

PERSONAL INFORMATION

Family name, First name: **Abate, Antonio**

Date of birth: **28.07.1983**; Nationality: **Italian**

ORCID: orcid.org/0000-0002-3012-3541; Research ID: **F-2419-2010**; Scopus ID: **35167776300**

URL for the website: <https://www.helmholtz-berlin.de/pubbin/vkart.pl?sprache=en&v=nxqzy>

EDUCATION

- 02/2011 *PhD, first-class honours*
Industrial Chemistry and Chemical Engineering, Politecnico di Milano, Italy
- 10/2006 *Master Degree* in Materials Engineering, *with high honours*
Department of Material Engineering, University of Naples Federico II, Italy.

CURRENT POSITIONS

- 2018-present **Assistant Professor** (abilitazione I e II fascia 02/B1, 03/B2, 09/D1) Rita Levi Montalcini fellowship
Department of Chemical and Materials Engineering, University of Naples Federico II, Italy.
- 2017-present **Team Leader** - Helmholtz Young Investigator Groups fellowship
Helmholtz-Zentrum Berlin für Materialien und Energie GmbH, Germany.
- 2016-present **Visiting Professor** - Minjiang Visiting Professorship
Department of Chemistry, Fuzhou University, China.

PREVIOUS POSITIONS

- 2015-2017 **Team leader**, Adolphe Merkle Institute, University of Fribourg, Switzerland.
- 2014-2016 **Marie Skłodowska-Curie fellow** (grant agreement No 291771)
Department of Chemistry, École Polytechnique Fédérale de Lausanne, Switzerland.
- 2013-2014 **Postdoc**, Department of Physics, University of Cambridge, United Kingdom.
- 2011-2013 **Postdoc**, Department of Physics, University of Oxford, United Kingdom.
- 2009-2010 **Visiting PhD student**, Department of Physics, Universitat Jaume I, Spain.
- 2007-2011 **PhD student**, Department of Chemistry, Politecnico di Milano, Italy.

AWARDS, RECOGNITIONS AND FELLOWSHIPS

- 2020 *Highly Cited Researchers 2020 - The Most Influential Scientific Minds* - Clarivate analytic.
- 2020 *Fellow of the Young Academy of Europe*
- 2019 *Highly Cited Researchers 2019- The Most Influential Scientific Minds* - Clarivate analytic.
- 2018 *Top 10 most influential scientist of the field* - The World University Rankings.
- 2018 *Highly Cited Researchers 2018- The Most Influential Scientific Minds* - Clarivate analytic.
- 2017 *Rita Levi Montalcini fellowship* - the Ministry of Education, University and Research in Italy.
- 2017 *Young Investigator Groups fellowship* - Helmholtz Association, Germany.
- 2017 *Italian Chemical Society best talk award* - PSCO Oxford, United Kingdom.
- 2016 *Minjiang Visiting Professorship*, Fuzhou University, China.
- 2015 *"Prime Speciale" outstanding Postdoc award* - EPFL, Switzerland.
- 2014 *Marie Skłodowska-Curie fellowship* - European Commission, EPFL, Switzerland.
- 2010 *"Idea to Product" award* - University of Texas, United States of America.
- 2007 *PhD fellowship* - the Ministry of Education, University and Research in Italy.

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

- 2017-present **6 Postdocs; 8 PhD Students; 6 Master Students**; Helmholtz-Zentrum Berlin, Germany.
- 2015-2017 **3 PhD students; 2 Master students**; Adolphe Merkle Institute, University of Fribourg, Switzerland.
- 2014-2016 **1 PhD student; 1 Master student**; Department of Chemistry, École Polytechnique Fédérale de Lausanne, Switzerland.
- 2011-2014 **2 PhD students**; Department of Physics, University of Oxford, United Kingdom.

TEACHING ACTIVITIES

- 2019-present **Full course responsibility** for *Engineering nanophase materials for sensors and solar cells*, Department of Chemical and Materials Engineering, University of Naples Federico II, Italy.
- 2018-present **Full course responsibility** for *Materials and technologies for solar cells*, Department of Chemical and Materials Engineering, University of Naples Federico II, Italy.
- 2014-2016 **Teaching assistant** for Prof. K. Nazeeruddin - *Advanced materials for photovoltaics and lighting*, Department of Chemistry, EPFL, Switzerland.

2007-2011 **Teaching assistant** for Prof. G. Resnati and Prof. P. Metrangolo - *General chemistry*, Department of Chemistry, Politecnico di Milano, Italy.

ORGANISATION OF SCIENTIFIC MEETINGS

08/2020 XXIX International Materials Research Congress Symposium "Advances in perovskite photovoltaics and optoelectronics", Cancún, México (online).
 06/2020 Online conference NanoGe "Advances and Challenges in Tin Halide ASnX_3 Perovskites" (online).
 04/2020 Online conference Materials Research Society Spring Meeting Symposium "Next steps for Perovskite Photovoltaics and Beyond" (online).
 11/2019 NanoGe Fall Meeting, over 300 participants, Berlin, Germany.
 09/2019 5th Perovskite Solar Cells and Optoelectronics Conference (PSCO), over 400 participants, Lausanne, Switzerland.
 04/2019 Materials Research Society Spring Meeting Symposium on PV technologies, Washington, United States of America.
 02/2019 American Association for the Advancement of Science Symposium "Perovskite solar cells", over 300 participants, Phoenix, United States of America.
 11/2018 Materials Research Society Fall Meeting Symposium "Perovskite solar cells", over 300 participants, Boston, United States of America.
 08/2018 7th European Association for Chemical and Molecular Sciences Congress, over 2000 participants, Liverpool, United Kingdom.
 10/2017 1st Clean Energy for the Worldwide Electricity Grid Conference, over 300 participants, Genève, Switzerland.

INSTITUTIONAL RESPONSIBILITIES

2017-present **Board Member of Renewable Energy Division**, Helmholtz-Zentrum Berlin für Materialien und Energie GmbH, Germany.
 2017-present **Board Member of Graduate School "Perovskites - Basic Research for High-Efficiency Solar Cells (HyPerCells)"**, Helmholtz-Zentrum Berlin, Germany.
 2016-present **Member of the Faculty Committee for PhD examination**, J. P. Pascual Mielgo, Department of Chemistry, University of the Basque Country; B. Roose, Department of Physics, University of Fribourg, Switzerland; A. Pellaroque, University of Oxford, United Kingdom.
 2015-present **Organiser of Institute Seminars**, M. Saliba from EPFL and J.-P. Correa-Baena from MIT, Adolphe Merkle Institute, Switzerland; F. De Angelis from CNR Italy and Juan Luis Delgado de la Cruz from the University of the Basque Country, Helmholtz-Zentrum Berlin, Germany.
 2014-2016 **Member of the Faculty Committee for Master course examination - Advanced materials for photovoltaics and lighting**, Department of Chemistry, EPFL, Switzerland.

COMMISSIONS OF TRUST

2020-present **Advisory board** member of Universal Scientific Education and Research Network (USERN).
 2015-present **Section Editor-in-Chief** of *Frontiers in Optoelectronics* (since 2020), *Energies* (2019-2020); **Editorial Board Member** of *Springer Nature Applied Sciences* (since 2018), *Technologies* (since 2018), *Sci* (since 2018), *iScience* (since 2017), *Advanced Composites and Hybrid Materials* (since 2017), *Advances in Materials Science and Engineering* (2017), *International Journal of Nanoengineering and Nanotechnology* (since 2016), *International Journal of Photoenergy* and *Journal of Electronics and Communication Engineering Research* (since 2015).
 2009-present **Reviewer for scientific journals**: Elsevier, Wiley, ACS and RSC international scientific journals, including *Nature*; *Energy and Environmental Science* (recognised outstanding reviewer 2017, more than 30 assignments); *Advanced Energy Materials* (more than 30 tasks); *Nano Energy* (more than 10 tasks); *Applied Materials & Interfaces*; *Advanced Materials*; *Chemical Communications*; *Chemistry of Materials*; *ChemPhysChem*; *Journal of Materials Chemistry A*; *Journal of Physical Chemistry Letters*.
 2014-present **External Evaluator for funding agencies**: European Research Council, Swiss National Science Foundation; Netherlands Organization for Scientific Research.
 2017-present **Evaluator** for International Postdoctoral Exchange Program assignment, Office of China Postdoctoral Council and Helmholtz Association.
 2017 **Guest Editor** for Frontiers in Chemistry special issue "Physical insights in low-dimensional inorganics: From materials designs to functionality."
 2014 **Scientific Advisor** for Graduate Students, Master of Advanced Studies in Nano and Micro Technology, Department of Physics, University of Geneva, Switzerland.
 2013 **Consultant** providing expert advice on perovskite solar cells for Sanfer Srl.

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

American Chemical Society, Royal Society of Chemistry, German Physical Society, Materials Research Society, European Materials Research Society and Young Academy of Europe.

INTERNATIONAL PRESENTATIONS (the list includes official invitations only)

Invited speaker at Material Research Society meeting (Phoenix, USA, 2020); Italian Institute of Technology (Genova, Italy, 2020); Societa' Chimica Italiana, Chimica per le Energie Rinnovabili (Padova, Italy, 2020); Perovskite Solar Cells and Optoelectronics (2019, Lausanne, Switzerland); International Summit on Organic and Hybrid Photovoltaics Stability (2019, Karlsruhe Institute of Technology, Germany); International Symposium on Solar Energy Conversion (2019, Nankai, China); Material Research Meeting (2019, Yokohama, Japan); International Conference on Materials for Advanced Technologies (2019, Singapore); International Materials Research Congress (2019, Cancun, Mexico); Hybrid and Organic Photovoltaics (2018, Benidorm, Spain); Advanced Energy Materials and Research (2018, Dublin, Ireland); American Association for the Advancement of Science (2018, Austin, US); International Conferences on Modern Materials and Technologies (2018, Perugia, Italy); International Conference on Nanotechnologies and Bionanoscience (2018, Heraklion, Crete); Annual Nanotechnology conference (2018, Vienna, Austria); Italian National Conference on the Physics of Matter (2017, Trieste, Italy); International School on Organic Photovoltaics (2015, Ventotene, Italy); Energy Materials and Nanotechnology (2015, Rome, Italy).

Guest lecturer in over 20 international institutes, including *Massachusetts Institute of Technology, University of Oxford, University of Cambridge, Imperial College London, Politecnico di Milano, Italian Institute of Technology, Fuzhou University, University of Potsdam, Bielefeld University, Freie Universität Berlin, University of Perugia, National Research Council Italy*.

More than **40 selected speaker contributions** to international workshops and conferences, including 4x *Material Research Society (MRS)*, 5x *European Material Research Society (E-MRS)*, 6x *Hybrid and Organic Photovoltaics (HOPV)*, 3x *Perovskite Solar Cells and Optoelectronics (PSCO)*, 1x *International Society for Optics and Photonics (SPIE)*.

PUBLICATION SUMMARY

Highly Cited Researchers 2018, 2019 and 2020: top 1% by citations for field and year in Web of Science.

Over 120 papers, thereof **18 as first** and **48 as corresponding/last author**, in peer-reviewed international journals, including *Nature, Science, Energy and Environmental Science, Angewandte Chemie International Edition, Journal of American Chemical Society, Advanced Materials, Advanced Energy Materials, Nano Letters, ACS Nano*. More than **32 000 literature citations**, which generated an **h-index of 62**, according to Google Scholar. Author of **3 book chapters** published by Elsevier and Wiley. Inventor of **8 patents filed with 3 different research institutes:** Politecnico di Milano, University of Oxford, École Polytechnique Fédérale de Lausanne. All the patents have been licenced to companies, including OxfordPV and Solaronix.

FUNDING

Collected ca. **4 000 000 €personal and 15 000 000 €joint research funding** as an independent researcher.