Scientific Conference

Contributed abstracts from universities, institutes and especially from industry are welcome. Recent developments and progress in the listed areas can be presented at the conference.
Abstracts can be submitted for oral or poster presentations.

Program Specials

In addition to discussions with well-known colleagues from the field of surface technology, new applications will also be highlighted. Experts from new, evolving applications are invited to discuss challenges in surface technology on these hot topics.

Partner Country & PSE Awards

Participants from our Partner Country Czech Republic will have the possibility to present their profile in an outstanding way. For PSE Awards you can nominate outstanding persons from the field of plasma and ion surface engineering.

Conference Topics

1 Plasma and ion surface engineering
- 1.1 Plasma and ion source technologies
- 1.2 Plasma in liquids
- 1.3 Atmospheric plasmas
- 1.4 Particles and powders in plasmas
- 1.5 Plasmas in conversion technologies

2 Surface modification technologies
- 2.1 Plasma diffusion technologies
- 2.2 Plasma treatment, cleaning and etching
- 2.3 Physical vapor deposition – PVD
- 2.4 (Plasma-enhanced) Chemical vapor deposition – (PE)CVD
- 2.5 Other plasma-based surface processing technologies

3 Coating applications and properties
- 3.1 Protective and tribological coatings
- 3.2 Optical, electrical and magnetic coatings
- 3.3 Biomedical & biological applications
- 3.4 New energy concepts related coatings
- 3.5 Quantum technologies
- 3.6 Conversion processes related thin films

4 Characterization and simulation of films and processes
- 4.1 Simulation and modelling of growth, structure and properties
- 4.2 Simulation and modelling of plasma processes
- 4.3 Diagnostics of technological plasmas
- 4.4 Analytics of film structures & properties
- 4.5 Simulation of plasma-based process chains

Abstract Submission

Abstracts, allocated to one of the mentioned topics, should have a length of not more then 2000 characters. Please submit your abstract online at:
www.pse-conferences.net/pse2022.html

DEADLINE Abstract Submission: FEBRUARY 28th, 2022

Industrial Workshop

"Changes in Plasma Surface Engineering"

Tuesday, September 13, 2022

The Industrial Workshop focuses on Changes in Plasma Surface Engineering. Next to the drive to new applications for low CO_2 emission, new technologies like additive manufacturing have become available as well as new materials. Existing technologies like forming and moulding are also influenced. A number of examples of new applications of plasma surface engineering will be shown.

Organized and chaired by
Ton Hurkmans, Ionbond Netherlands b.v., Venlo, Netherlands

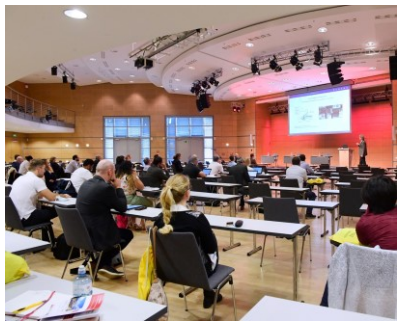
Trend Topic Workshop

„Plasma(-catalysis) in Gas Conversion Processes"

Monday, September 12, 2022

Global warming is by far the most important challenge that Humankind will have to face in the near future. In this context, energy-efficient plasma(-catalysis)-based gas conversion processes are very promising tools. These technologies are for example under advanced development to directly mitigate the anthropic emission of CO_2, they are also studied for the possibility they offer for energy efficient N_2 fixation (competing with the strongly CO_2-emitting Haber-Bosch process), and to allow for the production of green H_2 from hydrocarbon molecules.

Organized and chaired by
Rony Snyders,
University of Mons,
Mons, Belgium;
Ante Hecimovic,
Max-Planck-
Institut für Plasmaphysik,
München, Germany



Partner Country – Czech Republic

Researchers and people from industry coming from Czech Republic are particularly asked to send their contributions to PSE 2022. Czech partners will be presented in a special way at the conference website and in the exhibition.

Partner Country Workshop
"Plasma-Assisted Nanomaterials Engineering"
February 10 – 11, 2022 | Prague, Czech Republic

PSE Awards

At PSE 2022 outstanding researchers will be honored with the PSE Awards.
The **PSE Leading Scientist Award** is intended to highlight an approved researcher with pioneering contributions in science or technology of plasma and ion surface engineering.
Beside this, three young researchers will be honored with the **PSE Early Carrier Award** for their work and engagement in the field.
You are asked to nominate your favorite colleague.

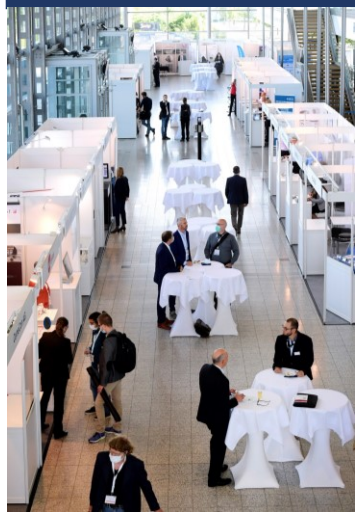
Awards:
PSE Leading Scientist Award
PSE Early Career Award

Nomination Procedure
www.pse-conferences.net

Nomination Deadline:
January 31, 2022

Further Events

Tutorials | September 12, 2022
Industrial Exhibition | September 13 – 14, 2022
Industrial Evening | September 13, 2022
Conference Dinner | September 14, 2022



Conference Fees

The registration fee includes conference attendance, delegate bag with all information about the conference, admission to the industry exhibition, voucher-based snacks, lunch and drinks as well as the Industrial evening.

Regular

Early bird registration (before July 1, 2022)	735 €
Standard registration	895 €
One-day registration	395 €

Students

Early bird registration (before July 1, 2022)	295 €
Standard registration	395 €

Registration will be possible online at the conference website

Location

Trade Fair Erfurt
Congress Center /
Entrance East
Gothaer Str. 34
99094 Erfurt
Germany

Management

European Society of Thin Films
Dresden, Germany
Tel. +49 351 871 8370
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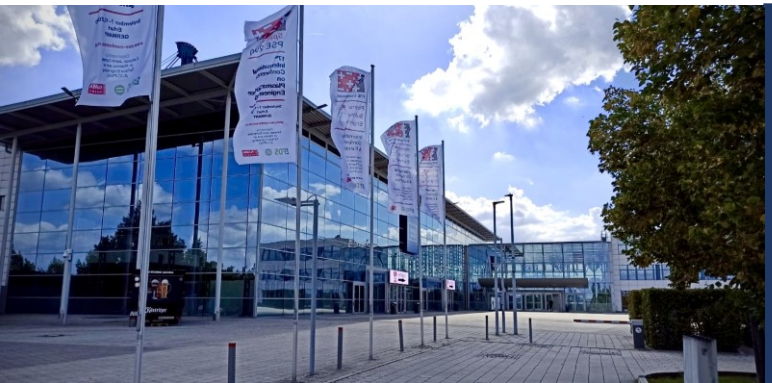
pse-conferences@efds.org

Organization

European Joint Committee on Plasma and Ion Surface Engineering (EJC/PISE)
Michael Thomas (Chairman), Fraunhofer-Institut für Schicht- und
Oberflächentechnik IST | Braunschweig, Germany
Phone: +49 531 2155-525 | Fax: +49 531 2155-900



Scope of the PSE Conference

With nearly 800 participants from all over the world in 2018 the PSE Conference is a well-established and leading forum in the field of plasma and ion surface engineering focusing on fundamentals and application in surface modification and thin film technologies.

Fundamentals and applications of plasma and ion beam techniques in surface engineering

PSE provides an opportunity to present recent progress in research and development, and moreover in industrial applications. Its topics span a wide range from fundamentals such as e.g. process modelling and simulation of plasmas or thin film physics, through experimental studies which establish the relationships between process parameters and the structural and functional properties of modified surfaces and/or thin films, towards the application in industrial production. With numerous industrial exhibitors and an exceptionally large fraction of participants from industry (46% in 2018), a special feature of PSE is the intimate and vivid interaction between those being involved in basic research and those who have to meet the rapidly increasing demands in industrial production.

PSE 2022 will be dedicated to "**Changes in Plasma Surface Engineering**". Presently there are numerous trend breaks in technology. Existing applications of e.g. hard and/or low friction coatings may reduce substantially in the next decade. Reduction of the CO_2 footprint has parallel triggered development in various directions, hydrogen production related with electrolyzers and fuel cells, battery technology related to increase the power density per mass unit, but also plasma conversion processes to produce e.g. high value hydrocarbons from CO_2. Additive manufacturing has reached a state, whereby special applications are considered requiring a dedicated surface treatment. Emphasis of the PSE2022 will be on technologies of which a growth potential is expected in the next decade.

Boards and Committees

Chairman
Jaroslav Vlcek,
Plzen, Czech Republic

Co-Chairmen
Ton Hurkmans,
Venlo, Netherlands
Wonho Choe,
Daejeon, South Korea

PSE 2022 is supported by
Local Organizing Committee
International Program Committee
International Scientific Committee
Advisory Board

Honorary Founding Chairman
K.-T. Rie†

PSE 2022

18th International Conference on Plasma Surface Engineering

PSE2022
September 12 – 15, 2022
Erfurt, Germany

Conference
Exhibition
Awards

EJC PLASMA GERMANY EFDS