

# Curriculum Vitae

## *Personal Details*

**Name** Andrei Ionut MARDARE  
**Birth date/place** 24.12.1976, Birlad, Romania  
**Address** Erlenweg 10, 4040, Linz, Austria  
**Contact** Tel.: mobile: +4366473683272  
Tel.: office: +4373224688702  
e-mail: andrei.mardare@jku.at



## *Academic Qualifications*

- **2016:** *Habilitation* (Venia Docendi) in Inorganic Chemistry Technology, with the treatise "Scanning Droplet Cell Microscopy: A new microelectrochemical tool for thin film combinatorial libraries screening".  
Faculty of Natural Sciences, Johannes Kepler University Linz, Linz, Austria
- **2009:** *PhD in Physics* (Dr. rer. nat., *Summa cum laude*) conferred for the scientific activity accomplished as part of the International Max-Planck Research School for Surface and Interface Engineering in Advanced Materials (IMPRS-SurMat) with the dissertation "High throughput growth, modification and characterization of thin anodic oxides on valve metals".  
Max-Planck Institut für Eisenforschung, Düsseldorf, Germany  
Faculty of Physics and Astronomy, Ruhr-Universität Bochum, Germany
- **2001:** *MSc. in Physics* "Optotechnics, Non-conventional Technologies with Plasma and Lasers" with the dissertation "Study on dynamical instabilities. Chaos in lasers".  
Faculty of Physics, University of Bucharest, Bucharest, Romania
- **2000:** *Engineer in Physics*, section Technological Physics with the graduation thesis "Optical transmission by modulation of a laser beam".  
Faculty of Physics, University of Bucharest, Bucharest, Romania

## *Career History*

- **10. 2016 – present:** *Associate University Professor*  
Institute of Chemical Technology of Inorganic Materials  
Johannes Kepler University, Linz, Austria
- **10. 2011 – 10.2016:** *Assistant Professor (habilitation track)*  
Institute for Chemical Technology of Inorganic Materials

Johannes Kepler University, Linz, Austria

- **10. 2009 – 10. 2011:** *Senior researcher*  
Institute for Chemical Technology of Inorganic Materials  
Johannes Kepler University, Linz, Austria
- **07. 2009 – 09. 2009:** *Post-doctoral fellow*  
Max-Planck Institut für Eisenforschung, Düsseldorf, Germany
- **06. 2006 – 06. 2009:** *PhD fellow*  
International Max-Planck Research School for Surface and Interface Engineering in  
Advanced Materials (IMPRS-SurMat)  
Max-Planck Institut für Eisenforschung, Düsseldorf, Germany
- **10. 2001 – 01. 2006:** *Young researcher*, in the frame of the European Project “Optical  
devices using photosensitivity for their elaboration” (ODUPE)  
Institute for Computers and System Engineering (INESC), Porto, Portugal
- **10. 2000 – 09. 2001:** *Research Assistant* (part-time student job)  
National Institute for Laser Physics, Plasma and Radiation  
Lasers section, Magurele, Bucharest, Romania
- **10. 1999 – 03. 2000:** *Research Assistant* (part-time student job)  
National Institute for Laser Physics, Plasma and Radiation  
Quantum Electronics of Solid State section, Magurele, Bucharest, Romania

### ***Memberships, honors and awards***

- **2001 – 2006:** *Fellowship* award as Young Researcher within the European Project  
“Optical devices using photosensitivity for their elaboration”
- **2006 – 2009:** *Fellowship* of the International Max-Planck Research School for Surface  
and Interface Engineering in Advanced Materials
- **2009:** *Summa cum laude* for the Dr. rer. nat. title conferred by the Faculty of Physics  
and Astronomy, Ruhr-Universität Bochum, Germany
- **2010:** one of the 500 worldwide elected young scientists for attending the *60<sup>th</sup> Nobel  
Laureate Meeting* in Lindau, Germany (27<sup>th</sup> June - 2<sup>nd</sup> July)
- **2017:** Cardinal Innitzer Promotion Preis (Kardinal-Innitzer-Förderungspreise) for  
Habilitation in Natural Sciences
- **2009 – present:** active member of *International Society of Electrochemistry*
- **2014 – 2019:** active member of *Erwin Schrödinger Society for Nanosciences*
- **2024 -** member of the Electrochemical Society

- **2025** – *Francis and Taylor interview*: Meet the author Andrei Ionut Mardare  
<https://think.taylorandfrancis.com/meet-the-author-andrei-mardare/>

### ***Grants and scientific projects***

- 2017 - "Electromigration in Al-based thin film alloys - ELMIGAL": strategic project within COMET Center (K1) at Competence center for Electrochemical Surface Technology (CEST), project partly financing a PhD work- 135 k€
- 2019 – “Combinatorial memristive materials for sensor applications (CoMeM)”: Austrian Science Fund (FWF) project financing one PhD work - 235 k€
- 2023 – “Combinatorial study of composite memristors with intrinsic defect control for artificial synapses”: mobility grant PN-IV-P2-2.2-MCD-2023-0024, Romanian Ministry of science and education – 2 k€
- 2024 – “Composite anodic memristors: combinatorial studies for defect engineering”: mobility grant PN-IV-P2-2.2-MCD-2024-0298, Romanian Ministry of science and education – 2 k€
- 2024 – “Combinatorial screening for memristive sensing” (COMSENS): Linz Institute of Technology and Upper Austria project financing one PhD work - 150 k€
- 2025 – “High performance memristors by Ag<sup>+</sup> metallization of oxide thin films for memory and neuromorphic devices”: bilateral Austria-India project financing cooperation between Johannes Kepler University Linz and Banaras Hindu University Varanasi – 15 k€

### ***Other events***

- 2024 – board member of WP4 “Good health and well-being” within EC2U – European Campus of City-Universities network
- 2024 – co-chair of 15<sup>th</sup> International Workshop on Engineering of Functional Interfaces (EnFI 2024), Linz 29-30 August
- 2025 – organizer of “Microscopy” workshop with pupils (12-13 years old) from Europagymnasium Linz, Johannes Kepler University Linz, 23 April

### ***Peer-reviewed papers***

116 web of science papers, h-factor 21, total citation number 1355 (928)

topics: thin film technology, material science, surface science, electrochemistry

**selected reviewer for:** Advanced Electronic Materials, Advanced Materials Interfaces Analytica Chimica Acta, Applied Physics A, Applied Physics Letters, Applied Surface Science, Batteries and Supercaps, Corrosion Science, Electroanalysis, Electrochemistry Communications, Electrochimica Acta, Inorganic chemistry, Journal of Solid State Electrochemistry, Journal of Electrochemical Society, Materials and Corrosion, Materials Chemistry and Physics, Materials, Micromachines, Nanomaterials, Nanoscale, Physica Status Solidi, RSC Advances, Surface and Coatings Technology, Thin Solid Films

***Supervisions – PhD thesis***

- 2017-2020: “Binary and ternary alloys in the Al-Cu-Ga system for improved electromigration resistance”, Saedeeh Ravandi
- 2020-2023: “Combinatorial anodic memristors on valve metals”, Ivana Zrinski
- 2023-2024: “Electrochemical surface and interface tuning of Ti group oxide films”, Dominik Knapic
- 2024-ongoing: “Combinatorial memristive materials for sensor applications”, Elena Atanasova

***Languages:***

Romanian: mother tongue

English: advanced level skills in speaking, reading and writing

German: intermediate level skills in speaking, reading and writing

Portuguese: intermediate level skills in speaking, reading and writing

French: intermediate level skills in comprehension and reading

Reasonable understanding of Spanish and Italian