

Curriculum vitae

PERSONAL INFORMATION

Family name, First name: **Stamate Eugen**, Date of birth: **11-09-1967**

ORCID: **0000-0002-9649-2438**

ResearcherID: **K-5731-2012**



EDUCATION

- 2001 Doctor of Engineering, Nagoya Institute of Technology, Nagoya, Japan.
- 1998 PhD in Physics (thesis PhD), “Al. I. Cuza” University Iasi, Romania.
- 1986 – 1991 Bachelor (4 years) and Master of Science (1 year), Faculty of Physics, “Al. I. Cuza” University, Iasi, Romania.
- Additional education* Executive education, Harvard Business School, *From Project to Competitive advantage - “Pasteur Program 2017”* (supported by Innovation Fund Denmark).

CURRENT POSITION

2019 – Senior Researcher, Group Leader (Plasma Aided Nanotechnology), National Centre for Nano Fabrication and Characterization (DTU Nanolab), Technical University of Denmark (DTU).

PREVIOUS POSITIONS

- 2006 – 2019 Senior Scientist, Risø National Laboratory (2006), Risø National Laboratory for Sustainable Energy (2007-2012), DTU Energy (2012-2019).
- 2003 – 2006 Associate Professor, “Plasma-Nano” Centre of Excellence, Department of Electrical Engineering and Computer Science, Nagoya University, Nagoya Japan.
- 2001 – 2003 Research fellow, The Japanese Society for the Promotion of Science (JSPS), Department of Electrical Engineering and Computer Science, Nagoya University, Nagoya, Japan.
- 1999 – 2001 Lecturer, Venture Business Laboratory, Nagoya Institute of Technology, Nagoya, Japan.
- 1996 – 1999 Research (1996) and PhD student (1997-1998), Department of Systems Engineering, Nagoya Institute of Technology, Nagoya, Japan.
- 1991 – 1995 Research and teaching assistant in parallel with PhD preparation, Faculty of Physics, “Al. I. Cuza” University, Iasi, Romania (No PhD student system available in Romania until 2000).

SCIENTIFIC PROFILE

Functional materials and nanostructures; Thin film deposition; Ion induced surface modifications; Solid electrolytes for batteries and fuel cells; Transparent conductive oxides; Thin film solar cells; Plasma for environmental applications; Dry/plasma etching; Plasma diagnostics, Ion kinetic simulation; **Key Findings:** Discoverer of modal and discrete focusing effects by three-dimensional plasma-sheath-lenses; Pioneering work on production and diagnostics of negative ions.

PUBLICATION RECORD

Author and co-author of 64 journal papers (28 as first author, 8 as corresponding author and 21 as senior author), 3 book chapters, 4 granted patents (3 Japan, 1 USA), 3 patent applications. **Web of Science:** over 890 citations and H-index 17, **Google scholar:** over 1250 citations and H-index 19. More than 80 peer-reviewed contributions at international conferences (more than 35 in the last 10 years). **Publications in journals with IF above 4:** Nature Energy (IF: 46, x1), Nano Lett. (IF: 11.2, x1), Phys. Rev. Lett. (IF: 8.4, x1), ACS Applied Materials and Interfaces (IF: 8.3, x1), J. Power Sources (IF: 8.2, x2), Energy Convers. Manage. (IF: 8.2, x1), Sol. Energy Mater. Sol Cells (IF: 7, x4), Fuel (IF: 5.8, x2), Int. J. Hydrogen Energy (IF: 4.9, x1), ACS Appl. Energy Mat. (IF: 4.5, x2), Nanomaterials (IF 4.3, x1), Scientific Reports (IF 4, x2).

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

1999 – 2020 3 Master Students (Japan), 5 PhD students (2 Japan, 3 Denmark), 6 Postdocs (1 Japan, 5 Denmark).

MAJOR PROJECTS

- Durable, transparent and low emissivity coatings on large-area glass substrates based on aluminum doped zinc oxide, Project leader, PI, Innovation Fund Denmark, 1.33 mil euro, 2017-2020.
- Plasma Technologies for environment protection, PlasTEP, work package leader, co-PI, work package budget 1.5-mil euro (2010-2014)
- PSO Project 2006-1-6365, NO_x reduction by low temperature plasma oxidation, project coordinator, PI, 1 mil euro, (2007-2009).

FELLOWSHIPS AND AWARDS

- 2012 “*Plasma Physics Innovation Prize 2012*” awarded by the European Physical Society, Plasma Physics Division, for the discovery of modal and discrete focusing effects.
- 2007 Marie Skłodowska-Curie International Re-Integration Grant.
- 2001 – 2003 Research fellow of the Japan Society for the Promotion of Science (JSPS).
- 1996 – 1998 Research and PhD student scholarship, Japanese Ministry of Education (Monbusho), Japan.

COMMISSIONS OF TRUST

- Vice-president of the National Commission of Ethics in Research, Development and Innovation, Romania, Ministry of Education, Romania (since 2020).
- Grant applications evaluator: H2020, EU; National Research Agency, France; National Science Foundation, USA; Austrian Science Fund, Austria; Leibniz Association, Germany; UEFISCDI, Romania.
- Habilitation and PhD evaluator: Grenoble-Alpes University, Linköping University, Aarhus University.

TEACHING

- 2015 – 2019 Graduate course: *Advanced plasma processes for tailoring materials and nanostructures*, Technical University of Denmark
- 2020 – Graduate course: *Semiconductor technology*, Technical University of Denmark

COLLABORATION WITH INDUSTRIAL PARTNERS

VELUX, Denmark (Low-emissivity coatings), Polyteknik, Denmark (transparent conductive oxides, sputtering), Lesni and Dong Energy, Denmark (NO_x reduction), Kyocera, Japan and Tantec, Denmark (dielectric barrier discharges), Applied Materials USA (electrolytes for all-solid-state batteries).

ORGANISATION OF SCIENTIFIC MEETINGS (selection of main conferences)

- Chair (2015 – 2017) and member (2011–2015) of the Int. Scientific Committee of Int. Conf. on Phenomena in Ionized Gases (ICPIG), one of the most prestigious conferences in plasma physics.
- Member of the Int. Scientific Committee of Europhysics Conf. on Atomic and Molecular Physics of Ionized Gases (ESCAMPIG) (since 2018 –).
- Member of the Int. Scientific Committee of Int. Conf. on Reactive Plasmas (ICRP) – since 2011.
- Advisory Committee Member of Int. Conf. on Plasma Surface Engineering (PSE) – since 2007.
- Member of Int. Organizing Committee of Int. Symposium on Dry Process (DPS) – since 2009.
- Member of the Int. Committee of Int. Conf. on Microelectronics and Plasma Technology (2010 – 2014); Member of the Organizing Committee of European Physical Society Conf. on Plasma Physics (2016)

EDITORIAL ACTIVITY

- Editorial board* **Plasma Physics Express**, Institute of Physics (IoP), since 2018 (IF not yet available)
- Review editor* **Frontiers in Physics** (2016 -), Frontiers Media, IF 2.64
- Reviewer board* **Nanomaterials** (2020 -), MDPI, IF 4.32
- Guest editor* **Thin Solid Films**, **Jpn. J. Appl. Phys.** and **Plasma Sources Sci. Technol.**

JOURNAL REVIEWER

More than 25 manuscripts per year, including *J. Power Sources* (IF 8.2), *Sol. Energy Sol. Mat.* (IF 7) and most journals covering plasma physics, thin films and functional materials for energy devices.