

Curriculum vitae with track record

Personal information

First name, Surname:	Claudia Barolo		
Date of birth:		Sex:	F
Nationality:	Italian		
Researcher unique identifier(s) (ORCID, ResearcherID, etc.):	ORCID: 0000-0003-0627-2579 ResearcherID 2014-02-05 Author ID: 6602578023		
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Education

Year	Faculty/department - University/institution - Country
2004	Post graduated School (2 year) in Synthetic Chemistry, University of Milano, Italy. Dissertation: "Functionalized oligopyridyl as multidentate ligands in DSC photosensitizers"
2001 (dissertation defended)	Ph.D. in Chemical Science, University of Torino, Italy. Dissertation: "Novel fluorophores and dipolar and octopolar cromophores for fundamental studies and applications in Photonics".
1997	Master Degree in Industrial Chemistry (110/110 with laude), University of Torino, Italy Dissertation: Synthesis and characterization of highly polarizable molecules for optoelectronic devices,

Positions - current and previous

Year	Job title – Employer - Country
2021-now	Full professor in Industrial Chemistry, Department of Chemistry, University of Torino, Italy
2014-2021	Associate professor in Industrial Chemistry, Department of Chemistry, University of Torino, Italy
2006-2014	Assistant professor in Industrial Chemistry, Department of Organic and General Chemistry, University of Torino, Italy
2005-2006	EP Technician, Department of Organic and General Chemistry, University of Torino, Italy
	VISITING
2014	Invited Professor @UNESP, Bauru Campus, Brasil
2012	Invited Researcher @LPI, EPFL, Lausanne, Switzerland
2010	Invited Researcher @LPI, EPFL, Lausanne, Switzerland

2008-2009	Researcher for International Mobility WWS (World Wide Style) @LPI, EPFL, Lausanne, Switzerland
2002	Post-doc @LPI, EPFL, Lausanne, Switzerland
2001	Visiting PhD student @ Color Chemistry Department - Università di Leeds, United Kindom

Career breaks

Year	Reason
2009	6 months parental leave

Project management experience

Year	Project owner - Project - Role - Funder
2023-2026	CANVAS nuovi Concetti, mAteriali e tecnologie per l'iNtegrazione del fotoVOLTaico negli edifici in uno scenario di generazione diffuSa _ PI for Torino unit
2021-2024	VIPERLAB Fully Connected Virtual and Physical perovskite Photovoltaics lab (INFRAIA 2020) – PI of a subunit next UNITOV_CHOSE
2021-2024	SUNRISE MultiSensor sorting tools in a circular economy approach for the efficient recycling of PVB interlayer material in high-quality prodUcts from laminated glass coNstRuction and demolltion waStEs- PI of a subunit next POLITO_GAMELab
2020-2026	CUBE Unravelling the secrets of Cu-based catalysts for C-H activation (ERC-Synergy H2020) - participant in Torino unit
2020-2023	ARTIBLED, Engineered Artificial Proteins for Biological Light-Emitting Diodes (FET OPEN H2020) – PI for Torino unit
2020-2022	BEST4U, PON Project “Tecnologia per celle solari bifacciali ad alta Efficienza a 4 terminali per utility scale” of the Italian Ministry MIUR (CUP B88D19000160005)” – PI for Torino unit
2019-2021	IMPRESSIVE, ground-breakIng tandeM of transPaRent dyE SenSitIzedand peroVskite solar cEll (RIA, LC-SC3-2018-2019-2020/H2020) – PI for Torino unit
2019-2021	Emitting molecules for bioLED, San Paolo ex-post- PI of the project
2019-2021	RECIPLAST — Regione Piemonte - participant
2018-2020	SMART3D – Regione Piemonte - participant
2018-2019	PEROSKY, Perovskite and other printable materials for energy application in space” – PI for Torino unit – Italian Space Agency
2011-2013	DYE-HARD – PI of the project - Industrial Regional Project (4 SME and two universities): Development and technological implementation of novel hybrids materials to increase yields in photovoltaic modules.

Supervision of students

Master's students	Ph.D. students	University/institution - Country
> 50	>15	University of Torino – Italy (for master student, the number refers to those already finished, for PhD the number includes also the actual PhD student and those in co-supervision)

Other relevant professional experiences

The research activity is mainly devoted to the synthesis and characterization of functional molecules (surfactants, chromogens and polymers) and hybrid materials (organo-inorganic) for innovative technological application (photonics, solar-energy, biotechnology) with a special attention on the emerging application in the renewable energy field. Specifically, organic molecules able to interact with light have been coupled with inorganic and organic polymers in the field of solar cells, and with proteins to obtain optical sensors or study innovative drugs. Functional polymers have been synthesized for 3D printing, while formulation based on bio-derived polymers have been developed as green electrolytes. Throughout the research special attention have been dedicated to the development of green and sustainable, but efficient materials (e.g. water-based photovoltaic device, CRM-free and bio LEDs among others). Interdisciplinarity and collaboration are the two main keyword of the research.

Year	Description - Role
2011-15	Member of Scientific and technical Committee of Dyepower Consortium
2015-now	Member of Scientific and technical Committee of ICxT Interdepartmental Centre
2013-16	Member of Scientific and technical Committee of NIS Interdepartmental Centre
2015-now	Member of the Research Commission of the Department of Chemistry (University of Torino)
2016-now	Member of Directive Committee of NIS Interdepartmental Centre
2015-now	Member of JP-PV in EERA (representative for Torino University) and treasurer (from 2017)
2017-now	Vice-Coordinator of Doctoral programme in Innovation for the Circular Economy
2020-now	Representative of UNITO at the National Technological Cluster for Energy
2021-now	Member of the Board of the GIF (Italian Group of Photochemistry), part of EPA (European Photochemistry Association)
2021-now	Deputy Director of the Department of Chemistry (Research)

Track record

- Number of papers **156** (first publication 2000). Overall citations: >5500 (SCOPUS); **h-index: 42** (Scopus), Number of Book Chapter **3**
- *Invited presentations to international advanced schools*
 - "Molecular engineering of sensitizers for DSC", International School on Organic Photovoltaics (ISOPHOS 2008), Ventotene, Italy (22-26 settembre 2009)
 - Lesson1: "Recent advances on photosensitizer design in Dye Sensitized Solar Cells" Lesson 2: "Molecular engineering of novel dyes in Dye Sensitized Solar Cells", Advanced School on Hybrid Nanostructured Materials for Photovoltaic applications, Valencia, Spain (9-11 marzo 2009)
 - "State of the art and Recent Advances on Photosensitizers for DSC: molecular engineering and photovoltaic performances", International School on Organic Photovoltaics (ISOPHOS 2010), Ventotene, Italy (22-26 settembre 2010)
 - "When Synthesis Becomes the Key Strategy for a Successful Bioelectronic Device", First School on Organic Bioelectronics, Napoli, Italy (20 October 2019)
- *Invited presentations to international conferences*

- "Recent advances in redox couples and electrolyte compositions in Dye-Sensitized Solar Cells" (Topic: Photo- and Spectro-electrochemistry), Journee de l'Electrochimie Francaise 2015 (JE2015), Roma, Italy (6-10 luglio 2015) KEY NOTE
- "Functional dyes, from synthesis to applications", SISOC XI (2016), San Sebastian, Spain (13-15 July 2016)
- "Near-infrared emitting squaraine dye aggregates with large Stokes shifts", Symposium Q: Aggregation-Induced Emission: Materials, Mechanism, and Applications, 2018 European Materials Research Society Spring Meeting (E-MRS Spring Meeting 2018), 18–22 June 2018, Strasbourg, France
- "Far Red and Near Infra-Red Dyes in Dye-Sensitized Solar Cells: key ingredients for both panchromatic absorption and transparent solar windows", in 31st Workshop on Quantum Solar Energy Conversion, QUANTSOL 2019 Winter workshop, Rauris, Austria, 17-22 March, 2019
- "Near Infra-Red Dyes in Dye-Sensitized Solar Cells: from Panchromatic Absorption to Completely Transparent DSSCs", HOPV 2019 (Hybrid and Organic Photovoltaics), Roma Italia (12-15 May 2019)
- Far-Red / NIR Polymethyne Dyes as Versatile Active Moieties in Green Photonics and Bioelectronics, OrBITaly 2019, Napoli, Italy (21-13 October 2019)
- "Functional organic dyes in light harvesting applications", Avogadro Colloquia 2019, Elements of the Periodic Table for Energy, CNR Roma (17-19 December 2019)
- "NIR functional dyes for transparent and colorless Dye-sensitized Solar Cells", nanoGe Spring Symposium 2021, online March 9th-12th, 2021
- "Synthetic strategies in functional NIR dyes towards transparent and colorless Dye-sensitized Solar Cells" MRS, Brazil 2021
- "Toward non-intrusive BIPV: strategies for NIR-selective DSSCs, HOPV 2022 (Hybrid and Organic Photovoltaics), Valencia Spain (23-25 May 2022)

Torino, 09 July 2023

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