

## Curriculum vitae

### PERSONAL INFORMATION

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

Address: Ørsteds Plads 347, DTU Nanolab, Kgs. Lyngby-2800, Denmark ([eust@dtu.dk](mailto:eust@dtu.dk), +45 2521 7090)

**ORCID**: Eugen Stamate, 0000-0002-9649-2438.

**Google scholar**: Eugen STAMATE

### EDUCATION

2001 Doctor of Engineering, Nagoya Institute of Technology, Nagoya, Japan.

1998 PhD in Physics (thesis PhD), “Al. I. Cuza” University Iasi, Romania.

1986 – Bachelor (4 years) and Master of Science (1 year), Faculty of Physics, “Al. I. Cuza”  
1991 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, DTU Energy (2012-2019), Risø National Laboratory for Sustainable Energy (2007-2012), Risø National Laboratory (2006),

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 assistant/assistant professor, Faculty of Physics, “Al. I. Cuza” University, Iasi, Romania

### 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; Energy conversion and storage. **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 82 scientific articles (38% as first author, 45% as corresponding author, 3 book chapters, 4 granted patents (3 Japan, 1 USA), 3 patent applications. **Web of Sci.**: > 1340 citations and H-Index 21, **Google scholar**: > 1820 citations and H-Index 25. Over 25 invited talks at international conferences. More than 80 peer-reviewed contributions at international conferences (more than 35 in the last 10 years). **21 publications (24% of total) in journals with impact factor (IF) above 6 (as 2022)**: Nature Energy (IF. 67.4,

x1), Small (IF 15x1), Nano Lett. (IF: 12.2, x1), Phys. Rev. Lett. (IF: 9.2, x1), ACS Applied Materials and Interfaces (IF: 10.4, x2), J. Power Sources (IF: 9.8, x2), Energy Convers. Manage. (IF: 11.5, x1), J. Mater. Chem. C (IF 8x1) Sol. Energy Mater. Sol Cells (IF: 7.3, x4), Fuel (IF: 8.0, x2), Int. J. Hydrogen Energy (IF: 7.1, x2), ACS Appl. Energy Mat. (IF: 6.9, x2).

### **SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS**

1999 – 2022 5 Master Students, 8 PhD students (2 Japan, 6 Denmark), 5 Postdocs (1 Japan, 4 Denmark).

### **MANAGEMENT EXPERIENCE (major projects)**

- Advanced micro- and nanofabrication of functional materials for internet of things devices based on 3D plasma processing, PI, Innovation Fund Denmark, 1.75 mil euro, 2023-2026.
- 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<sub>x</sub> 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).

### **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, Linkoping University, Aarhus University.

### **COLLABORATION WITH INDUSTRIAL PARTNERS**

VELUX, Denmark (Low-emissivity coatings), Polyteknik, Denmark (transparent conductive oxides, sputtering, metal oxides), PragmatIC Semiconductor Ltd. UK, (thin film transistors), Lesni and Dong Energy, Denmark (NO<sub>x</sub> 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 (since 2018 –).
- Member of the Int. Scientific Committee of Int. Conf. on Reactive Plasmas (ICRP) – since 2011. Vice-chair ICRP 2022.
- Advisory Committee Member of Int. Conf. on Plasma Surface Engineering (PSE) – since 2007.

### **EDITORIAL ACTIVITY**

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|-------------------------------|---|
| <i>Editorial board member</i> | <i>Scientific Reports (Nature group)</i> , IF 5.                              |
| <i>Review editor</i>          | <i>Frontiers in Physics</i> (2016 -), Frontiers Media, IF 2.64                |
| <i>Reviewer board</i>         | <i>Nanomaterials</i> (2020 -), MDPI, IF 5.7                                   |
| <i>Guest editor</i>           | <i>Thin Solid Films, Jpn. J. Appl. Phys. and Plasma Sources Sci. Technol.</i> |