

## Dr. Elisa Artegiani, PhD

Born in Mantova (Italy), 29/04/1989

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### CURRICULUM VITAE

#### QUALIFICATIONS:

- Complies with the Italian requirements (**Abilitazione Scientifica Nazionale**) for the role of Associate Professor (2023) in Experimental Physics (Sector 02/B1)
- **PhD in Nanoscience and Advanced Technologies** (17/04/2019). Thesis title: “New paradigms for advances in efficiency and stability of CdTe solar cells”. School of Natural Science and Engineering, University of Verona, Italy.
- **Master Degree in Physics** (19/03/2015). Department of Physics and Earth Science, University of Parma, Italy. Final mark: 106/110. Thesis title: “Thin film solar cells based on CdTe: effects of the front contact”.
- **Bachelor Degree in Physics** (24/07/2012). Department of Physics and Earth Science, University of Parma, Italy. Final mark: 100/110. Thesis title: “State of the art and future developments of solar cells based on CIGS”.
- **Scientific High School Diploma** (2008). Scientific High School Belfiore, Mantova, Italy. Final mark: 95/100.

#### CAREER PATH:

- 01/2022 - now: **RTD-A** (junior researcher). Laboratory for Photovoltaics and Solid State Physics, University of Verona, Italy.
- 11/2018 – 12/2021: **Research fellow**. Laboratory for Photovoltaics and Solid State Physics, University of Verona, Italy. I worked on the development, stability and doping of CdTe solar cells and on the development of antimony selenide ( $\text{Sb}_2\text{Se}_3$ ) and copper zinc tin sulfide selenide (CZTSSe) based thin film solar cells. Moreover, I supervised and coordinated the work of PhD students and undergraduate students in the laboratory.
- 10/2015 – 10/2018: **PhD position**. Laboratory for Photovoltaic and Solid State Physics, University of Verona, Italy. I worked on the development, stability and doping of CdTe solar cells and on the development of tin sulfide ( $\text{SnS}$ ) based thin film solar cells. Moreover, I supervised and coordinated the work of undergraduate students in the laboratory.
- 10/2017 – 12/2017: **PhD position – research period abroad**. Stephenson Institute for Renewable Energy, University of Liverpool, UK. I worked on the development, stability and doping of CdTe solar cells.

- 9/2014: **International Summer School on Photovoltaics and New Concepts of Quantum Solar Energy Conversion**, held in Hirschegg (Austria), organized by Helmholtz Zentrum Berlin.
- 3/2014 – 3/2015: **Master Degree thesis**. Laboratory for Photovoltaic and Solid State Physics, University of Verona, Italy. I worked on the effects of the front contact on CdTe based solar cells.
- 3/2012 – 7/2012: **Bachelor Degree thesis**. Thin Film Laboratory (ThiFiLab), University of Parma, Italy. I worked on the development of CdTe and CIGS based solar cells.

#### SCIENTIFIC AND TECHNICAL KNOW-HOW:

- **Growth and deposition of thin films** by physical vapor deposition techniques such as: vacuum evaporation, RF and DC sputtering, close space sublimation, pulsed electron deposition and electron-beam physical vapor deposition, and by chemical deposition techniques such as spin coating and chemical bath.
- **Characterization techniques** such as: current-voltage measurements, external quantum efficiency, capacitance-voltage, drive level capacitance profiling, admittance spectroscopy, atomic force microscopy, spectrophotometry, x-ray diffraction spectroscopy.

#### PROJECTS:

During my stay in the Laboratory for Photovoltaics and Solid State Physics, I worked actively on the following projects:

- 1/2023 – 12/2025: “**INSOBILD Innovative solutions for building integrated photovoltaics**”. Project funded by Cariverona foundation through the 2022 Research and Development Call and by “Manni Group”, a historic organization industrial company based in Verona.
- 10/2021 – 10/2026: “**RENEW PV - Research and International Networking on Emerging Inorganic Chalcogenides for Photovoltaics**”. Project funded by COST (European Cooperation in Science and Technology).
- 7/2021 – 7/2022: “**Nanostructured thin film solar cells – third year**”. Project funded by “Isopan S.p.a.”, made in collaboration with the company “Isopan S.p.a.”, manufacturer of insulating sandwich panels for roofs and walls.
- 7/2020 – 7/2021: “**Nanostructured thin film solar cells – second year**”. Project funded by “Isopan S.p.a.”, made in collaboration with the company “Isopan S.p.a.”, manufacturer of insulating sandwich panels for roofs and walls.
- 7/2020 – 7/2021: “**Integration in buildings of sprayed nanostructured photovoltaic cells (BISPRASOL)**”. Project funded by fondo sociale europeo in sinergia con il fondo europeo di sviluppo regionale POR 2014-2020 – Ob. Investimenti a favore della crescita e dell’occupazione, made in collaboration with the company “Isopan S.p.a.”, manufacturer of insulating sandwich panels for roofs and walls.

- 7/2019 – 7/2020: **“Nanostructured thin film solar cells”**. Project funded by “Isopan S.p.a.”, made in collaboration with the company “Isopan S.p.a.”, manufacturer of insulating sandwich panels for roofs and walls.
- 4/2018 – 4/2019: **“Traceability, certification and anti-counterfeiting of Made in Italy fashion products”**. Project funded by Regione Veneto - asse 1 “ricerca, sviluppo tecnologico e innovazione” (azione 1.1.4 “Sostegno alle attività collaborative di R&S per lo sviluppo di nuove tecnologie sostenibili, di nuovi prodotti e servizi”).
- 1/2018 – 1/2020: **“Innovative back contact and doping for improved thin film industrial photovoltaic modules”**. Project funded by “Joint projects – UniVr”, made in collaboration with the company “Calyxo-TS Solar” manufacturer of CdTe photovoltaic panels.
- 7/2017-7/2018: **“Innovative thermal insulation panels for the generation of thermoelectric energy”**. Project funded by Veneto Region as part of the "POR FSE 2014 - 2020 - Axis I Employability -" Research to support business transformation - Innovators in the company ", made in collaboration with the company “Isopan S.p.a.”, manufacturer of insulating sandwich panels for roofs and walls.
- 7/2017-7/2018: **“TECHBRASS - High Tech Nano- Brazing (New metal-ceramic brazing methods for thin film deposition)”**. Project funded by Veneto Region as part of the "POR FSE 2014 - 2020 - Axis I Employability -" Research to support business transformation - Innovators in the company ", made in collaboration with the company “ECOR RESEARCH SPA, Schio (VI).” (<https://www.ecor-international.com/>).
- 2/2016 – 2/2017: **“Tin Film SnS solar cells by Ionized Jet Deposition - Joint Projects 2015”**. Project funded by “Joint projects 2015 – UniVr”, made in collaboration with the companies “CINQUEPASCAL S.r.l.”, designer and retailer of high vacuum and cryogenic systems, and “Noivion S.r.l.”, designer and manufacturer of Ionized Jet Deposition (IJD) systems.
- 11/2015 – 11/2017: **“TINJET - Tin Sulphide solar cells by Ionized Jet Deposition”**. Project funded by Fondazione Cassa di Risparmio di Trento e Rovereto, made in collaboration with the company “Noivion S.r.l.”, designer and manufacturer of Ionized Jet Deposition (IJD) systems.

#### PATENTS:

- P. Punathil, E. Artegiani, A. Romeo, S. Zanetti, Isopan S.p.A. 2023. “Un metodo per migliorare le prestazioni di una cella solare CZTSSe” (Solar cell). (Italian)

#### LANGUAGES:

- English: very good command of written / good command of spoken
- Italian: mother tongue

#### TEACHING ACTIVITIES:

**Temporary professor (professore a contratto)** at the University of Verona from the academic year 2020-2021:

- 2023/2024: Physics course: “Fisica I”, for computer science student, University of Verona, Italy.
- 2022/23: Physics course “Fisica Applicata a Medicina e Chirurgia”, 2 credits – 20 hours, for students in biomedical laboratory techniques, University of Verona, Italy.
- 2021/22 – 2022/23: Physics course “Esercitazioni di fisica”, 1 credit – 12 hours, for biotechnology students, University of Verona, Italy.
- 2021/22 - 2022/23: Physics course “Fisica Applicata a Medicina e Chirurgia”, 2 credits – 20 hours, for students in cardiocirculatory physiopathology and cardiovascular perfusion techniques and students in orthopaedics techniques, University of Verona, Italy.
- 2020/21 – 2021/22: Physics course “Fisica Applicata all’Odontoiatria”, 1 credit – 10 hours, for dental hygiene students, University of Verona, Italy.

#### Other **teaching assignments**:

- 2019: Physics lectures, 9 hours, preparatory course for admission exam in sport science degree course, University of Verona.
- 2019: Physics lectures, 6 hours, preparatory course for admission exam in science degree courses, University of Verona.

#### **Didactic tutoring activity**:

- 2018: Tutoring for the exercises of the “Physics” course, 12 hours, for bio-computer science students, University of Verona, Italy.
- 2018: Tutoring for the exercises of the “Physics I” course, 32 hours, for computer science students, University of Verona, Italy.
- 2018: Tutoring for the exercises of the “Physics” course, 12 hours, for biotechnology students, University of Verona, Italy.
- 2017: Tutoring for the exercises of the “Physics” course, 12 hours, for biotechnology students, University of Verona, Italy.
- 2017: Tutoring for the exercises of the “Physics I” course, 32 hours, for computer science students, University of Verona, Italy.
- 2016: Tutoring in the laboratory of the “Physics laboratory” course, 48 hours, for math students, University of Verona, Italy.

#### INTERNATIONAL CONFERENCES:

##### **Oral speaker** at the following international conferences:

- 2023:
- 2022: WCPEC-8, 8<sup>th</sup> World Conference on Photovoltaic Energy Conversion. September 26-30, Milan (Italy). **Speaker-Oral presentation.**
- 2021: E-MRS Spring Meeting, European Materials Research Society. May 31 - June 3, on-line. **Speaker-Oral presentation.**

- 2018: 35th EU-PVSEC European Photovoltaic Solar Energy Conference and Exhibition. September 24-28, Brussels (Belgium). **Speaker-Oral presentation.**
- 2018: E-MRS Spring Meeting, European Materials Research Society. June 18-22, Strasbourg (France). **Speaker-Oral presentation.**
- 2017: 34th EU-PVSEC European Photovoltaic Solar Energy Conference and Exhibition. September 25-29, Amsterdam (Netherlands). **Speaker-Oral presentation.**

**Visual presentation** at the following international conferences:

- 2020: 37th EU-PVSEC European Photovoltaic Solar Energy Conference and Exhibition. September 7-11, on-line. **Visual presentation.**
- 2019: 36th EU-PVSEC European Photovoltaic Solar Energy Conference and Exhibition. September 9-13, Marseille (France). **Visual presentation.**
- 2016: 32nd EU-PVSEC European Photovoltaic Solar Energy Conference and Exhibition. June 20-24, Munich (Germany). **Visual presentation.**
- 2016: E-MRS Spring Meeting, European Materials Research Society. May 1-5, Lille (France). **Visual presentation.**

#### AWARDS AND RECOGNITIONS

- 2013: Winner of the "Energies 2021 Best Paper Award" with the publication "CdTe-Based Thin Film Solar Cells: Past, Present and Future", <https://www.mdpi.com/journal/energies/awards/1844>
- 2023: Poster Award in "Thin Films and new Concepts" at the "40<sup>th</sup> European Photovoltaic Solar Energy Conference and Exhibition" held in Lisbon, 18-22/09/2023. Title of the work "Enhance Performance of CZTSSe Solar Cells through Chlorine-based Impurity Inclusion Process". <https://www.eupvsec.org/index.php/conference/prizes-awards?view=article&id=41&catid=12>

#### LIST OF PUBLICATIONS:

##### Journal articles:

- 1) V. Pecunia, S. Silva, J. D. Phillips, **E. Artegiani**, A. Romeo, et al., "Roadmap on energy harvesting materials", JPhys Materials, Volume 6 (2023), 10.1088/2515-7639/acc550
- 2) N. Torabi, **E. Artegiani**, A. Gasparotto, F. Piccinelli, M. Meneghini, G. Meneghesso, A. Romeo, "Analysis of CdSe as an alternative buffer layer for Sb<sub>2</sub>Se<sub>3</sub> solar cells", Solar Energy, Volume 264 (2023), 10.1016/j.solener.2023.111990
- 3) **E. Artegiani**, A. Gasparotto, M. Meneghini, G. Meneghesso, A. Romeo, "How the selenium distribution in CdTe affects the carrier properties of CdSeTe/CdTe solar cells", Solar Energy, Volume 260 (2023), 10.1016/j.solener.2023.05.058

- 4) P. Punathil, **E. Artegiani**, S. Zanetti, L. Lozzi, V. Kumar and A. Romeo, A simple method for Ge incorporation to enhance performance of low temperature and non-vacuum based CZTSSe solar cells”, Solar Energy, Volume 236 (2022), 10.1016/j.solener.2022.03.027
- 5) V. Kumar, **E. Artegiani**, P. Punathil, M. Bertoncello, M. Meneghini, F. Piccinelli, A. Romeo, “Analysis of Se Co-evaporation and Post-selenization for Sb<sub>2</sub>Se<sub>3</sub>-Based Solar Cells”, ACS Applied Energy Materials, Volume 4 (2021). 10.1021/acsaem.1c02301
- 6) **E. Artegiani**, P. Punathil, V. Kumar, M. Bertoncello, M. Meneghini, A. Gasparotto and A. Romeo, “Effects of CdTe selenization on the electrical properties of the absorber for the fabrication of CdSe<sub>x</sub>Te<sub>1-x</sub>/CdTe based solar cells”, Solar Energy, Volume 227, October 2021, 10.1016/j.solener.2021.08.
- 7) P. Punathil, S. Zanetti, **E. Artegiani**, V. Kumar and A. Romeo, “Analysis of the drying process for precursors of Cu<sub>2</sub>ZnSn(S,Se)<sub>4</sub> layers by low cost non vacuum fabrication technique”, Solar Energy, Volume 224, August 2021, 10.1016/j.solener.2021.06.063
- 8) M. Barbato, **E. Artegiani**, M. Bertoncello, M. Meneghini, N. Trivellin, E. Mantoan, A. Romeo, G. Mura, L. Ortolani, E. Zanoni, “CdTe solar cells: technology, operation and reliability”, Journal of Physics D: Applied Physics, May 2021. 10.1088/1361-6463/ac04e3.
- 9) **E. Artegiani**, A. Gasparotto, P. Punathil, V. Kumar, M. Barbato, M. Meneghini, G. Meneghesso, F. Piccinelli, A. Romeo, “A new method for CdSe<sub>x</sub>Te<sub>1-x</sub> band grading for high efficiency thin-absorber CdTe solar cells”, Solar Energy Materials and Solar Cells, Volume 226, July 2021. 10.1016/j.solmat.2021.111081.
- 10) A. Romeo, **E. Artegiani**, “CdTe-based thin film solar cells: past, present and future”, Energies, Volume 14, Issue 6, March 2021. 10.3390/en14061684
- 11) J. Gasser, M. Fohn, A. Galli, **E. Artegiani**, A. Romeo, P. Wurz, “Cadmium telluride as a potential conversion surface”, Journal of Applied Physics, Volume 129, January 2021. 10.1063/5.0033701
- 12) M. Bertoncello, F. Casulli, M. Barbato, **E. Artegiani**, A. Romeo, N. Trivellin, E. Zanoni, M. Meneghini, G. Meneghesso, “Influence of CdTe solar cell properties on stability at high temperatures”, Microelectronics Reliability (2020), 10.1016/j.microrel.2020.113847.
- 13) J. Ramanujam, D. Bishop, T. Todorov, O. Gunawan, J. Rath, R. Nekovei, **E. Artegiani**, A. Romeo, “Flexible CIGS, CdTe and a-Si:H based thin film solar cells: A review”, Progress in Materials Science. 10.1016/j.pmatsci.2019.100619
- 14) **E. Artegiani**, J. D. Major, H. Shiel, V. Dhanak, C. Ferrari, A. Romeo, “How the amount of copper influences the formation and stability of defects in CdTe solar cells”, Solar Energy Materials and Solar Cells, Volume 204, January 2020. 10.1016/j.solmat.2019.110228
- 15) M. Bertoncello, M. Barbato, M. Meneghini, **E. Artegiani**, A. Romeo, G. Meneghesso, “Reliability investigation on CdTe solar cells submitted to short-term thermal Stress”, Microelectronics Reliability (2019), 10.1016/j.microrel.2019.113490

- 16) V. Kumar, **E. Artegiani**, A. Kumar, G. Mariotto, F. Piccinelli, A. Romeo, “Effects of post-deposition annealing and copper inclusion in superstrate Sb<sub>2</sub>Se<sub>3</sub> based solar cells by thermal evaporation”, *Solar Energy* 193 (2019), 452-457, 10.1016/j.solener.2019.09.069
- 17) **E. Artegiani**, D. Menossi, H. Shiel, V. Dhanak, J. D. Major, A. Gasparotto, K. Sun, A. Romeo. “Analysis of a novel CuCl<sub>2</sub> back contact process for improved stability in CdTe solar cells”. *Progress in Photovoltaics* (2019), 10.1002/pip.3148
- 18) **E. Artegiani**, M. Leoncini, M. Barbato, M. Meneghini, G. Meneghesso, M. Cavallini, A. Romeo, “Analysis of magnesium zinc oxide for high efficiency CdTe devices”, *Thin Solid Films* 672 (2019), pages 22-25. 10.1016/j.tsf.2019.01.004.
- 19) M. Leoncini, **E. Artegiani**, I. Lozzi, M. Barbato, M. Meneghini, G. Meneghesso, M. Cavallini, A. Romeo, “Difluorochloromethane treated thin CdS buffer layers for improved CdTe solar cells.”, *Thin Solid Films* 672 (2019), pages 7-13. 10.1016/j.tsf.2019.01.003.
- 20) A. Romeo, **E. Artegiani**, D. Menossi, “Low substrate temperature CdTe solar cells: A review” *Solar Energy* 175 (2018), 9-15. 10.1016/j.solener.2018.02.038.
- 21) **E. Artegiani**, D. Menossi, A. Salavei, S. Di Mare, A. Romeo, “Analysis of the influence on the performance degradation of CdTe solar cells by the front contact”, *Thin Solid Films*, Volume 633, 1 July 2017, Pages 101-105. 10.1016/j.tsf.2016.09.052.
- 22) D. Menossi, **E. Artegiani**, A. Salavei, S. Di Mare, A. Romeo, “Study of MgCl<sub>2</sub> activation treatment on the defects of CdTe solar cells by capacitance-voltage, drive level capacitance profiling and admittance spectroscopy techniques” *Thin Solid Films*, Volume 633, 1 July 2017, Pages 97-100. 10.1016/j.tsf.2016.10.008.
- 23) I. Rimmaudo, A. Salavei, **E. Artegiani**, D. Menossi, M. Giarola, G. Mariotto, A. Gasparotto, A. Romeo, “Improved stability of CdTe solar cells by absorber surface etching”, *Solar Energy Materials and Solar Cells*, Volume 162, 1 April 2017, Pages 127-133. 10.1016/j.solmat.2016.12.044
- 24) S. Di Mare, D. Menossi, A. Salavei, **E. Artegiani**, F. Piccinelli, A. Kumar, G. Mariotto, A. Romeo, “SnS Thin Film Solar Cells: Perspectives and Limitations”, *Coatings* 2017, 7, 34; doi:10.3390/coatings7020034
- 25) A. Salavei, D. Menossi, F. Piccinelli, A. Kumar, G. Mariotto, M. Barbato, M. Meneghini, G. Meneghesso, S. Di Mare, **E. Artegiani**, A. Romeo, “Comparison of high efficiency flexible CdTe solar cells on different substrates at low temperature deposition”, *Solar Energy*, Volume 139, 1 December 2016, Pages 13-18. 10.1016/j.solener.2016.09.004.

#### Conference proceedings:

- 1) F. Bittau, **E. Artegiani**, A. Abbas, D. Menossi, A. Romeo, J. W. Bowers, J. M. Walls, “Magnesium-doped Zinc Oxide as a High Resistance Transparent Layer for thin film CdS/CdTe solar cells”, *Conference Record of the IEEE Photovoltaic Specialists Conference* Volume 2017, pages 752-756. 10.1109/PVSC.2017.8366785
- 2) D. Menossi, **E. Artegiani**, I. Rimmaudo, A. Le Donne, S. Binetti, J. L. Pena, F. Piccinelli, A. Romeo, “Comparison of MgCl<sub>2</sub> and CdCl<sub>2</sub> activation treatment for CdTe solar cells:

Recrystallization and Defects”, Conference Record of the IEEE Photovoltaic Specialists Conference Volume 2017.

- 3) D. Menossi, S. Di Mare, I. Rimmaudo, **E. Artegiani**, G. Tedeschi, J. L. Pena, F. Piccinelli, A. Salavei, A. Romeo, “SnS by Ionized Jet Deposition for photovoltaic applications”, Conference Record of the IEEE Photovoltaic Specialists Conference Volume 2017. 10.1109/PVSC.2017.8366041
- 4) A. Salavei, G. Tedeschi, D. Menossi, S. Di Mare, F. Piccinelli, **E. Artegiani**, A. Romeo, “CdTe thin film solar cells by pulsed electron deposition”, Conference Record of the IEEE Photovoltaic Specialists Conference Volume 2016-November, Pages 498-501. 10.1109/PVSC.2016.7749644
- 5) S. Di Mare, A. Salavei, D. Menossi, F. Piccinelli, P. Bernardi, **E. Artegiani**, A. Kumar, G. Mariotto, A. Romeo, “A study of SnS recrystallization by post deposition treatment”, Conference Record of the IEEE Photovoltaic Specialists Conference Volume 2016-November, Pages 431-434. 10.1109/PVSC.2016.7749627
- 6) **E. Artegiani**, P. Punathil, S. Zanetti, N. Torabi, A. Romeo, “Study of CdSeTe/CdTe devices fabricated by thermal evaporation”, 8<sup>th</sup> World Conference on Photovoltaic Energy Conversion. 10.4229/WCPEC-82022-2DO.6.5
- 7) N. Torabi, S. Zanetti, **E. Artegiani**, F. Piccinelli, P. Punathil, A. Romeo, “Comparison of CdS and CdSe buffer layers for antimony selenide (Sb<sub>2</sub>Se<sub>3</sub>) solar cells by vacuum evaporation”, 8<sup>th</sup> World Conference on Photovoltaic Energy Conversion. 10.4229/WCPEC-82022-2BV.2.14
- 8) P. Punathil, S. Zanetti, **E. Artegiani**, N. Torabi, A. Romeo, “Analysis of selenization temperature for performance improvement of spin coated CZTSSe solar cells”. 8<sup>th</sup> World Conference on Photovoltaic Energy Conversion. 10.4229/WCPEC-82022-2AV.2.17
- 9) **E. Artegiani**, V. Kumar, P. Punathil, S. Zanetti, M. Bertoncello, M. Meneghini, A. Romeo, “Study of SnO<sub>2</sub>/CdSexTe1-x/CdTe solar cells fabricated by selenium treatment of the absorber layer”, 38th European Photovoltaic Solar Energy Conference and Exhibition. 10.4229/EUPVSEC20212021-3BO.8.5
- 10) V. Kumar, **E. Artegiani**, P. Punathil, A. Romeo, “Low temperature co-selenised antimony selenide (Sb<sub>2</sub>Se<sub>3</sub>) based solar cells by vacuum evaporation”, 38th European Photovoltaic Solar Energy Conference and Exhibition. 10.4229/EUPVSEC20212021-1BV.3.28
- 11) P. Punathil, S. Zanetti, **E. Artegiani**, V. Kumar, A. Romeo, “Analysis of environmentally friendly and low cost non vacuum process for Cu<sub>2</sub>ZnSn(S,Se)<sub>4</sub> solar cells.” 38th European Photovoltaic Solar Energy Conference and Exhibition. 10.4229/EUPVSEC20212021-3BV.2.5
- 12) **E. Artegiani**, P. Punathil, V. Kumar, A. Romeo, “Achievement of graded band gap in CdTe solar cells through selenization of the absorber”, 37th European Photovoltaic Solar Energy Conference and Exhibition. 10.4229/EUPVSEC20202020-3BV.2.2



- 13) V. Kumar, **E. Artegiani**, P. Punathil, A. Romeo, “Analysis of selenization process for antimony selenide solar cells by vacuum evaporation”, 37th European Photovoltaic Solar Energy Conference and Exhibition. 10.4229/EUPVSEC20202020-1BV.4.26
- 14) P. Punathil, S. Zanetti, **E. Artegiani**, V. Kumar, A. Romeo, “Annealing temperature and post sulphurization/selenization effects on solution-based CZTS devices”, 37th European Photovoltaic Solar Energy Conference and Exhibition. 10.4229/EUPVSEC20202020-3BV.2.3
- 15) V. Kumar, **E. Artegiani**, A. Romeo, “Antimony Selenide Based Solar Cells by Vacuum Evaporation” 36th European Photovoltaic Solar Energy Conference and Exhibition. 10.4229/EUPVSEC20192019-1BV.3.36
- 16) **E. Artegiani**, V. Kumar, A. Romeo, “Influence of Copper Thickness on the Defects Formation in CdTe Solar Cells”. 36th European Photovoltaic Solar Energy Conference and Exhibition. 10.4229/EUPVSEC20192019-3BV.1.21
- 17) **E. Artegiani**, D. Menossi, M. Barbato, M. Meneghini, G. Meneghesso, M. Leoncini, M. Cavallini and A. Romeo, “Introduction of copper by wet deposition in CdTe solar cells”, 35th European Photovoltaic Solar Energy Conference and Exhibition. 10.4229/35thEUPVSEC20182018-3CO.8.2.
- 18) M. Leoncini, **E. Artegiani**, M. Barbato, M. Meneghini, G. Meneghesso, M. Cavallini and A. Romeo, “Efficiency improvement of cdTe solar cells with ultra-thin CdS layer”, 35th European Photovoltaic Solar Energy Conference and Exhibition. 10.4229/35thEUPVSEC20182018-3BV.2.25
- 19) T. M. Razykov, A. Bosio, B. Ergashev, K. M. Kouchkarov, A. A. Mavlonov, A. Romeo, **E. Artegiani**, N. Romeo, R. Yuldoshev, “Growth and characterization of  $(\text{ZnSe})_{0.1}(\text{SnSe})_{0.9}$  films for use in thin film solar cells”, 35th European Photovoltaic Solar Energy Conference and Exhibition. 10.4229/35thEUPVSEC20182018-1CV.4.43
- 20) **E. Artegiani**, D. Menossi, C. Ferrari, A. Romeo, “Effects of Ultra-Thin Copper Layer on the Performance and Stability of CdTe/CdS Solar Cells”, 34th European Photovoltaic Solar Energy Conference and Exhibition. 10.4229/EUPVSEC20172017-3AO.7.4
- 21) D. Menossi, **E. Artegiani**, F. Bittau, M. Barbato, M. Meneghini, G. Meneghesso, J.W. Bowers, J.M. Walls, F. Piccinelli, A. Romeo, “High Efficiency CdTe Solar Cells by Low Temperature Deposition with MgZnO HRT Layer”, 34th European Photovoltaic Solar Energy Conference and Exhibition. 10.4229/EUPVSEC20172017-3BO.9.5
- 22) D. Menossi, S. Di Mare, **E. Artegiani**, G. Tedeschi, F. Piccinelli, A. Romeo, “SnS/CdS Thin Film Solar Cells by Ionized Jet Deposition”, 34th European Photovoltaic Solar Energy Conference and Exhibition. 10.4229/EUPVSEC20172017-3DV.2.118
- 23) T. M. Razykov, **E. Artegiani**, G. S. Boltaev, A. Bosio, B. Ergashev, K. M. Kouchkarov, N. K. Mamarsulov, A. A. Mavlonov, A. Romeo, N. Romeo, R. Yuldoshev. “Novel  $\text{Zn}_x\text{Sn}_{1-x}\text{Se}$  Absorber for Use in Thin-Film Solar Cells”, 34th European Photovoltaic Solar Energy Conference and Exhibition. 10.4229/EUPVSEC20172017-1CV.3.68

- 24) S. Di Mare, A. Salavei, D. Menossi, F. Piccinelli, **E. Artegiani**, A. Kumar, G. Mariotto, P. Bernardi, A. Romeo, "Effects of Temperature and Post Deposition Annealing on SnS Polycrystalline Thin Film Growth", 32nd European Photovoltaic Solar Energy Conference and Exhibition. 10.4229/EUPVSEC20162016-1BV.6.40
  
- 25) **E. Artegiani**, D. Menossi, S. Di Mare, A. Salavei, A. Kumar, G. Mariotto, A. Romeo, "Study of MoO<sub>x</sub> Back Contact for Low Temperature CdTe Solar Cells on Superstrate Configuration", 32nd European Photovoltaic Solar Energy Conference and Exhibition. 10.4229/EUPVSEC20162016-3CV.4.30
  
- 26) **E. Artegiani**, A. Salavei, I. Rimmaudo, D. Menossi, A. Bosio, N. Romeo, A. Romeo, "Influence of Transparent Conductive Oxide on the Degradation of CdTe Solar Cell Performance", 31st European Photovoltaic Solar Energy Conference and Exhibition. 10.4229/EUPVSEC20152015-3BO.7.6
  
- 27) A. Salavei, **E. Artegiani**, F. Piccinelli, S. Di Mare, D. Menossi, A. Bosio, N. Romeo, A. Romeo, "Flexible CdTe Solar Cells on Polyimide and Flexible Glass Substrates", 31st European Photovoltaic Solar Energy Conference and Exhibition. 10.4229/EUPVSEC20152015-3DV.3.24

#### GUEST EDITOR ACTIVITY

- Guest Editor of Special Issue "Advances on Solar Energy Materials and Solar Cells", for the journal Energies by MDPI (I. F. 3.2). From 01/2023 to now.  
[https://www.mdpi.com/journal/energies/special\\_issues/39000NO486](https://www.mdpi.com/journal/energies/special_issues/39000NO486)

#### REFeree ACTIVITY:

- Solar Energy, Elsevier.
- Thin Solid Films, Elsevier.
- Materials Science in Semiconductor Processing, Elsevier.
- ACS Applied Energy Materials, ACS publications.
- Optical Materials, Elsevier.
- Journal of Alloys and Compounds, Elsevier.
- Indian Journal of Physics, Springer.
- Materials Advances, Royal Society Of Chemistry.
- Current Opinion in Green and Sustainable Chemistry, Elsevier.

#### AUTHOR METRICS:

Overall H-index: 14  
 Number of citations: 763  
 Documents by author: 30  
 (Source: Scopus)

Overall H-index: 15  
 Number of citations: 1005  
 (Source: Google scholar)

Tutto quanto dichiarato corrisponde a verità e le dichiarazioni rese nel curriculum sono rilasciate ai sensi degli articoli 46 e 47 del D.P.R. 445/2000.

Verona, 23/01/2024

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