

Prof. Alessandro Romeo, PhD

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Complete CV with publications

Short presentation

Since 2024 I am a full professor at the University of Verona and head of a research group and a laboratory (Laboratory for Photovoltaics and Solid State Physics) for the preparation of thin films (especially for the preparation of photovoltaic cells).

I have been and still am a member of the Scientific Committee of all the editions of the European Photovoltaic Solar Energy Conference from 2010 to date. I was the organizer within the E-MRS Spring Meeting of the Symposium “Thin Film Chalcogenide Solar Cells” in 2010, 2012 and 2014 and I have remained a member of the scientific committee.

I have worked in several laboratories at the University of Verona (I), the Swiss Federal Institute of Technology in Zurich (CH) and the University of Parma (I). I obtained my PhD at the Swiss Federal Institute of Technology (ETH) - Zurich in 2002 and I graduated in Physics in the extraordinary session 1994/1995 at the University of Parma.

I am the author of more than 170 international publications including articles in scientific journals and conference proceedings, five book chapters and seven patents (listed below). I have been invited to numerous international conferences and workshops that will be listed below.

I have been and am the supervisor of several PhD thesis (5 concluded and 2 in progress) and 12 theses. At the time of writing this CV I lead a research group composed of a RTDA researcher, two PhD students and two post-docs, a further post-doc has already won the competition and will join the work group in a few months.

Qualifications:

- Complies with the Italian requirements (Abilitazione Scientifica Nazionale) for the role of **Full Professor (2017) in:**
 - 1) Experimental Physics (Sector 02/B1)

- Complies with the Italian requirements (Abilitazione Scientifica Nazionale) for the role of **Associate Professor (2013) in:**
 - 1) Experimental Physics (Sector 02/B1)
 - 2) Applied Physics for Biology, Medicine and Cultural Heritage (Sector 02/B3)

- **PhD in Physics (2002)**

“High Efficiency CdTe/CdS solar cells: process and characterisation”

Faculty of Science, Swiss Federal Institute of Technology, Zurich, Switzerland

- **Mathematics specialisation teacher course (1997)**

Mathematics Department, Faculty of Science, University of Parma, Parma, Italy

Project presented “The Trigonometry with computers”

- **Master Degree in Physics, specialisation in Solid State Physics (1995)**

Final mark: 106/110

Department of Physics, Faculty of Science, University of Parma, Italy

Thesis Title: “Thin Film Solar Cells of CuInGaSe₂/CdS”

Expertise:

Spectroscopy: Transient absorption spectroscopy (applied to the study of the photoprotection of carotenoids), fluorescence and absorption spectroscopy. Microscopy: Atomic Force Microscopy (AFM) applied to biological systems.

Thin film deposition: High vacuum technology, deposition techniques such as: electron gun, RF and DC sputtering, physical vapour deposition (also with Molecular Beam Epitaxy machines), chemical bath deposition, spin coating.

Other characterizations: Electro-optical and physical properties characterization: X-ray diffraction, scanning electron microscope (SEM), (EDX), atomic force microscope (AFM), current-voltage and capacitance-voltage measurements.

The **LAPS-Laboratory for Photovoltaics and Solid State Physics**, founded and managed by me, is equipped with the following instruments (acquired through competitive project funding):

Process instruments:

1 RF sputtering machine, 3 vacuum evaporation machines, 1 Pulsed Electron Deposition machine, 3 tubular furnace with vacuum system, 3 muffles, 1 chemical bath deposition system, 2 spin coating deposition systems, 1 spray pyrolysis deposition system, 1 chemical hood.

Analysis Instrumentation:

1 Solar simulator with current-voltage measurement system, 1 capacity-voltage measurement system and admittance spectroscopy with cryostat, 2 atomic force microscopes, 1 nanometric tip profiler, 1 high-resolution optical microscope with camera.

Spoken languages:

English. Spoken: fluent, written: very good.

German. Spoken: fair, written: fair.

Italian. Native speaker.

Scientific path outline:

- (2024- present) Full Professor in Experimental Physics (FIS/01)
University of Verona, Italy.
- (2022- present) Associate Professor in Experimental Physics (FIS/01)
University of Verona, Italy (Effective sector change from 1/2/2022).
- (2014- 2022) Associate Professor in Applied Physics (FIS/07)
University of Verona, Italy.
- (2004-2014) Assistant Professor in Applied Physics (FIS/07).
Founder and group leader since 2007 of the "Laboratory for Photovoltaics and Solid State Physics-LAPS", University of Verona, Italy.
- (2002-2004) Post-doc.
Research project for the preparation of alternative buffer layers for CuInGaSe₂ solar cells, at the Swiss Federal Institute of Technology in Zurich, Switzerland.
- (1998-2002) Ph.D.
Research project for the preparation of high efficiency CdTe/CdS solar cells, Faculty of Science, Swiss Federal Institute of Technology in Zurich, Switzerland.
- (1997) Post-graduate scholarship
Optimization of a manufacturing process for CdTe/CdS solar cells, Faculty of Science, Swiss Federal Institute of Technology in Zurich, Switzerland.

- (1996-1997) Post-graduate scholarship

Collaboration in the research project for " A stable ohmic contact for CdTe/CdS solar cells "
Department of Physics, University of Parma, Italy.

- (1995-1996) Master Thesis

Research project for the development of "High efficiency solar cells of CuInGaSe₂/CdS"
Department of Physics, University of Parma, Italy.

Academic path with the description of the research projects won on competitive calls, related to each career phase:

- 2024-currently- Full Professor & group leader

Department of Computer Science, University of Verona, Italy.

- 2014-2024- Associate Professor & group leader

Department of Computer Science, University of Verona, Italy.

Projects won on competitive calls- in brackets the amount of funding:

- 2024 European Project- HORIZON-MSCA-SE-2023- SOLIS- Solar Cells-Inspired Inorganic Semiconductor Synaptic Systems for Low Energy Edge Computing and Visual Learning, duration 3 years (150k euro), local manager.
- 2024 European Project-CETPartnership Call 2023- EMPOWER- Sustainable chalcogenide thin films for low power photovoltaics, duration 3 years (200k euros), local manager.
- 2023 European Project-CETPartnership Call 2022- ACT-FAST- Sustainable Antimony Chalcogenide Thin-Film Tandem Solar Technology, duration 3 years (250k euros), local manager.
- 2022 Fondazione Cariverona- INSOBILD Project (INnovative SOLutions for BUILDing integrated photovoltaics", duration 3 years (190k euro), principal investigator.
- 2019 FSE (European Social Fund)- BISPRASOL Project (integrated photovoltaic modules), duration one year (50k euro), principal investigator.
- 2018 Por-Fesr 2017 (Veneto Region)- Etichetta parlante Project, duration 2 years (37k euro), local investigator.

- 2018 (Project co-financed by the University of Verona and Calyxo GmbH) Innovative back contact and doping for improved thin film industrial photovoltaic modules, duration two years (50K euro), principal investigator.
- 2015 Fondazione CariTro- SnS based solar cells by Ionized Jet Deposition, duration two years (50k euro)- principal investigator.
- 2015 (Project co-financed (University of Verona and Noivion S.r.l.) Thin Film SnS solar cells by Ionized Jet Deposition, one year (25k euro), principal investigator.

• **(2004-2014) Researcher & group leader**

Faculty of Science, University of Verona, Italy.

Projects won on competitive calls:

Thin Films & Photovoltaics:

-2012 Project co-financed by University of Verona and Noivion-5Pascal for pulsed beam deposition of CdTe solar cells (25k euro).

-2010 European Project “ALPINE” Advanced Lasers for Photovoltaic INdustrial processing Enhancement, three years (450k euro), local investigator.

-2008 National project (PRIN) for flexible CdTe solar cells, two years (250k euro), general investigator.

-Internationalization project for CdTe solar cells (MIUR 2005) INTERLINK-2005 in collaboration with the ETH Zurich (national project) (20k euro).

Bio-materials:

-2011 Nanomedicine Project (Cariverona Foundation), three years. On this project, not managed by me, I upgraded the first atomic force microscope and added another AFM platform.

Part of my career at the ETH Zurich:

- (February 2002-March 2004) Post-doc Researcher.

Research project on alternative buffer layers for CuInGaSe₂ thin-film solar cells.

Swiss Federal Institute of Technology, Zurich, Switzerland.

- (March 1998-January 2002) Post-doc Researcher.

Research project for the preparation of high efficiency CdTe/CdS solar cells
Swiss Federal Institute of Technology, Zurich, Switzerland.

- (September 1997-December 1997) Post-graduate researcher.

Study of a process for high efficiency CdTe/CdS solar cells
Swiss Federal Institute of Technology, Zurich, Switzerland.

European projects at ETH Zurich (1998-2004) as a participating researcher:

FP5-EESD-PROCIS-PROduction of large area CIS modules, 36 months.

FP5-EESD-NEBULES-NEw BUffer Layers for Efficient chalcopyrite Solar cells - target action L, 36 months.

FP4-NNE-JOULE C-CadBACK-The CdTe thin film solar Cell – improved Back contact, 36 months.

FP4-NNE-JOULE C-LACTEL-Large area cadmium telluride electrodeposition for thin film solar cells, 36 months.

Editorial Boards of Journals, Series, Encyclopedias and Treatises

- Special Issue of Thin Solid Films-Proceedings of Symposium A, European Material Research Society 2014, Thin Solid Films, Elsevier.

- Special Issue of Thin Solid Films-Proceedings of Symposium B, European Material Research Society 2013, Thin Solid Films, Elsevier.

- Book: Thin Film Solar Cells Current Status & Future Trends. Bosio A., Romeo A. (2011). Nova Science Publishers Inc, ISBN: 9781616683269, 2011.

- Special Issue of Thin Solid Films-Proceedings of Symposium M, European Material Research Society 2010, Thin Solid Films, Elsevier.

Project Officer Activities (Technical and Scientific Expert):

Since 2020:

- Technical and Scientific Expert, appointed by the Ministry of University and Research, for REACTION: first and euRopEAn siC eigTh Inches pilOt line (H2020-ECSEL-2017-1-IA-two-stage)-part of Italian funding.

- Technical and Scientific Expert, appointed by the Ministry of University and Research, for BEST4U (Bifacial Efficient Solar cell Technology with 4 terminal architecture for Utility scale), Total funding: €3,005,034

Call: PON Research and Innovation 2014-2020

Since 2023:

- Technical and Scientific Expert, appointed by the Ministry of University and Research, for the project SOLARGRID: Sistemi solari termodinamici e fotovoltaici con Accumulo per co-Generazione e gestione di rete. Call: PON Research and Innovation 2014-2020. Total funding: €4,413,930.00

Consultancy and spin-off activities:

- (2019-23) Consultancy for Isopan S.p.A.- Gruppo Manni.
- (2018) Consultancy for Calyxo GmbH (CdTe modules production).
- (2012) Consultancy for Officine di Energia Srl.
- (2006) Partner of Arendi S.p.A. (EuroEnergy-Marcegaglia Group) for a project for the industrialization of CdTe/CdS thin-film photovoltaic modules
- (2000) Co-founder and partner of SSE (Solar Systems and Equipments) S.r.L.

Teaching activities:

- (2014-current) General Physics (Bachelor's Degree in Biotechnology) - from 2022 also borrowed from the degree in Nutraceuticals (Department of Medicine) - Department of Biotechnology, University of Verona.
- (2024-current) Physics I (Bachelor's Degree in Computer Science)
- (2024-current) Biophysics (resuming the course discontinued in 2021/2022), (Bachelor's Degree in Biotechnology).
- (2024-current) Molecular Biophysics (Bachelor's Degree in Medical Systems Engineering).

Completed teaching activities:

1. (2022-2023-two academic years) Mechanics and Thermodynamics (Bachelor's Degree in Medical Systems Engineering for the Person), Department of Computer Science, University of Verona.
2. (2016-2022) Physics for Integrated Devices & Sensors (Master's Degree in Computer Engineering for Robotics and Smart Industry)
Department of Computer Science, University of Verona.
3. (2011) "Lecturer" at the Solar Valley Summer School at the University of Halle in Germany, by invitation, for the part of thin-film solar cells.
4. (2010) General Physics (Master's Degree in Biotechnology) Department of Biotechnology, University of Verona.
5. (2004-2022) Professor of Biophysics (3 credits) in the Master's Degree in "Molecular and Industrial Biotechnology" and since 2009 transferred to the Master's Degree in Biotechnology (6 credits), Department of Biotechnology, University of Verona.
6. (2007-2008) Lecturer in Mathematics (5 credits) in the Bachelor's Degree in Viticultural and Oenological Sciences and Technologies at the Faculty of Science of the University of Verona.
7. (2006-2007) Lecturer in Photo-Bioreactors (2 credits) in the Master's Degree in "Molecular and Industrial Biotechnology" at the Faculty of Science of the University of Verona.
8. (1998-2004) Teaching assistant in various university courses (Laboratories and exercises) Faculty of Science, Swiss Federal Institute of Technology in Zurich, Switzerland.

Institutional roles:

- (2023- 2024) President of the Joint Committee for the Department of Computer Science of the University of Verona.
- (2020-currently) - Member of the International Cooperation Commission of the University of Verona.
- (2020-2024) - Member of the University of Verona commission for the Network of Sustainable Universities (RUS).
- (2020-currently) - Security referent for the Department of Computer Science of the University of Verona.
- (2021-2023) Member of the joint commission for the Area of Science and Engineering of the University of Verona.
- (2020-2023) Advisor to the board of directors of the technological platforms center of the University of Verona.

(2009-2013) - Member of the Board of Directors of the University of Verona.

(2012-2014) - Member of the Scientific Committee of Veneto Nanotech, representative for the University of Verona.

(2008-2015) - Member of the Environment Commission of the University of Verona.

Publications:

More than 180 international publications including book chapters, patents, conference proceedings.

H-index: 32 (Scopus) Number of citations: 4024

H-index: 38 (Google Scholar) Number of citations: 5960

Awards and recognitions for scientific activity

Among the recognitions I have been organizer for three consecutive times of the symposium "Thin Film Chalcogenide Solar Cells" (2010, 2012 and 2014) at the "European Materials Research Society Spring Meeting" in Strasbourg (symposium B 2012 and symposium M 2010) and in Lille (2014) (consequently also editor of the related "Special Issue" on Thin Solid Films.

I have had several invitations to conferences and have been chairman for several conferences (as listed below).

I have been and still am part of the international scientific committee (from 2010 until now) of the "European Photovoltaic Solar Energy Conference" (in 2010 and in 2021 it was "World Conference"), also for the next conference in 2024.

I received a 2001 American Material Research Society (MRS) "graduate student silver award" and a poster award for which I was co-author.

Below is the complete list of international awards:

- January 2025- Member of the scientific committee 2025 European Photovoltaic Solar Energy Conference and Exhibition.
- September 2024- Chairman at the 2024 European Materials Society Spring Meeting, Warsaw, Poland, 2024.
- September 2024- Invited Speaker at the 2024 European Materials Society Spring Meeting, Warsaw, Poland, 2024.
- February 2024- Invited Speaker at the First International Conference on Low-Dimensional Advanced Materials, Taskhent, Uzbekistan.

- January 2024- Member of the Scientific Committee 2024 European Photovoltaic Solar Energy Conference and Exhibition.
- October 2023- Invited speaker at the MS&T23 (Materials Science and Technology) Conference, Columbus, October 1-5, 2023, USA.
- February 2023- Invited speaker at the 47th International Conference and Expo on Advanced Ceramics and Composites (ICACC2023), Daytona Beach, Florida, USA.
- January 2023- Member of the Scientific Committee 2023 European Photovoltaic Solar Energy Conference and Exhibition.
- September 2022- Chairman at the 2022 World Photovoltaic Solar Energy Conference and Exhibition, Milan, Italy.
- January 2022- Member of the Scientific Committee 2022 World Photovoltaic Solar Energy Conference and Exhibition.
- January 2021- Member of the Scientific Committee 2021 European Photovoltaic Solar Energy Conference and Exhibition.
- January 2021- Invited speaker at the International Workshop on Renewable Energy and Storage Devices for Sustainable Development (IWRESD - 2021) (online).
- January 2020- Member of the scientific commission 2020 European Photovoltaic Solar Energy Conference and Exhibition.
- December 2019- Invited speaker at the 3rd International Conference on Solar Energy PV, Bhubaneswar, India
- September 2019- Chairman at the 2019 European Photovoltaic Solar Energy Conference and Exhibition, Marseille, France.
- January 2019- Member of the scientific commission 2019 European Photovoltaic Solar Energy Conference and Exhibition.
- September 2018- Chairman at the 2018 European Photovoltaic Solar Energy Conference and Exhibition, Brussels, Belgium.
- January 2018- Member of the scientific commission 2018 European Photovoltaic Solar Energy Conference and Exhibition.
- June 2017- Chairman at the 2017 European Photovoltaic Solar Energy Conference and Exhibition, Amsterdam, Holland.
- January 2017- Member of the scientific commission 2017 European Photovoltaic Solar Energy Conference and Exhibition.
- June 2016- Chairman at the 2016 Phototovoltaic Solar Energy Conference and Exhibiton, Munich, Germany,
- January 2015- Member of the scientific commission 2016 European Photovoltaic Solar Energy Conference and Exhibition.
- October 2015- Invited Speaker Scientific Meeting “Advances in Photovoltaics” organized by the Institute of Physics, London, UK.
- September 2015- Chairman 2015 Phototovoltaic Solar Energy Conference and Exhibiton, Hamburg, Germany

- January 2014- Member of the scientific commission of the 2015 European Photovoltaic Solar Energy Conference and Exhibition.
- January 2014- Organizer of Symposium A “Thin Film Chalcogenide Photovoltaic Materials” 2014 E-MRS Spring Meeting, Lille, France.
- September 2013- Invited Speaker 3rd New Energy Forum, Xian, China
- January 2013- Member of the Scientific Committee of the 2013 European Photovoltaic Solar Energy Conference and Exhibition.
- September 2012- Chairman of the 27th Photovoltaic Solar Energy Conference and Exhibition, Frankfurt, Germany
- September 2012- Invited speaker at the Italian-Japanese Symposium on Science and Technology, Miyazaki, Japan.
- February 2012- Member of the Scientific Committee of the 2012 European Photovoltaic Solar Energy Conference and Exhibition.
- January 2012- Main organizer of Symposium B “Thin Film Chalcogenide Photovoltaic Materials” 2012 E-MRS Spring Meeting, Strasbourg, France.
- October 2011-Invited speaker at Science and Innovation Week 2011, Palacio de Minería, Mexico City, Mexico
- August 2011-Invited speaker at IMRC11-International Conference on Materials Research, Cancun, Mexico.
- May 2011-Invited speaker at Optics: Phenomena, Materials, Devices, and Characterization, Calicut, India.
- February 2011- Member of the Scientific Committee of the 2011 European Photovoltaic Solar Energy Conference and Exhibition.
- February 2010- Member of the Scientific Committee of the 2010 World Photovoltaic Conference and Exhibition.
- January 2010- Organizer of the Symposium M “Thin Film Chalcogenide Photovoltaic Materials” 2010 E-MRS Spring Meeting, Strasbourg, France.
- September 2008- Invited speaker at the 28th Annual Meeting International Conference on Surfaces, Materials and Vacuum, Veracruz, México
- July 2008- Invited speaker at the X World Renewable Energy Conference and Exhibition, Glasgow, Scotland, UK.
- July 2008- Invited speaker at the 2008 International Symposium on Optoelectronic devices and Solar Cells, University of Chicago, Chicago (IL) USA.
- May 2008- Chairman at the 2008 European Material Research Society Spring Meeting (Strasbourg, France).
- August 2006- Invited speaker and Chairman at the XV International Materials Research Society Conference (Cancun, Mexico).
- June 2005- Invited speaker at the 2005 European Material Research Society Spring Meeting (Strasbourg, France).
- October 2004- Invited speaker at the 14th PV-Net Workshop, Kranjska Gora, Slovenia

- October 2002- Chairman at the "PV in Europe from PV Technology to Energy Solutions" Conference and Exhibition (Rome, Italy)
- April 2001- American Material Research Society Student Silver Award (S. Francisco, USA)
- May 2000- European Material Research Society Poster Award (as co-author) (Strasbourg, France)

Patents (7):

1. S. Zanetti, **A. Romeo**, E. Artegiani, P. Punathil, 2023
Method to enhance the kesterite solar cell performance
US Patent. N.1 17867290.
2. S. Zanetti, **A. Romeo**, E. Artegiani, P. Punathil, 2023
A method for improving the performance of a CZTSSe solar cell
European Patent N.102021000018911.
3. N. Romeo, **A. Romeo**, A. Bosio, 2012
Method for the Activation of CdTe Thin Films for the Application in CdTe/CdS type thin film solar cells. (Worldwide Extension, N. WO 2011/045728)
4. N. Romeo, **A. Romeo**, A. Bosio, 2011
Process for the production of Cu(In,Ga)Se₂/CdS thin film solar cells. (Worldwide Extension, No. WO 2011/033445 A1)
5. N. Romeo, A. Bosio, **A. Romeo**, 2010
Method for the Formation of a non-rectifying back-contact in a CdTe/CdS thin film solar cell. (Worldwide Extension, No. WO2009/001389)
6. N. Romeo, A. Bosio, **A. Romeo** - 2006
"A Process for Large-Scale Production of CdTe/CdS Thin Film Solar Cells Without the Use of CdCl₂". (International Extension, WO 2006/085348 A2)
7. N. Romeo, A. Bosio, **A. Romeo**- 2003
"A Process for Large-Scale Production of CdTe/CdS Thin Film Solar Cells".
(International Extension, WO 03/032406 A2)
8. A.N. Tiwari, Prof. G. Khripunov, **A. Romeo**, D. Bätzner, F. Kurdesau - 2003
"Bifacial Thin Film Solar Cell". (British Patent, No. GB 2 405 030 A)

Books and Book Chapters: 5 Book Chapters and 1 Book

1. Romeo, A. CdTe and CuInGaSe₂ Thin-Film Solar Cells. (2020) Springer Series in Materials Science, 301, pp. 197-217. DOI: 10.1007/978-3-030-46487-5_8. (Book Chapter).
2. Romeo, A. CdTe solar cells. (2018) McEvoy's Handbook of Photovoltaics: Fundamentals and Applications, pp. 309-369. DOI: 10.1016/B978-0-12-809921-6.00009-4. (Book Chapter).

In the book I co-edited:

Bosio, A., Romeo, A.; Thin film solar cells: Current status and future trends (2012) Thin Film Solar Cells: Current Status and Future Trends, pp. 1-291.

There are three book chapters in which I am co-author:

3. Bosio, A., Romeo, A., Romeo, N.; Polycrystalline CdTe thin film solar cells (2012) Thin Film Solar Cells: Current Status and Future Trends, pp. 159-198.
4. Roca, F., Bosio, A., Romeo, A.; Introduction to inorganic thin film solar cells (2012) Thin Film Solar Cells: Current Status and Future Trends, pp. 26-57.
5. Romeo, A., Bosio, A.; CdTe solar cells by low temperature processes (2012) Thin Film Solar Cells: Current Status and Future Trends, pp. 135-157.

List of journal publications (identified on Scopus) in asterisk when I am an author for correspondence, starting from the most recent.

1. I. Fierri, Roberto C., S. Roncoletta, **A. Romeo**, C. Stranieri, E. G. Di Leo, F. Benetti, A. M. Fratta Pasini, M. Bellumori, and G. Zoccatelli Formulation, Characterization, and Antioxidant Properties of Chitosan Nanoparticles Containing Phenolic Compounds from Olive Pomace., Antioxidants, 2024, 13(12), 1522.
2. Razykov T.M., Bosio A., Kouchkarov K.M., Khurramov R.R., Tivanov M.S., Bayko D.S., **Romeo A.**, Romeo N. Effect of substrate temperature on structure, morphology and optical properties of Sb₂Se₃ thin films fabricated by chemical-molecular beam deposition method from Sb and Se precursors for solar cells, (2024), 791, art. no. 140218.

3. Analysis of CdSe as an alternative buffer layer for Sb₂Se₃ solar cells; Torabi N., Artegiani E., Gasparotto A., Piccinelli F., Meneghini M., Meneghesso G., **Romeo A.*** (2023), Solar Energy, 264, art. no. 111990 DOI: 10.1016/j.solener.2023.111990
4. Pecunia V., Silva S.R.P., Phillips J.D., Artegiani E., **Romeo A.**, Shim H., Park J., Kim J.H., Yun J.S., Welch G.C., Larson B.W., Creran M., Laventure A., Sasitharan K., Flores-Diaz N., Freitag M., Xu J., Brown T.M., Li B., Wang Y., Li Z., Hou B., Hamadani B.H., Defay E., Kovacova V., Glinsek S., Kar-Narayan S., Bai Y., Kim D.B., Cho Y.S., Žukauskaitė A., Barth S., Fan F.R., Wu W., Costa P., del Campo J., Lanceros-Mendez S., Khanbareh H., Wang Z.L., Pu X., Pan C., Zhang R., Xu J., Zhao X., Zhou Y., Chen G., Tat T., Ock I.W., Chen J., Graham S.A., Yu J.S., Huang L.-Z., Li D.-D., Ma M.-G., Luo J., Jiang F., Lee P.S., Dudem B., Vivekananthan V., Kanatzidis M.G., Xie H., Shi X.-L., Chen Z.-G., Riss A., Parzer M., Garmroudi F., Bauer E., Zavanelli D., Brod M.K., Malki M.A., Snyder G.J., Kovnir K., Kauzlarich S.M., Uher C., Lan J., Lin Y.-H., Fonseca L., Morata A., Martin-Gonzalez M., Pennelli G., Berthebaud D., Mori T., Quinn R.J., Bos J.G., Candolfi C., Gougeon P., Gall P., Lenoir B., Venkateshvaran D., Kaestner B., Zhao Y., Zhang G., Nonoguchi Y., Schroeder B.C., Bilotti E., Menon A.K., Urban J.J., Fenwick O., Asker C., Talin A.A., Anthopoulos T.D., Losi T., Viola F., Caironi M., Georgiadou D.G., Ding L., Peng L.-M., Wang Z., Wei M.-D., Negra R., Lemme M.C., Wagih M., Beeby S., Ibn-Mohammed T., Mustapha K.B., Joshi A.P., Roadmap on energy harvesting materials (2023), JPhys Materials, 6 (4), art. no. 042501, DOI: 10.1088/2515-7639/acc550
5. Fierri I., De Marchi L., Chignola R., Rossin G., Bellumori M., Perbellini A., Mancini I., **Romeo A.**, Ischia G., Saorin A., Mainente F., Zoccatelli G. Nanoencapsulation of Anthocyanins from Red Cabbage (*Brassica oleracea* L. var. Capitata f. rubra) through Coacervation of Whey Protein Isolate and Apple High Methoxyl Pectin, (2023), 12 (9), art. no. 1757, DOI: 10.3390/antiox12091757
6. Artegiani E., Gasparotto A., Meneghini M., Meneghesso G., **Romeo A.***; How the selenium distribution in CdTe affects the carrier properties of CdSeTe/CdTe solar cells; (2023) Solar Energy, 260, pp. 11 – 16; DOI: 10.1016/j.solener.2023.05.058
7. Scarpulla M.A., McCandless B., Phillips A.B., Yan Y., Heben M.J., Wolden C., Xiong G., Metzger W.K., Mao D., Krasikov D., Sankin I., Grover S., Munshi A., Sampath W., Sites J.R., Bothwell A., Albin D., Reese M.O., **Romeo A.**, Nardone M., Klie R., Walls J.M., Fiducia T., Abbas A., Hayes S.M.; CdTe-based thin film photovoltaics: Recent advances, current challenges and future prospects; (2023) Solar Energy Materials and Solar Cells, 255, art. no. 112289; DOI: 10.1016/j.solmat.2023.112289
8. Razykov T.M., Bekmirzoev J., Bosio A., Ergashev B.A., Isakov D., Khurramov R., Kouchkarov K.M., Makhmudov M.A., **Romeo A.**, Romeo N., Tivanov M.S., Utamuradova S.B., Bayko D.S., Lyashenko L.S., Korolik O.V., Mavlonov A.A.; Structural and optical properties of Sb_xSe_y thin films obtained by chemical molecular beam deposition method from Sb and Se precursors; (2023) Solar Energy, 254, pp. 67 – 72; DOI: 10.1016/j.solener.2023.03.010
9. Piccinelli F., Mizzoni S., Zanella G., Gaglio S.C., Perduca M., **Romeo A.**, Ruggieri S., Nardon C., Cavalli E.; Ln(III) Complexes Embedded in Biocompatible PLGA Nanoparticles as Potential Vis-to-NIR Optical Probes; (2023) Molecules, 28 (5), art. no. 2251; DOI: 10.3390/molecules28052251

10. Cavalli, E., Nardon, C., Willis, O.G., **Romeo, A.**, Piccinelli, F.; Near Infrared Circularly Polarized Luminescence From Water Stable Organic Nanoparticles Containing a Chiral Yb(III) Complex. *Chemistry - A European Journal*, 2022, 28(37), DOI:10.1002/chem.202200574
11. Punathil, P., Artegiani, E., Zanetti, S., Kumar, V., **Romeo, A.***; A simple method for Ge incorporation to enhance performance of low temperature and non-vacuum based CZTSSe solar cells., *Solar Energy*, 2022, 236, pp. 599–607. DOI:10.1016/j.solener.2022.03.027
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