final written exams.
- Main topics: Classical Mechanics, Fluid Mechanics, and Thermodynamics.
- Main instructor: Prof. Cosimo D'Andrea.

Student Laboratories

from Mar 2021 to Jun 2021 **Experimental Physics I (10 ECTS)** *cod. 054215*, Dipartimento di Fisica, Politecnico di Milano, Italy.

- Main tasks: responsible for online laboratories for students in Engineering Physics (5 laboratories of 4 hours each); grading laboratory reports.
- Main topics: Classical Mechanics, Thermodynamics, Physics of Solids and Fluids.
- Main instructor: Prof. Claudia Dallera.

from Apr 2020 to Jun 2020 **Experimental Physics I (10 ECTS)** *cod. 054215*, Dipartimento di Fisica, Politecnico di Milano, Italy.

- Main tasks: responsible for online laboratories for students in Engineering Physics (5 laboratories of 4 hours each); grading laboratory reports.
- Main topics: Classical Mechanics, Thermodynamics, Physics of Solids and Fluids.
- Main instructor: Prof. Claudia Dallera.

Dec 2019 **Optical Physics and Technology (10 ECTS)** *cod. 085913*, Dipartimento di Fisica, Politecnico di Milano, Italy.

- Main tasks: responsible for 4 hours of lecture and supervision of laboratory for a class of about 100 third-year Bachelor students in Engineering Physics.
- Main topics: Holography and Fourier Optics.
- Main instructor: Prof. Sandro De Silvestri.

from Mar 2019 to Jun 2019 **Experimental Physics I (10 ECTS)** *cod. 054215*, Dipartimento di Fisica, Politecnico di Milano, Italy.

- Main tasks: responsible for 28 hours of lecture and supervision of laboratory for groups of 25 Bachelor students in Engineering Physics; grading laboratory reports.
- Main topics: Classical Mechanics, Thermodynamics, Physics of Solids and Fluids.
- Main instructor: Prof. Claudia Dallera.

Dec 2018 **Optical Physics and Technology (10 ECTS)** *cod. 085913*, Dipartimento di Fisica, Politecnico di Milano, Italy.

- Main tasks: responsible for 4 hours of lecture and supervision of laboratory for a class of about 100 third-year Bachelor students in Engineering Physics.
- Main topics: Holography and Fourier Optics.
- Main instructor: Prof. Sandro De Silvestri.

from Mar 2018 to Jun 2018 **Experimental Physics I (10 ECTS)** *cod. 083024*, Dipartimento di Fisica, Politecnico di Milano, Italy.

- Main tasks: responsible for 32 hours of lecture and supervision of laboratory for groups of 20 Bachelor students in Engineering Physics; grading laboratory reports.
- Main topics: Classical Mechanics, Thermodynamics, Physics of Solids and Fluids.
- Main instructor: Prof. Claudia Dallera.

- from Nov 2017 to Dec 2017 **Optical Physics and Technology (10 ECTS)** *cod. 085913*, Dipartimento di Fisica, Politecnico di Milano, Italy.
- o Main tasks: responsible for 4 hours of lecture and supervision of laboratory for a class of about 100 third-year Bachelor students in Engineering Physics.
 - o Main topics: Holography and Fourier Optics.
 - o Main instructor: Prof. Sandro De Silvestri.
- from Mar 2017 to Jun 2017 **Experimental Physics I (10 ECTS)** *cod. 083024*, Dipartimento di Fisica, Politecnico di Milano, Italy.
- o Main tasks: responsible for 24 hours of lecture and supervision of laboratory for groups of 20 Bachelor students in Engineering Physics, grading laboratory reports.
 - o Main topics: Classical Mechanics, Thermodynamics, Physics of Solids and Fluids.
 - o Main instructor: Prof. Claudia Dallera.
- Jan 2017 **Optical Physics and Technology (10 ECTS)** *cod. 085913*, Dipartimento di Fisica, Politecnico di Milano, Italy.
- o Main tasks: responsible for 4 hours of lecture and supervision of laboratory for a class of about 100 third-year Bachelor students in Engineering Physics.
 - o Main topic: Second Harmonic Generation in Non-Linear Crystals.
 - o Main instructors Prof. Sandro De Silvestri.
- Jan 2016 **Optical Physics and Technology (10 ECTS)** *cod. 085913*, Dipartimento di Fisica, Politecnico di Milano, Italy.
- o Main tasks: responsible for 4 hours of lecture and supervision of laboratory for a class of about 100 third-year Bachelor students in Engineering Physics.
 - o Main topic: Second Harmonic Generation in Non-Linear Crystals.
 - o Main instructor: Prof. Sandro De Silvestri.
- from Mar 2014 to Jul 2014 **Experimental Physics**, Dipartimento di Fisica, Politecnico di Milano, Italy.
- o Main tasks: Responsible for 40 hours of lecture and supervision of laboratory for 10 classes of about 120 Bachelor students from different Engineering courses.
 - o Main topics: Mechanics, Magneto/Electrostatic.
 - o Main instructors: Prof. Giovanni Consolati, Prof. Matteo Cantoni, Prof. Giulio Cerullo, Prof. Fiorenza Quasso, Prof. Margherita Zavelani, Prof. Cosimo D'Andrea, Prof. Riccardo Bertacco.
- * Contracts not protocolled before Sep 2016, copy available upon request.

Tutoring

- from Mar 2017 to Jun 2017 **Experimental Physics I (10 ECTS)** *cod. 083024*, Dipartimento di Fisica, Politecnico di Milano, Italy.
- o Main tasks: responsible for 30 hours of lectures and face-to-face meetings for a class of about 50 Bachelor students in Engineering Physics; provided support students during the course; planned specific targeted exercises for unraveling students' doubts and filling in the gaps.
 - o Main topics: Classical Mechanics, Fluid Mechanics, and Thermodynamics.
 - o Main instructor: Prof. Claudia Dallera.
- from Jan 2016 to Sep 2016 **Experimental Physics I (10 ECTS)** *cod. 083024*, Scuola di Ingegneria Industriale e dell'Informazione, Politecnico di Milano, Italy.
- o Main tasks: responsible for 30 hours of lectures and face-to-face meetings . for a class of about 50 Bachelor students in Engineering Physics; provided support students during the course; planned specific targeted exercises for unraveling students' doubts and filling in the gaps.
 - o Main topics: Classical Mechanics, Fluid Mechanics, and Thermodynamics.
 - o Main instructor: Prof. Claudia Dallera.

Mentoring

- since 2014 **Bachelor students.**
Mentoring activity for more than 20 Bachelor students.

since 2014 **Master of Science students.**

Mentoring activity for 7 Master of Science students. Co-advisor of 1 thesis.

- Co-advisor of A. Annunziata. Thesis: "High-order harmonic generation in Semiconductor Crystals".
- Mentoring of L. Gatto. Thesis: "Photon-assisted processes in GaAs probed by time-resolved THz spectroscopy".
- Mentoring of M. Bonanomi. Thesis: "HHG in a chip for the generation of isolated attosecond pulses".
- Mentoring of G. Crippa. Thesis: "Novel experimental approaches in high-harmonic spectroscopy of atoms and molecules".
- Mentoring of C. Comparelli. Thesis: "High-order harmonic generation in a chip fabricated through femtosecond laser irradiation followed by chemical etching techniques".
- Mentoring of G. Mariani. Thesis: "Realizzazione di una sorgente accordabile di impulsi laser ultrabrevi mediante four wave mixing in fibra cava".
- Mentoring of L. Cardellino: "Study of rotational dynamics in impulsively aligned molecules by high order harmonic generation".

since 2017 **PhD Students.**

Mentoring activity for 7 PhD students.

- B-C Ispas: ongoing thesis work funded by the SMART-X project [see F2]
- S. Vovla: ongoing thesis work funded by the SMART-X project [see F2]
- L. Gatto: ongoing thesis work funded by ELI [see F11] and [see F3] .
- M. Bonanomi: ongoing thesis work funded by ELI [see F11] and [see F3] .
- G. Crippa: "Development of Ultrafast X ray Spectroscopy for the Investigation of Electron Dynamics in Semiconductors". Thesis work funded by Italy PhD Scholarship.
- P. Prasanna Geetha: "High energy ultrafast tunable mid-IR sources for the application in strong field physics and spectroscopy". Thesis work funded by the ASPIRE project [see F7]. Participation to ASPIRE project network meeting in Frankfurt as Supervisor (Sep 24-26 2018).
- A. Pusala: "Development of ultrafast Mid-IR sources and their applications to high-order harmonic generation spectroscopy". Thesis work is funded by the MEDEA project [see F8],

Professional Activities

Grants

from Aug 2021 to Oct 2021 [G1] **Post-doc Fellowship** at *Istituto di Fotonica e Nanotecnologie - Consiglio Nazionale delle Ricerche (CNR-IFN)*, Milano, Italy.

- Funding Grant: ELI-HU GOP (DFM.AD006.056),
- Call: "Studio di dinamiche elettroniche in materiali mediante spettroscopia ad attosecondi basata sulla generazione di armoniche di ordine elevato,".
- Call N: 126.247.AR207.
- Contract: Assegno di Ricerca (Law 240/2010 Art.22).
- Period: Aug 01, 2021 - Nov 30, 2021.

from Jul 2019 to Jul 2021 [G2] **Post-doc Fellowship** at *Istituto di Fotonica e Nanotecnologie - Consiglio Nazionale delle Ricerche (CNR-IFN)*, Milano, Italy.

- Funding Grant: "Laboratorio Congiunto ATTOBIO" (SAC.AD002.026) [see F4].
- Call: "Sviluppo di un setup per misure di assorbimento transiente ad attosecondi per lo studio di molecole biologiche".
- Call N: 126.247.AR174.
- Contract: Assegno di Ricerca (Law 240/2010 Art.22).
- Renewal Protocol N: CNR-IFN 0001631, Jul 02, 2020
- Period: Jul 15, 2019 - Jul 14, 2021.

- from Jul 2017 to Jul 2019 [G3] **Post-doc Fellowship** at *Istituto di Fotonica e Nanotecnologie - Consiglio Nazionale delle Ricerche (CNR-IFN)*, Milano, Italy.
- Funding Grant: ELI (The Extreme Light Infrastructure) – ELI Grant No. ESFRI Roadmap [see F11].
 - Call: “Sviluppo di sorgenti parametriche nell’infrarosso a fase assoluto stabile per la generazione di impulsi isolati ad attosecondi nella water-window”.
 - Call N: CNR-IFN 126.247.AR138.
 - Contract: Assegno di Ricerca (Law 240/2010 Art.22).
 - Contract Protocol N: CNR-IFN 0002745, Jul 12, 2017
 - Renewal Protocol N: CNR-IFN 0001970, Jul 13, 2018
 - Period: Jul 14, 2017 - Jul 13, 2019.
- from Nov 2016 to Jul 2017 [G4] **Post-doc Fellowship** at *Istituto di Fotonica e Nanotecnologie - Consiglio Nazionale delle Ricerche (CNR-IFN)*, Milano, Italy.
- Funding Grant: ERC StG Starting Research Grant “Ultrafast dynamic imaging of complex molecules (UDYNI)” – ERC grant agreement no. 304964-UDYNI. EC Seventh Framework Program [see F9].
 - Call: “Spettroscopia risolta nel tempo di molecole mediante armoniche di ordine elevato generate da sorgenti parametriche ultraveloci nel vicino infrarosso in campioni allineati ed orientati impulsivamente”.
 - Call N: CNR-IFN 123.247.AR.127.
 - Contract: Assegno di Ricerca (Law 240/2010 Art.22).
 - Contract Protocol N: CNR-IFN 0002745, Oct 28, 2016
 - Period: Nov 01, 2016 - Jul 13, 2017.
- from Nov 2013 to Nov 2016 [G5] **Italy PhD Scholarship** at *Physics Department, Politecnico di Milano*, Italy.
- Call Protocol Number: 0000851/2013.
 - Period: Nov 01, 2013 - Oct 31, 2016.

Fundings

- from Mar 2022 to Mar 2025 [F1] **CONQUEST** *Progetti di rilevante interesse nazionale (PRIN)*.
- Role: scientific responsible for research activities (CNR-IFN unit)
 - Project: attoseCOND electron dyNAMics in QuantUM confinEd SysTems (CONQUEST)
 - Funded under: Italian Ministry of Research and Education (MIUR, Ministero dell’Università e della Ricerca)
 - Project ID: 2020JZ5N9M
- from Mar 2020 to Feb 2024 [F2] **SMART-X** *Marie Skłodowska-Curie Innovative Training Networks (ITN-ETN)*.
- Role: participant
 - Project: Study of carrier transport in MATerials by time-Resolved specTROscopy with ultrashort soft X-ray light (SMART-X)
 - Funded under: H2020-EU.1.3. (EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions) and H2020-EU.1.3.1. (Fostering new skills by means of excellent initial training of researchers)
 - Project ID: 860553
- from Nov 2020 to May 2024 [F3] **IMPULSE** *Development and long-term sustainability of new pan-European research infrastructures (H2020-INFRADEV-2018-2020)*.
- Role: participant
 - Project: Integrated Management and reliable oPerations for User-based Laser Scientific Excellence (IMPULSE)
 - Funded under: H2020-EU.1.4.1.1. - Developing new world-class research infrastructures
 - Project ID: 871161
- from Jan 2019 to Dec 2021 [F4] **ATTOBIO** *Laboratorio Congiungo Bilaterale Internazionale CNR*.
- Role: participant
 - Project: Programma di Ricerca Laboratorio congiunto Devetta/Calegari - Joint Laboratory - “ATTOBIO”
 - Funded under: CNR - Laboratori Congiunti Bilaterali Internazionali nell’area tematica Ottica, Fotonica e Tecnologie Quantistiche
 - Project ID: SAC.AD002.02

- from Oct 2018 to Mar 2020 [F5] **FESTA ERC Proof of Concept.**
- Role: participant
 - Project: Flexible Euv SpecTrometer for Attosecond science (FESTA)
 - Funded under: H2020-EU.1.1. - EXCELLENT SCIENCE - European Research Council (ERC)
 - Project ID: 813103
- from Jan 2017 to Dec 2021 [F6] **SONAR Research and Innovation Staff Exchange (RISE).**
- Role: participant
 - Project: Localized Surface Plasmon Resonance in doped semiconductor nanocrystals (SONAR)
 - Funded under: H2020-EU.1.3.(EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions) and H2020-EU.1.3.3. (Stimulating innovation by means of cross-fertilisation of knowledge)
 - Project ID: 734690
- from Mar 2016 to Feb 2020 [F7] **ASPIRE Marie Skłodowska-Curie Innovative Training Networks (ITN-ETN).**
- Role: participant
 - Project: Angular studies of photoelectrons in innovative research environments (ASPIRE)
 - Funded under: H2020-EU.1.3.1. - Fostering new skills by means of excellent initial training of researchers
 - Project ID: 674960
- from Jan 2015 to Dec 2018 [F8] **MEDEA Marie Skłodowska-Curie Innovative Training Networks (ITN-ETN).**
- Role: participant
 - Project: Molecular Electron Dynamics investigated by intense fields and Attosecond pulses (MEDEA)
 - Funded under: H2020-EU.1.3.1. - Fostering new skills by means of excellent initial training of researchers
 - Project ID: 641789
- from Jan 2013 to Dec 2017 [F9] **UDYNI ERC StG Starting Research Grant.**
- Role: participant
 - Project: Ultrafast Dynamic Imaging of Complex Molecules (UDYNI)
 - Funded under: FP7-IDEAS-ERC - Seventh Framework Programme of the European Community
 - Project ID: 307964
- from Jun 2012 [F10] **LASERLAB-EUROPE Integrating and opening existing national and regional research infrastructures of European interest.**
- Role: participant
 - Project: LASERLAB-EUROPE, Center for Ultrafast Science and Biomedical Optics (CUSBO)
 - Funded under: H2020-EU.1.4.1.2. - Integrating and opening existing national and regional research infrastructures of European interest
 - Project ID from Dec 2019: 871124
 - Project ID from from Dec 2015 to Nov 2019: 654148
 - Project ID from from Jun 2012 to Nov 2015: 284464
- from Jan 2011 [F11] **ELI ESFRI Roadmap.**
- Role: participant
 - Project: Extreme Light Infrastructure (ELI)
 - Funded under: Italian Ministry of Research and Education
 - Project ID: ESFRI Roadmap

Professional qualifications

- from Aug 2021 **Italian teaching qualification in Mathematics and Physics Ministry of University Education and Research (MIUR).**
- Competition class (classe di concorso) A027 Matematica e Fisica
 - Obtained through National Selection STEM D.D. 499/2020

Memberships

from May 2018 **European Physical Society (EPS).**

- to May 2019
 - Category: 3C/below 30
 - ID: IM180236

Referee Activity for International Journals

Nanophotonics, Nature Photonics, Journal of Optics, Journal of Physics B, Physical Review Letters, Physical Review A, Optics Express, Journal of the Optical Society of America B, Photonic Research, Optica, European Physical Journal D, Photonics, Photonics Research, OSA Continuum, Photonics Review Research

Teaching at Summer/Winter Schools

Feb 2018 **ICTP Winter College on Extreme Non-linear Optics, Attosecond Science and High-field Physics**, International Centre for Theoretical Physics, Trieste, Italy.

- Main tasks: Responsible for 6 hours of lecture and supervision of a simulation laboratory for PhD students attending the Winter College on Extreme Non-linear Optics, Attosecond Science and High-field Physics 2018 (smr 3184).
- Main topics: High order harmonic generation, Lewenstein Model, Strong-Field Approximation.
- Period: Feb 05, 2018 - Feb 16, 2018.

Beamtimes at Synchrotrons and FEL

Summary Participating to ~25 campaigns of experiments at FERMI and ELETTRA facilities in Trieste (Italy) as co-investigator and/or proposer, since 2013. Participating to 1 campaign of experiments at the European XFEL (Trieste) as co-investigator. Participating to 2 campaign of experiments at Soleil Synchrotron (Saint-Aubin, France) as co-investigator.

Outreach Activities

Sep 2016 **GOPHOTON! Workshop Liceo Scientifico Statale Amaldi**, Alzano Lombrado (BG), Italy.

- Main tasks: Responsible for 8 hours of training for high-school professors. The aim of the experience was to introduce high-school professors to the Photonics Explorer intra curricular kit (<http://www.eyest.eu>) and performing photonics experiments using Lasers, LEDs, optical fibers, polarizers, gratings, lenses, and filters.
- Main instructor: Prof. Francesca Calegari.

from Sep 2015 **The Week of Photonics Politecnico di Milano**, Milano, Italy.

- to Oct 2015 Main tasks: Responsible for organizing and carrying out "The Week of Photonics", an event funded by the GOPHOTON project aimed at high school and junior high school students. Responsible for guided tours of the laboratories of the Physics Department. The aim of the experience was to perform with the students several experiments using Lasers, LEDs, optical fibers, polarizers, gratings, lenses, and filters.
- Duration: Sep 26 - Oct 03, 2015
- Main instructor: Prof. Gianluca Valentini.

Sep 2015 **GOPHOTON! Workshop Liceo Scientifico Statale Amaldi**, Alzano Lombrado (BG), Italy.

- Main tasks: Responsible for 8 hours of training for high-school professors. The aim of the experience was to introduce high-school professors to the Photonics Explorer intra curricular kit (<http://www.eyest.eu>) and performing photonics experiments using Lasers, LEDs, optical fibers, polarizers, gratings, lenses, and filters.
- Duration: Sep 21-22, 2015
- Main instructor: Dr. Cristian Manzoni.

Professional Skills and Competences

Computer skills & competences

O.S. Advanced knowledge of Ubuntu and Windows

- Programming Advanced knowledge of LabVIEW, Matlab, Python and LaTeX.
 Good knowledge of C and C++.
 Basic knowledge of Java, bash, R, javascript, HTML and CSS.
- Desktop Apps Advanced knowledge of Microsoft Office and LibreOffice Suite.
 Good knowledge of the following graphic utilities: Gnuplot, Blender, Gimp, Inkscape.
 Basic knowledge of Autocad.

Technical skills & competences

- Photonics Expertise in designing and developing experimental apparatus on an optical table.
 Expertise in designing and developing high energy laser ultrashort pulses (OPA).
 Expertise in designing XUV sources based on High Harmonic Generation (HHG).
 Excellent knowledge of optical measurement devices: CCD, sensors, spectrometers and cameras.
 Excellent knowledge and ability to maintain and work with optical components: lenses, dielectric mirrors, non linear crystals, custom optics.
 Excellent knowledge and ability to maintain and work with commercial and custom high power laser sources.
- Vacuum Tech. Expertise in Gas jet targets manipulation.
 Excellent knowledge and ability to maintain and work with vacuum instrumentation.
- Data Acq. Expertise in designing software and hardware laboratory configuration and integration for spectroscopy experiments.
- Data Analysis Advanced experience in data analysis with Matlab and Python.

Personal Skills and Competences

Languages

Italian	Mother tongue	
English	Reading, writing and listening	C2
	Spoken production	C2
	Spoken interaction	C2
	Certificate	TOEIC (2010)
Spanish	Reading, writing and listening	B2
	Spoken production	B2
	Spoken interaction	B1
	Certificate	DELE (2004)

* Levels: C1/2 Proficient user, B1/2: Independent usee, A1/2: Basic user
(Common European Framework of Reference for Languages)

Impact of Research

Summary

I co-authored 47 publications and proceedings on international journals: 1 in Nature Physics [13] and 3 in Physical Review Letters [17, 18, 20]. I've co-authored to 50 contributions to international conferences. I've participated to 9 international conferences as poster presenter, 10 international conferences as a speaker, 3 of which as invited speaker.

Google Scholar
Oct 09, 2023

- o Sum of Times Cited: 432;
- o h-index: 12.
- o i10-index: 14.

International Seminars and Conferences

Invited

- [S1] "Polarization- and time-resolved high-order harmonic spectroscopy in condensed matter", at *4th Annual Workshop of AttoChem COST Action CA18222*, Szeged, Hungary, Sep 18–20, 2023.
D. Faccialà
- [S2] "Soft-X-ray spectroscopy of ultrafast dynamics in materials for solar energy applications", at *108 ° Congresso Nazionale della Società Italiana di Fisica, Sezione Giovani*, Milano, Sep 15, 2022.
D. Faccialà
- [S3] "Probing ultrafast chiral dynamics in complex molecules with chemical sensitivity", at *2nd Annual Workshop of AttoChem COST Action CA18222*, Virtual Event, Oct 13–Oct 15, 2021.
D. Faccialà

Speaker

- [S4] “Time-resolved chiral X-Ray photoelectron spectroscopy of fenchone with transiently enhanced atomic site-selectivity”, at *The 23rd European Conference on the Dynamics of Molecular Systems (MOLEC 2022)*, Hamburg, Germany, Aug 21–Aug 26, 2022.
D. Faccialà, M. Devetta, S. Beauvarlet, N. Besley, F. Calegari, C. Callegari, D. Catone, E. Cinquanta, A. Ciriolo, L. Colaizzi, M. Coreno, G. Crippa, G. De Ninno, M. Di Fraia, M. Galli, G. Garcia, Y. Mairesse, M. Negro, O. Plekan, I. Powis, P. Prasannan Geehta, K. Prince, A. Pusala, S. Stagira, S. Turchini, K. Ueda, D. You, N. Zema, L. Nahon, V. Blanchet, and C. Vozzi.
- [S5] “High order harmonic generation spectroscopy of ZnTe”, at *CMD2020GEFES - Condensed Matter in Madrid*, Virtual Event, Aug 31–Sep 04, 2020.
D. Faccialà, A. Pusala, P. Prasannan Geetha, M. Musheghyan, G. Crippa, A. G. Ciriolo, M. Devetta, A. Assion, E. Cinquanta, S. Stagira, and C. Vozzi
- [S6] “Core-level Time Resolved Spectroscopy of Photoelectron Circular Dichroism in Fenchone”, at *XXII International Conference on Ultrafast Phenomena (UP2020)*, Virtual Event, Nov 16–19, 2020.
D. Faccialà, M. Devetta, S. Beauvarlet, N. Besley, F. Calegari, C. Callegari, D. Catone, E. Cinquanta, A. Ciriolo, L. Colaizzi, M. Coreno, G. Crippa, G. De Ninno, M. Di Fraia, M. Galli, G. Garcia, Y. Mairesse, M. Negro, O. Plekan, I. Powis, P. Prasannan Geehta, K. Prince, A. Pusala, S. Stagira, S. Turchini, K. Ueda, D. You, N. Zema, L. Nahon, V. Blanchet, and C. Vozzi.
- [S7] “HHG probing of atomic dipoles by electronic wave-packet caustics”, at *XXI International Conference on Ultrafast Phenomena (UP2018)*, Hamburg, Germany, Jul 15–20, 2018.
D. Faccialà, S. Pabst, B. D. Bruner, A. G. Ciriolo, M. Devetta, M. Negro, H. Soifer, N. Dudovich, S. Stagira, and C. Vozzi.
- [S8] “Probing Quantum Trajectories by High-order Harmonics Driven by Elliptically Polarized Light”, at *XX International Conference on Ultrafast Phenomena (UP2016)*, Santa Fe, New Mexico, United States, Jul 17–22, 2016.
D. Faccialà, A. G. Ciriolo, M. Devetta, M. Negro, C. Vozzi, and S. Stagira.
- [S9] “Special Report: Probing Xe electronic structure by two-color HHG”, at *XXIX International Conference on Photonic, Electronic, and Atomic Collisions (ICPEAC)*, Toledo, Spain, Jul 22–28, 2015.
D. Faccialà, S. Pabst, B. D. Bruner, A. G. Ciriolo, S. De Silvestri, M. Devetta, N. Dudovich, M. Negro, H. Soifer, S. Stagira and C. Vozzi.
- [S10] “Attosecond Probing of Xenon electronic structure by two-color HHG”, at *ATTO 2015*, Saint-Sauveur, Québec, Canada, Jul 06–10, 2015.
D. Faccialà, S. Pabst, B. D. Bruner, A. G. Ciriolo, S. De Silvestri, M. Devetta, N. Dudovich, M. Negro, H. Soifer, S. Stagira and C. Vozzi.

Contributions to Invited Talks

- [S11] “Time resolved photoelectron circular dichroism at FERMI Free Electron Laser”, at *Laserlab Europe User Meeting*, Paris, France, Nov 28–30, 2018.
M. Devetta, **D. Faccialà**, S. Beauvarlet, N. Besley, F. Calegari, C. Callegari, D. Catone, E. Cinquanta, A. Ciriolo, L. Colaizzi, M. Coreno, G. Crippa, G. De Ninno, M. Di Fraia, M. Galli, G. Garcia, Y. Mairesse, M. Negro, O. Plekan, I. Powis, P. Prasannan Geehta, K. Prince, A. Pusala, S. Stagira, S. Turchini, K. Ueda, D. You, N. Zema, L. Nahon, V. Blanchet, and C. Vozzi.
- [S12] “Novel Approaches in high-order harmonic spectroscopy”, at *Workshop “Attosecond Physics at the Nanoscale”*, Daejeon, South Korea, Oct 29–Nov 02, 2018.
V. S. Makhija, V. Kumarappan, J. Tross, C. Trallero, A. G. Ciriolo, **D. Faccialà**, M. Devetta, C. Vozzi and S. Stagira.

- [S13] “Time resolved studies of protein structural dynamics using XFEL radiation”, at *Ultrafast Dynamic Imaging of Matter (UFDIM2018)*, Crete, Greece, Sep 29 – Oct 03, 2018.
M. Devetta, **D. Faccialà**, S. Beauvarlet, N. Besley, F. Calegari, C. Callegari, D. Catone, E. Cinquanta, A. Ciriolo, L. Colaizzi, M. Coreno, G. Crippa, G. De Ninno, M. Di Fraia, M. Galli, G. Garcia, Y. Mairesse, M. Negro, O. Plekan, I. Powis, P. Prasanna Geehta, K. Prince, A. Pusala, S. Stagira, S. Turchini, K. Ueda, D. You, N. Zema, L. Nahon, V. Blanchet, and C. Vozzi.
- [S14] “Attosecond probing of multielectron dynamics by HHG spectroscopy”, at *Conference on High Intensity Laser and attosecond science in Israel (CHILI 2017)*, Tel-Aviv, Israel, Dec 11–13, 2017.
D. Faccialà, S. Pabst, B. D. Bruner, A. G. Ciriolo, S. De Silvestri, M. Devetta, N. Dudovich, M. Negro, H. Soifer, S. Stagira and C. Vozzi.
- [S15] “Novel approaches in high harmonic spectroscopy of molecules”, at *Conference on High Intensity Laser and attosecond science in Israel (CHILI 2017)*, Tel-Aviv, Israel, Dec 11–13, 2017.
V. S. Makhija, V. Kumarappan, J. Tross, C. Trallero, A. G. Ciriolo, **D. Faccialà**, M. Devetta, C. Vozzi and S. Stagira.
- [S16] “Two-color HHG Spectroscopy of the Xenon Giant Resonance”, at *High-Brightness Sources and Light-driven Interactions Congress (HILAS)*, Long Beach, California, United States, Mar 20–22, 2016.
D. Faccialà, S. Pabst, B. D. Bruner, A. G. Ciriolo, S. De Silvestri, M. Devetta, N. Dudovich, M. Negro, H. Soifer, S. Stagira and C. Vozzi.
- [S17] “Attosecond Probing of Electron Correlation by Two-Color High-Order Harmonic Spectroscopy”, at *Gordon Research Conference on Photoionization and Photodetachment*, Lucca, Italy, Feb 7–12, 2016.
D. Faccialà, S. Pabst, B. D. Bruner, A. G. Ciriolo, S. De Silvestri, M. Devetta, N. Dudovich, M. Negro, H. Soifer, S. Stagira and C. Vozzi.
- [S18] “Molecular orbital tomography by high-order harmonic generation”, at *FisMat 2015*, Palermo, Italy, Sep 38 – Oct 02, 2015.
M. Negro, S. Stagira, C. Vozzi, M. Devetta, **D. Faccialà**, A. G. Ciriolo and S. De Silvestri

Poster Presenter

- [S19] “Measuring the non-linear susceptibility of a semiconductor by polarization resolved high-order harmonic generation spectroscopy”, at *ATTO VIII - Attosecond Science and Technology Conference*, Jul 11–15, 2022.
D. Faccialà, A. Annunziata, N. Tancogne-Dejean, A. Pusala, E. Cinquanta, G. Crippa, M. Devetta, G. Isella, M. Bollani, U. De Giovannini, H. Huebener, A. Rubio, S. Stagira, and C. Vozzi
- [S20] “Measuring the non-linear susceptibility of a semiconductor by polarization resolved high-order harmonic generation spectroscopy”, at *2022 Multiphoton Processes Conference GRC*, Jun 12–17, 2022.
D. Faccialà, A. Annunziata, N. Tancogne-Dejean, A. Pusala, E. Cinquanta, G. Crippa, M. Devetta, G. Isella, M. Bollani, U. De Giovannini, H. Huebener, A. Rubio, S. Stagira, and C. Vozzi
- [S21] “Probing the crystal structure of ZnTe with high-order harmonic generation”, at *OSA High-brightness Sources and Light-driven Interactions Congress 2020*, Nov 16–20, 2020.
D. Faccialà, A. Pusala, P. Prasanna Geetha, M. Musheghyan, G. Crippa, A. G. Ciriolo, M. Devetta, A. Assion, E. Cinquanta, S. Stagira, and C. Vozzi
- [S22] “High-energy ultrafast mid-IR optical parametric amplifier for strong-field science”, at *ICPEAC 2019*, Deauville, France, Jul 23–30, 2019.
D. Faccialà, M. Musheghyan, P. Prasanna Geetha, A. Pusala, G. Crippa, A. G. Ciriolo, M. Devetta, C. Vozzi, and S. Stagira.

- [S23] “Time Resolved Photoelectron Circular Dichroism of Fenchone at FERMI”, at *ATTO 2019*, Szeged, Hungary, Jul 1–5, 2019.
D. Faccialà, M. Devetta, S. Beauvarlet, N. Besley, F. Calegari, C. Callegari, D. Catone, E. Cinquanta, A. Ciriolo, L. Colaizzi, M. Coreno, G. Crippa, G. De Ninno, M. Di Fraia, M. Galli, G. García, Y. Mairesse, M. Negro, O. Plekan, I. Powis, P. Prasannan Geehta, K. Prince, A. Pusala, S. Stagira, S. Turchini, K. Ueda, D. You, N. Zema, L. Nahon, V. Blanchet, and C. Vozzi.
- [S24] “High-order Harmonic Generation Spectroscopy by Electron Wave-packet Caustics”, at *Gordon Research Conference on Multiphoton Processes*, Smithfield, RI, United States, Jun 24–29, 2018.
D. Faccialà, S. Pabst, B. D. Bruner, A. G. Ciriolo, M. Devetta, M. Negro, H. Soifer, N. Dudovich, S. Stagira and C. Vozzi.
- [S25] “Probing xenon multi-electron dynamics by two-color driven HHG”, at *Gordon Research Conference on Photoionization and Photodetachment*, Lucca, Italy, Feb 7–12, 2016.
D. Faccialà, S. Pabst, B. D. Bruner, A. G. Ciriolo, S. De Silvestri, M. Devetta, N. Dudovich, M. Negro, H. Soifer, S. Stagira and C. Vozzi
- [S26] “Probing Xe electronic structure by two-color HHG”, at *XXIX International Conference on Photonic, Electronic, and Atomic Collisions (ICPEAC)*, Toledo, Spain, Jul 22–28, 2015.
D. Faccialà, S. Pabst, B. D. Bruner, A. G. Ciriolo, S. De Silvestri, M. Devetta, N. Dudovich, M. Negro, H. Soifer, S. Stagira and C. Vozzi.
- [S27] “Probing xenon electronic structure by two-color driven high-order harmonic generation”, at *Gordon Research Conference on Multiphoton Processes*, Waltham, MA, United States, Jun 15–20, 2014.
D. Faccialà, M. Negro, B. D. Bruner, M. Devetta, S. De Silvestri, N. Dudovich, S. Pabst, R. Santra, H. Soifer, S. Stagira, and C. Vozzi

Contributions to Oral Presentations

- [S28] “High-order Harmonic Generation in Femtosecond Laser Micromachined Devices for Ultrafast X-ray Spectroscopy”, at *XXII International Conference on Ultrafast Phenomena (UP2020)*, Virtual Event, Nov 16–19, 2020.
A. G. Ciriolo, R. Martínez Vázquez, V. Tosa, A. Frezzotti, E. L. Cinquanta, G. Crippa, **D. Faccialà**, M. Devetta, R. Osellame, C. Vozzi, and S. Stagira
- [S29] “Probing Delayed C–I Bond Fission in the UV Photochemistry of 2-Iodothiophene with Core-to-Valence Transient Absorption Spectroscopy”, at *XXII International Conference on Ultrafast Phenomena (UP2020)*, Virtual Event, Nov 16–19, 2020.
B.W. Toulson, M. Borgwardt, **D. Faccialà**, D.M. Neumark, S.R. Leone, O. Gessner
- [S30] “High-order Harmonic Generation in Microfluidic Femtosecond Laser Micromachined Devices for Ultrafast X-ray Spectroscopy”, at *OSA Frontiers in Optics (FIO) 2020*, Sep 14–17, 2020.
A. G. Ciriolo, R. Martínez Vázquez, G. Crippa, V. Tosa, A. Frezzotti, **D. Faccialà**, M. Devetta, R. Osellame, C. Vozzi, and S. Stagira
- [S31] “Time Domain Spectroscopy through Broadband Four-Wave Mixing”, at *OSA Frontiers in Optics (FIO) 2020*, Sep 14–17, 2020.
G. Crippa, **D. Faccialà**, P. Prasannan Geetha, A. Pusala, M. Bonanomi, E. Cinquanta, A. G. Ciriolo, M. Devetta, L. Gatto, C. Vozzi, and S. Stagira
- [S32] “High-order Harmonic Generation in Femtosecond Laser Micromachined Microfluidic Glass Devices for Ultrafast X-ray Spectroscopy”, at *OSA High-brightness Sources and Light-driven Interactions Congress 2020*, Nov 16–20, 2020.
A. G. Ciriolo, R. Martínez Vázquez, G. Crippa, V. Tosa, A. Frezzotti, **D. Faccialà**, M. Devetta, R. Osellame, C. Vozzi, and S. Stagira

- [S33] “High-order harmonic generation in a femtosecond-laser-micromachined chip”, at *High-Brightness Sources and Light-driven Interactions Congress (HILAS)*, Strasbourg, France, Mar 26–28, 2018.
A.G. Ciriolo, R. Martínez Vázquez, **D. Faccialà**, M. Negro, M. Devetta, D. Pereira Lopes, A. Pusala, P. Prasannan Geetha, C. Vozzi, R. Osellame, and S. Stagira.
- [S34] “Generation of Ultrashort Pulses by Four Wave Mixing in a Gas-filled Hollow Core Fiber”, at *High-Brightness Sources and Light-driven Interactions Congress (HILAS)*, Strasbourg, France, Mar 26–28, 2018.
A.G. Ciriolo, G. Mariani, M. Negro, M. Devetta, **D. Faccialà**, A. Pusala, C. Vozzi, and S. Stagira.
- [S35] “Complete photoionization experiment and autoionizing states in Ne II”, at *The European Conference on Lasers and Electro-Optics (CLEO Europe)*, Munich, Germany, Jun 25–29, 2017.
P.A. Carpeggiani, E. Gryzlova, M. Reduzzi, A. Dubroui, **D. Faccialà**, M. Negro, K. Ueda, S.I. Strakhova, F. Frassetto, F. Stienkemeier, Y. Ovcharenko, M. Meyer, O. Plekan, P. Finetti, K. Prince, C. Callegari, A.N. Grum-Grzhimailo, and G. Sansone.
- [S36] “XUV pump-UV probe measurement of the interatomic Coulombic decay process induced by two-photon double excitation in Ne₂”, at *Short Wavelength Atomic and Molecular Process-3 (ISWAMP-3)*, Hamburg, Germany, Jul 18–20, 2015.
T. Takanashi, H. Fukuzawa, K. Motomura, Y. Kumagai, S. Mondal, T. Tachibana, T. Nishiyama, K. Matsunami, K. Nagaya, P. Johnsson, P. Piseri, G. Sansone, A. Dubrouil, M. Reduzzi, P. Carpeggiani, C. Vozzi, M. Devetta, M. Negro, **D. Faccialà**, F. Calegari, A. Trabattoni, M. Castrovilli, Y. Ovcharenko, M. Mudrich, F. Stienkemeier, M. Coreno, M. Alagia, B. Schütte, N. Berrah, C. Callegari, O. Plekan, P. Finetti, L. Giannessi, C. Spezzani, E. Ferrari, E. Allaria, G. Penco, C. Serpico, G. De Ninno, B. Diviacco, S. Di Mitri, K. Prince, M. Yao, and K. Ueda.
- [S37] “Disentangling structural and dynamical effects via multidimensional high harmonic spectroscopy”, at *XIX International Conference on Ultrafast Phenomena (UP2014)*, Okinawa, Japan, Jul 7–11, 2014.
B. D. Bruner, H. Soifer, M. Negro, M. Devetta, **D. Faccialà**, C. Vozzi, S. Stagira, S. De Silvestri, N. Dudovich.
- [S38] “Probing xenon electronic structure by two-color driven high-order harmonic generation”, at *XIX International Conference on Ultrafast Phenomena (UP2014)*, Okinawa, Japan, Jul 7–11, 2014.
M. Negro, **D. Faccialà**, B. D. Bruner, M. Devetta, S. De Silvestri, N. Dudovich, S. Pabst, R. Santra, H. Soifer, S. Stagira, and C. Vozzi.

Contributions to Poster Presentations

- [S39] “High-energy mid-IR strong-field source for high-order harmonic generation in solid”, at *CMD2020GEFES - Condensed Matter in Madrid*, Virtual Event, Aug 31–Sep 04, 2020.
A. Pusala, P. Prasannan Geetha, **D. Faccialà**, M. Musheghyan, G. Crippa, A. G. Ciriolo, M. Devetta, A. Assion, E. Cinquanta, S. Stagira, and C. Vozzi
- [S40] “Angular dependence of high-order harmonic generation in ZnTe crystals”, at *OSA Frontiers in Optics (FIO) 2020*, Sep 14–17, 2020.
A. Pusala, **D. Faccialà**, P. Prasannan Geetha, M. Musheghyan, G. Crippa, A. G. Ciriolo, M. Devetta, A. Assion, E. Cinquanta, S. Stagira, and C. Vozzi
- [S41] “Time Domain Spectroscopy of Methane Excited by Resonant High-Energy Mid-IR Pulses”, at *OSA High-brightness Sources and Light-driven Interactions Congress 2020*, Nov 16–20, 2020.
G. Crippa, **D. Faccialà**, P. Prasannan Geetha, A. Pusala, M. Bonanomi, E. Cinquanta, A. G. Ciriolo, M. Devetta, L. Gatto, S. Stagira, and C. Vozzi

- [S42] “Towards understanding the electronic structure and ion fragmentation patterns of indole and related compounds”, at *ICPEAC 2019*, Deauville, France, Jul 23–30, 2019. H. Sa’adeh, O. Plekan, A. Ponzi, D. Toffoli, P. Bolognesi, J. Chiarinelli⁵, M. C. Castrovilli, C. Vozzi, **D. Faccialà**, M. Devetta, A. Ciavardini, L. Avaldi, M. Coreno, C. Callegari, R. Richter and K. C. Prince.
- [S43] “High-energy Ultrafast Mid-IR Optical Parametric Amplifier for Strong-Field Science”, at *ATTO 2019*, Szeged, Hungary, Jul 1–5, 2019. M. Musheghyan, **D. Faccialà**, P. Prasannan Geetha, A. Pusala, G. Crippa, A. G. Ciriolo, M. Devetta, C. Vozzi and S. Stagira
- [S44] “High-order Harmonic Generation in Femtosecond Laser-Micromachined Devices”, at *XXI International Conference on Ultrafast Phenomena (UP2018)*, Hamburg, Germany, Jul 15–20, 2018. A.G. Ciriolo, R. Martínez Vázquez, **D. Faccialà**, M. Negro, M. Devetta, D. Pereira Lopes, A. Pusala, C. Vozzi, R. Osellame, and S. Stagira
- [S45] “High-order Harmonic Generation in Femtosecond Laser- Micromachined Devices”, at *Gordon Research Conference on Multiphoton Processes*, Smithfield, RI, United States, Jun 24–29, 2018. A. G. Ciriolo, R. Martinez Vazquez, G. Crippa, **D. Faccialà**, M. Negro, M. Devetta, D. Pereira Lopes, A. Pusala, C. Vozzi, R. Osellame and S. Stagira
- [S46] “Generation of Ultrashort Pulses by Four Wave Mixing in a Gas-filled Hollow Core Fiber”, at *The European Conference on Lasers and Electro-Optics (CLEO Europe)*, Munich, Germany, Jun 25–29, 2017. A. G. Ciriolo, G. Mariani, M. Negro, M. Devetta, **D. Faccialà**, A. Pusala, C. Vozzi, and S. Stagira
- [S47] “A view on the new laser facility for dynamic imaging of complex molecules”, at *Gordon Research Conference on Photoionization and Photodetachment*, Lucca, Italy, Feb 7–12, 2016. A. G. Ciriolo , M. Negro, M. Devetta, **D. Faccialà**, S. Stagira and C. Vozzi.
- [S48] “Various interatomic Coulombic Decay processes after Multiple Valence Excitations in Ne Clusters”, at *XXIX International Conference on Photonic, Electronic, and Atomic Collisions (ICPEAC)*, Toledo, Spain, Jul 22–28, 2015. D. Iablonskyi, K. Nagaya, H. Fukuzawa, K. Motomura, Y. Kumagai, S. Mondal, T. Tachibana, T. Takanashi, T. Nishiyama, K. Matsunami, P. Johnsson, P. Piseri, G. Sansone, A. Dubrouil, M. Reduzzi, P. Carpeggiani, C. Vozzi, M. Devetta, M. Negro, **D. Faccialà**, F. Calegari, A. Trabattoni, M. Castrovilli, Y. Ovcharenko, T. Möller, M. Mudrich, F. Stienkemeier, M. Coreno, M. Alagia, B. Schütte, N. Berrah, C. Callegari, O. Plekan, P. Finetti, C. Spezzani, E. Ferrari, E. Allaria, G. Penco, C. Serpico, G. De Ninno, B. Diviacco, S. Di Mitri, L. Giannessi, K. Prince, M. Yao, and K. Ueda.
- [S49] “Investigating the ICD process induced by two-photon double excitation in Ne dimer using free-electron laser facility “FERMI””, at *Asian International Seminar on Atomic and Molecular Physics (AISAMP)*, Sendai, Japan, Oct 5–10, 2014. T. Takanashi, H. Fukuzawa, K. Motomura, Y. Kumagai, S. Mondal, T. Tachibana, T. Nishiyama, K. Matsunami, K. Nagaya, P. Johnsson, P. Piseri, G. Sansone, A. Dubrouil, M. Reduzzi, P. Carpeggiani, C. Vozzi, M. Devetta, M. Negro, **D. Faccialà**, F. Calegari, A. Trabattoni, M. Castrovilli, Y. Ovcharenko, M. Mudrich, F. Stienkemeier, M. Coreno, M. Alagia, B. Schütte, N. Berrah, C. Callegari, O. Plekan, P. Finetti, L. Giannessi, C. Spezzani, E. Ferrari, E. Allaria, G. Penco, C. Serpico, G. De Ninno, B. Diviacco, S. Di Mitri, K. Prince, M. Yao, and K. Ueda.

- [S50] “Novel interatomic Coulombic decay vs exciton Mott transition in Ne clusters”, at *Asian International Seminar on Atomic and Molecular Physics (AISAMP)*, Sendai, Japan, Oct 5–10, 2014.
D. Iablonskyi, K. Nagaya, H. Fukuzawa, K. Motomura, Y. Kumagai, S. Mondal, T. Tachibana, T. Takanashi, T. Nishiyama, K. Matsunami, P. Johnsson, P. Piseri, G. Sansone, A. Dubrouil, M. Reduzzi, P. Carpeggiani, C. Vozzi, M. Devetta, M. Negro, **D. Faccialà**, F. Calegari, A. Trabattoni, M. Castrovilli, Y. Ovcharenko, T. Möller, M. Mudrich, F. Stienkemeier, M. Coreno, M. Alagia, B. Schütte, N. Berrah, C. Callegari, O. Plekan, P. Finetti, C. Spezzani, E. Ferrari, E. Allaria, G. Penco, C. Serpico, G. De Ninno, B. Diviacco, S. Di Mitri, L. Giannessi, K. Prince, M. Yao, and K. Ueda.

Publications

Book Chapters

- [1] A. G. Ciriolo, M. Devetta, **D. Faccialà**, P. P. Geetha, A. Pusala, and C. Vozzi. “Molecular orbital tomography based on high-order harmonic generation: Principles and perspectives”. In “Advances in the Application of Lasers in Materials Science”, pages 191–216. Springer International Publishing, 2018.

Articles

- [2] B. Toulson, D. Hait, **D. Faccialà**, D. Neumarl, S. Leone, M. Head-Gordon, and O. Gessner “Probing C–I bond fission in the UV photochemistry of 2-iodothiophene with core-to-valence transient absorption spectroscopy”. *J. Chem. Phys.* **159**,034304. 2023. doi:<https://doi.org/10.1063/5.0151629>.
- [3] **D. Faccialà**, M. Devetta, S. Beauvarlet, N. Besley, F. Calegari, C. Callegari, D. Catone, E. Cinquanta, A. G. Ciriolo, L. Colaizzi, M. Coreno, G. Crippa, G. De Ninno, M. Di Fraia, M. Galli, G. A. Garcia, Y. Mairesse, M. Negro, O. Plekan, P. Prasannan Geetha, K. C. Prince, A. Pusala, S. Stagira, S. Turchini, K. Ueda, D. You, N. Zema, V. Blanchet, L. Nahon, I. Powis, and C. Vozzi “Time-resolved chiral X-Ray photoelectron spectroscopy with transiently enhanced atomic site-selectivity: a Free Electron Laser investigation of electronically excited fenchone enantiomers”. *Physical Review X* **13** 2023. doi:<https://doi.org/10.1103/PhysRevX.13.011044>.
- [4] A. G. Ciriolo, R. M. Vázquez, G. Crippa, M. Devetta, **D. Faccialà**, P. Barbato, F. Frassetto, M. Negro, F. Bariselli, L. Poletto, V. Tosa, A. Frezzotti, C. Vozzi, R. Osellame, and S. Stagira “Microfluidic devices for quasi-phase-matching in high-order harmonic generation”. *APL Photonics* **7** 2022. doi:<https://doi.org/10.1063/5.0118199>.
- [5] **D. Faccialà**, B. D. Bruner, and O. Gessner. “Removal of correlated background in a high-order harmonic transient absorption spectra with principal component regression”. *Optics Express* **29**(22), 35135, 2021. doi:<https://doi.org/10.1364/OE.435008>.
- [6] G. Crippa, **D. Faccialà**, P. Prasannan Geetha, A. Pusala, M. Musheghyan, A. Assion, M. Bonanomi, E. Cinquanta, A. G. Ciriolo, M. Devetta, D. Fazzi, L. Gatto, S. De Silvestri, C. Vozzi, and S. Stagira. “Time-domain spectroscopy of methane excited by resonant high-energy mid-IR pulses”. *Journal of Physics: Photonics* **3**(3), 034020, 2021. doi:<https://doi.org/10.1088/2515-7647/ac0d0e>.
- [7] A. Ponzi, E. Bernes, D. Toffoli, G. Fronzoni, C. Callegari, A. Ciavardini, M. Di Fraia, R. Richter, K. C. Prince, H. Sa’adeh, M. Devetta, **D. Faccialà**, C. Vozzi, L. Avaldi, P. Bolognesi, M. C. Castrovilli, D. Catone, M. Coreno, and O. Plekan. “Carbon and Nitrogen K-Edge NEXAFS Spectra of Indole, 2, 3-Dihydro-7-azaindole, and 3-Formylindole”. *The Journal of Physical Chemistry A* **125**(19), 4160–4172, 2021. doi:<https://doi.org/10.1021/acs.jpca.1c02570>.

- [8] M. Musheghyan, P. Prasanna Geetha, **D. Faccialà**, A. Pusala, G. Crippa, A. Campolo, A. G. Ciriolo, M. Devetta, A. Assion, C. Manzoni, C. Vozzi, and S. Stagira. “Tunable, few-cycle, CEP-stable mid-IR optical parametric amplifier for strong field applications”. *Journal of Physics B: Atomic, Molecular and Optical Physics* **53**(18), 185402, 2020. doi:10.1088/1361-6455/aba127.
- [9] O. Plekan, H. Sa'adeh, A. Ciavardini, C. Callegari, G. Cautero, C. Dri, M. Di Fraia, K. C. Prince, R. Richter, R. Sergo, L. Stebel, M. Devetta, **D. Faccialà**, C. Vozzi, L. Avaldi, P. Bolognesi, M. C. Castrovilli, D. Catone, M. Coreno, F. Zuccaro, E. Bernes, G. Fronzoni, D. Toffoli, and A. Ponzi. “Experimental and Theoretical Photoemission Study of Indole and Its Derivatives in the Gas Phase”. *J. Phys. Chem. A* **124**(20), 4115–4127, 2020. doi:10.1021/acs.jpca.0c02719
- [10] M.D. Kiselev, P.A. Carpeggiani, E.V. Gryzlova, S.M. Burkov, M. Reduzzi, A. Dubrouil, **D. Faccialà**, M. Negro, K. Ueda, F. Frassetto, F. Stienkemeier, Y. Ovcharenko, M. Meyer, M. Di Fraia, O. Plekan, K.C. Prince, C. Callegari, G. Sansone, and A.N. Grum-Grzhimailo “Photoelectron spectra and angular distribution in sequential two-photon double ionization in the region of autoionizing resonances of ArII and KrII”. *J. Phys. B: At. Mol. Opt. Phys.* **53**(24), 244006, 2020. doi:10.1088/1361-6455/abc2c5
- [11] A.G. Ciriolo, R. Martínez Vázquez, V. Tosa, A. Frezzotti, G. Crippa, M. Devetta, D. Faccialà, F. Frassetto, L. Poletto, A. Pusala, C. Vozzi, R. Osellame, and S. Stagira “High-order harmonic generation in a microfluidic glass device”. *Journal of Physics: Photonics* **2**(2), 024005, 2020. doi:10.1088/2515-7647/ab7d81
- [12] **D. Faccialà**, S. Pabst, B. D. Bruner, A. G. Ciriolo, M. Devetta, M. Negro, P. P. Geetha, A. Pusala, H. Soifer, N. Dudovich, et al. “High-order harmonic generation spectroscopy by recolliding electron caustics”. *Journal of Physics B: Atomic, Molecular and Optical Physics* **51**(13), 134002, 2018. doi:10.1088/1361-6455/aac351.
- [13] P. A. Carpeggiani, E. V. Gryzlova, M. Reduzzi, A. Dubrouil, **D. Faccialà**, M. Negro, K. Ueda, S. M. Burkov, F. Frassetto, F. Stienkemeier, Y. Ocharenko, M. Meyer, O. Plekan, P. Finetti, K. C. Prince, C. Callegari, A. N. Grum-grzhimailo, and G. Sansone. “Complete reconstruction of bound and unbound electronic wavefunctions in two-photon double ionization”. *Nature Physics* **15**, 170–177, 2019. doi:10.1038/s41567-018-0340-4.
- [14] A. G. Ciriolo, A. Pusala, M. Negro, M. Devetta, **D. Faccialà**, G. Mariani, C. Vozzi, and S. Stagira. “Generation of ultrashort pulses by four wave mixing in a gas-filled hollow core fiber”. *Journal of Optics* **20**(12), 125503, 2018. doi:10.1088/2040-8986/aac41.
- [15] C. Callegari, T. Takanashi, H. Fukuzawa, K. Motomura, D. Iablonskyi, Y. Kumagai, S. Mondal, T. Tachibana, K. Nagaya, T. Nishiyama, K. Matsunamia, P. Johnsson, P. Piseri, G. Sansone, A. Dubrouil, M. Reduzzi, P. A. Carpeggiani, C. Vozzi, M. Devetta, **D. Faccialà**, F. Callegari, M. C. Castrovilli, M. Coreno, M. Alagia, B. Schütte, N. Berrah, O. Plekan, P. Finetti, E. Ferrari, K. C. Prince, , and K. Ueda. “Application of matched-filter concepts to unbiased selection of data in pump-probe experiments with free electron lasers”. *Applied Sciences* **7**(6), 621, 2017. doi:10.3390/app7060621.
- [16] A. G. Ciriolo, M. Negro, M. Devetta, E. Cinquanta, **D. Faccialà**, A. Pusala, S. Stagira, and C. Vozzi. “Optical parametric amplification techniques for the generation of high-energy few- optical-cycles IR pulses for strong field applications”. *Applied Sciences* **7**(3), 265, 2017. doi:10.3390/app7030265.
- [17] T. Takanashi, N. V. Golubev, C. Callegari, H. Fukuzawa, K. Motomura, D. Iablonskyi, Y. Kumagai, S. Mondal, T. Tachibana, K. Nagaya, T. Nishiyama, K. Matsunami, P. Johnsson, P. Piseri, G. Sansone, A. Dubrouil, M. Reduzzi, P. A. Carpeggiani,

- C. Vozzi, M. Devetta, M. Negro, **D. Faccialà**, F. Calegari, A. Trabattori, M. C. Castrovilli, Y. Ovcharenko, M. Mudrich, F. Stienkemeier, M. Coreno, M. Alagia, B. Schütte, N. Berrah, O. Plekan, P. Finetti, C. Spezzani, E. Ferrari, E. Allaria, G. Penco, C. Serpico, G. D. Ninno, B. Diviacco, S. D. Mitri, L. Giannessi, G. Jabbari, K. C. Prince, L. S. Cederbaum, P. V. Demekhin, A. I. Kuleff, and K. Ueda. “Time-resolved measurement of interatomic coulombic decay induced by two-photon double excitation of Ne_2 ”. *Physical Review Letters* **118**(3), 033202, 2017. doi:10.1103/PhysRevLett.118.033202.
- [18] **D. Faccialà**, S. Pabst, B. D. Bruner, A. G. Ciriolo, S. De Silvestri, M. Devetta, M. Negro, H. Soifer, S. Stagira, N. Dudovich, et al. “Probe of multielectron dynamics in xenon by caustics in high-order harmonic generation”. *Physical review letters* **117**(9), 093902, 2016. doi:10.1103/PhysRevLett.117.093902.
- [19] B. D. Bruner, Z. Mašín, M. Negro, F. Morales, D. Brambila, M. Devetta, **D. Faccialà**, A. G. Harvey, M. Ivanov, Y. Mairesse, et al. “Multidimensional high harmonic spectroscopy of polyatomic molecules: detecting sub-cycle laser-driven hole dynamics upon ionization in strong mid-ir laser fields”. *Faraday discussions* **194**, 369–405, 2016. doi:10.1039/C6FD00130K.
- [20] D. Iablonskyi, K. Nagaya, H. Fukuzawa, K. Motomura, Y. Kumagai, S. Mondal, T. Tachibana, T. Takanashi, T. Nishiyama, K. Matsunami, P. Johnsson, P. Piseri, G. Sansone, A. Dubrouil, M. Reduzzi, P. A. Carpeggiani, C. Vozzi, M. Devetta, M. Negro, **D. Faccialà**, F. Calegari, A. Trabattori, M. Castrovilli, Y. Ovcharenko, T. Möller, M. Mudrich, F. Stienkemeier, M. Coreno, M. Alagia, B. Schütte, N. Berrah, C. Callegari, O. Plekan, P. Finetti, C. Spezzani, E. Ferrari, E. Allaria, G. Penco, C. Serpico, G. D. Ninno, B. Diviacco, S. D. Mitri, L. Giannessi, K. Prince, M. Yao, and K. Ueda. “Slow interatomic coulombic decay of multiply excited Ne clusters”. *Physical Review Letters* **117**(27), 276806, 2016. doi:10.1103/PhysRevLett.117.276806.
- [21] M. Negro, M. Devetta, **D. Faccialà**, A. G. Ciriolo, F. Calegari, F. Frassetto, L. Poletto, V. Tosa, C. Vozzi, and S. Stagira. “Non-collinear high-order harmonic generation by three interfering laser beams”. *Optics Express* **22**(24), 29778–29786, 2014. doi:10.1364/OE.22.029778.
- [22] M. Negro, M. Devetta, **D. Faccialà**, S. De Silvestri, C. Vozzi, and S. Stagira. “High-order harmonic spectroscopy for molecular imaging of polyatomic molecules”. *Faraday discussions* **171**, 133–143, 2014. doi:10.1039/C4FD00033A.
- [23] H. Soifer, B. D. Bruner, M. Negro, M. Devetta, **D. Faccialà**, C. Vozzi, S. de Silvestri, S. Stagira, and N. Dudovich. “Studying the universality of field induced tunnel ionization times via high-order harmonic spectroscopy”. *Journal of Physics B: Atomic, Molecular and Optical Physics* **47**(20), 204029, 2014. doi:10.1088/0953-4075/47/20/204029.
- Proceedings**
- [24] **D. Faccialà**, A. Pusala, P. Prasannan Geetha, M. Musheghyan, G. Crippa, A. G. Ciriolo, M. Devetta, A. Assion, E. Cinquanta, S. Stagira, and C. Vozzi. “Probing the crystal structure of ZnTe with high-order harmonic generation”. In “High-brightness Sources and Light-driven Interactions Congress 2020”, pages JW1A.17. Optical Society of America, 2020. doi:10.1364/EUVXRAY.2020.JW1A.17.
- [25] A. G. Ciriolo, R. Martínez Vázquez, G. Crippa, V. Tosa, A. Frezzotti, **D. Faccialà**, M. Devetta, R. Osellame, C. Vozzi, and S. Stagira. “High-order Harmonic Generation in Femtosecond Laser Micromachined Microfluidic Glass Devices for Ultrafast X-ray Spectroscopy”. In “High-brightness Sources and Light-driven Interactions Congress 2020”, pages ETu1A.6. Optical Society of America, 2020. doi:10.1364/EUVXRAY.2020.ETu1A.6.

- [26] G. Crippa, **D. Faccialà**, P. Prasannan Geetha, A. Pusala, M. Bonanomi, E. Cinquanta, A. G. Ciriolo, M. Devetta, L. Gatto, S. Stagira, and C. Vozzi “Time Domain Spectroscopy of Methane Excited by Resonant High-Energy Mid-IR Pulses”. In “High-brightness Sources and Light-driven Interactions Congress 2020”, pages JW1A.18. Optical Society of America, 2020. doi:10.1364/EUVXRAY.2020.JW1A.18.
- [27] A. Pusala, **D. Faccialà**, P. Prasannan Geetha, M. Musheghyan, G. Crippa, A. G. Ciriolo, M. Devetta, A. Assion, E. Cinquanta, S. Stagira, and C. Vozzi “Angular dependence of high-order harmonic generation in ZnTe crystals”. In “Frontiers in Optics (FIO) / Laser Science”, pages JW6A.3. Optical Society of America, 2020. doi:10.1364/FIO.2020.JW6A.3.
- [28] G. Crippa, **D. Faccialà**, P. Prasannan Geetha, A. Pusala, M. Bonanomi, E. Cinquanta, A. G. Ciriolo, M. Devetta, L. Gatto, C. Vozzi, and S. Stagira “Time Domain Spectroscopy through Broadband Four-Wave Mixing”. In “Frontiers in Optics (FIO) / Laser Science”, pages FW4B.4. Optical Society of America, 2020. doi:10.1364/FIO.2020.FW4B.4.
- [29] A. G. Ciriolo, R. Martínez Vázquez, G. Crippa, V. Tosa, A. Frezzotti, **D. Faccialà**, M. Devetta, R. Osellame, C. Vozzi, and S. Stagira “High-order Harmonic Generation in Microfluidic Femtosecond Laser Micromachined Devices for Ultrafast X-ray Spectroscopy”. In “Frontiers in Optics (FIO) / Laser Science”, pages FM1C.1. Optical Society of America, 2020. doi:10.1364/FIO.2020.FM1C.1.
- [30] B.W. Toulson, M. Borgwardt, **D. Faccialà**, D.M. Neumark, S.R. Leone, O. Gessner “Probing Delayed C–I Bond Fission in the UV Photochemistry of 2-iodothiophene with Core-to-Valence Transient Absorption Spectroscopy”. In “51st Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics”, 65, 4. Bulletin of the American Physical Society, 2020.
- [31] H. Sa’adeh, O. Plekan, A. Ponzi, D. Toffoli, P. Bolognesi, J. Chiarinelli, M. C. Castrovilli, C. Vozzi, **D. Faccialà**, M. Devetta, A. Ciavardini, L. Avaldi, M. Coreno, C. Callegari, R. Richter and K. C. Prince “Towards understanding the electronic structure and ion fragmentation patterns of indole and related compounds”. In “Journal of Physics: Conference Series”, IOP Publishing, 2020. doi:10.1088/1742-6596/1412/10/102003.
- [32] **D. Faccialà**, M. Musheghyan, P. Prasannan Geetha, A. Pusala, G. Crippa, A. G. Ciriolo, M. Devetta, C. Vozzi, and S. Stagira. “High-energy ultrafast mid-IR optical parametric amplifier for strong-field science”. In “Journal of Physics: Conference Series”, IOP Publishing, 2020. doi:10.1088/1742-6596/1412/8/082009.
- [33] **D. Faccialà**, S. Pabst, B. D. Bruner, A. G. Ciriolo, M. Devetta, M. Negro, H. Soifer, N. Dudovich, S. Stagira, and C. Vozzi. “HHG probing of atomic dipoles by electronic wave-packet caustics”. In “EPJ Web of Conferences”, 205, 02003, EDP Sciences, 2019. doi:10.1051/epjconf/201920502003.
- [34] A. G. Ciriolo, G. Mariani, M. Negro, M. Devetta, **D. Faccialà**, A. Pusala, C. Vozzi, and S. Stagira. “Generation of ultrashort pulses by four wave mixing in a gas-filled hollow core fiber”. In “High Intensity Lasers and High Field Phenomena”, pages HW3D–3. Optical Society of America, 2018. doi:10.1364/HILAS.2018.HW3D.3.
- [35] A. G. Ciriolo, R. M. Vazquez, **D. Faccialà**, M. Negro, M. Devetta, D. P. Lopes, A. Pusala, P. G. Prabhash, C. Vozzi, R. Osellame, and S. Stagira. “High-order harmonic generation in a femtosecond-laser-micromachined chip”. In “High Intensity Lasers and High Field Phenomena”, pages HW3A–5. Optical Society of America, 2018. doi:10.1364/HILAS.2018.HW3A.5.

- [36] C. A. G., R. M. Vazquez, G. Crippa, **D. Faccialà**, M. Negro, M. Devetta, D. P. Lopes, A. Pusala, C. Vozzi, R. Osellame, and S. Stagira. “High-order harmonic generation in femtosecond laser-micromachined devices”. In “2018 Conference on Lasers and Electro-Optics (CLEO)”, pages 1–2. IEEE, 2018. doi:10.1109/CLEO_AT.2018.JTu2A.156.
- [37] P. A. Carpeggiani, E. Gryzlova, M. Reduzzi, A. Dubrouil, **D. Faccialà**, M. Negro, K. Ueda, S. I. Strakhova, F. Frassetto, F. Stienkemeier, Y. Ovcharenko, M. Meyer, O. Plekan, P. Finetti, K. Prince, C. Callegari, A. N. Grum-Grzhimailo, and G. Sansone. “Complete photoionization experiment and autoionizing states in Ne II”. In “The European Conference on Lasers and Electro-Optics”, page JSI_2_3. Optical Society of America, 2017. doi:10.1109/CLEOE-EQEC.2017.8087758.
- [38] **D. Faccialà**, A. G. Ciriolo, M. Devetta, M. Negro, C. Vozzi, and S. Stagira. “Probing quantum trajectories by high-order harmonics driven by elliptically polarized light”. In “International Conference on Ultrafast Phenomena”, pages UM1A–6. Optical Society of America, 2016. doi:10.1364/UP.2016.UM1A.6.
- [39] **D. Faccialà**, S. Pabst, B. D. Bruner, A. G. Ciriolo, S. De Silvestri, M. Devetta, N. Dudovich, M. Negro, H. Soifer, S. Stagira, and C. Vozzi. “Two-color hhg spectroscopy of the xenon giant resonance”. In “High Intensity Lasers and High Field Phenomena”, pages HT2B–2. Optical Society of America, 2016. doi:10.1364/HILAS.2016.HT2B.2.
- [40] **D. Faccialà**, S. Pabst, B. D. Bruner, A. G. Ciriolo, S. De Silvestri, M. Devetta, N. Dudovich, M. Negro, H. Soifer, S. Stagira, and C. Vozzi. “Probing Xe electronic structure by two-color hhg”. In “XXIX International Conference on Photonic, Electronic, and Atomic Collisions (ICPEAC2015)”, volume 635, page 092100. IOP Publishing, 2015. doi:10.1088/1742-6596/635/9/092100.
- [41] B. D. Bruner, H. Soifer, M. Negro, M. Devetta, **D. Faccialà**, C. Vozzi, S. Stagira, S. De Silvestri, and N. Dudovich. “Disentangling structural and dynamical effects via multidimensional high harmonic spectroscopy”. In “Ultrafast Phenomena XIX”, volume 162, pages 20–23. Springer Proceedings in Physics (2015), 2015. doi:10.1007/978-3-319-13242-6_5.
- [42] D. Iablonskyi, K. Nagaya, H. Fukuzawa, K. Motomura, Y. Kumagai, S. Mondal, T. Tachibana, T. Takanashi, T. Nishiyama, K. Matsunami, P. Johnsson, P. Piseri, G. Sansone, A. Dubrouil, M. Reduzzi, P. A. Carpeggiani, C. Vozzi, M. Devetta, M. Negro, **D. Faccialà**, F. Calegari, A. Trabattoni, M. Castrovilli, Y. Ovcharenko, T. Möller, M. Mudrich, F. Stienkemeier, M. Coreno, M. Alagia, B. Schütte, N. Berrah, C. Callegari, O. Plekan, P. Finetti, C. Spezzani, E. Ferrari, E. Allaria, G. Penco, C. Serpico, G. D. Ninno, B. Diviacco, S. D. Mitri, L. Giannessi, K. C. Prince, M. Yao, and K. Ueda. “Interatomic coulombic decay processes after multiple valence excitations in ne clusters”. In “XXIX International Conference on Photonic, Electronic, and Atomic Collisions (ICPEAC2015)”, volume 635, page 112067. IOP Publishing, 2015. doi:10.1088/1742-6596/635/11/112067.
- [43] M. Negro, **D. Faccialà**, B. D. Bruner, M. Devetta, S. De Silvestri, N. Dudovich, S. Pabst, R. Santra, H. Soifer, S. Stagira, and C. Vozzi. “Probing xenon electronic structure by two-color driven high-order harmonic generation”. In K. Yamanouchi, S. Cundiff, R. de Vivie-Riedle, M. Kuwata-Gonokami, and L. DiMauro, editors, “Ultrafast Phenomena XIX”, pages 7–10. Springer International Publishing, 2015. doi:10.1007/978-3-319-13242-6_2.