



Union Internationale Pour La Science, La Technique et Les Applications du Vide  
 International Union for Vacuum Science, Technique and Applications  
 Internationale Union für Vakuum Forschung, Technik und Anwendung



JVC-19

19<sup>th</sup> Joint Vacuum Conference

On behalf of the Organizing Committee, it is our pleasure to announce that the 19<sup>th</sup> Joint Vacuum Conference (JVC-19) and the 30<sup>th</sup> Croatian Slovenian International Scientific Meeting on Vacuum Science and Technique will be held at the Hotel Le Meriden Lav in Podstrana near Split, Croatian biggest city on Adriatic coast, between 29th September and 04th October 2024.

Conference web page: <https://jvc19.org/>

It is our pleasure to announce the plenary speakers:

- Judith L. Driscoll**, University of Cambridge, United Kingdom  
*Challenges and Solutions of Oxides for Future AI Hardware*
- David N. Ruzic**, Illinois Plasma Institute, USA  
*Controlling the Energy and Species in PVD: HiPIMS with Cathode Reversal*
- María C. Asensio**, Materials Science Institute of Madrid, Spain  
*Discovery of advanced materials using artificial intelligence methods and advanced characterization techniques*
- Zoltán Kónya**, University of Szeged, Hungary  
*2D Boron Carbon Nitride structures: from synthesis to application*

#### Important deadlines:

- Registration: **September 6<sup>th</sup>**
- Abstract submission: **August 23<sup>rd</sup>**
- Abstract approval notification: **August 30<sup>th</sup>**

#### Conference fee (late)

Participant: 700 €  
 Student: 600 €  
 Accompanying person: 350 €

#### Social programme

- Welcome reception and welcome dinner
- Guided tour of Split old town with a focus on Diocletian's Palace (UNESCO World Heritage site)
- Conference dinner at konoba Rudine

#### Accommodation

Le Meriden Lav 5\*  
 Conference venue hotel  
<https://www.lameridienplit.eu/>

We look forward to seeing you  
 in Podstrana at JVC-19!

Sincerely,

Nikša Krstulović, chairman of JVC-19



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Dear Friends and Colleagues,

there are just a few days left for registration for the 100<sup>th</sup> IUVSTA workshop on “How sustainable are thin films and thin film processing? Pathways towards responsible surface engineering”, which will take place at the nestor Hotel in Ludwigsburg, Germany, from 27 – 31 October 2024.

The specific goal of the workshop is to nucleate and promote research and development on the implementation of the Sustainable Development Goals (SDGs) of the United Nations into surface engineering and thin film deposition, with a particular focus on the SDG 12 “Responsible Consumption and Production”. This IUVSTA workshop is supported by the German Vacuum Society (DVG) and with the scope of presumably 40 to 60 participants ideally suited to foster discussions and create awareness of the economical, societal and environmental impact of vacuum process technologies, materials and products. We are looking forward to an excellent program, covering resource optimization during plasma treatment and magnetron sputtering, semiconductor manufacturing, sustainability of low dimensional functional materials, tool coatings, nanosized metal hydrides for energy, machine-learning powered molecular dynamics, thermoelectrics, 3D printing, interface engineering and many topics more.

Let us rethink surface engineering!

#### Invited speakers:

**Anjana Devi** (Leibniz Institute for Solid State and Materials Research, Germany)

New scalable and sustainable routes to low dimensional functional materials: A chemist's perspective

**Arutjun Ehiasarian** (Sheffield Hallam University, United Kingdom)

Optimizing resources during plasma treatment through digital twins and the highly ionized environment of high power impulse magnetron sputtering

**Claudia Fleischmann** (imec Leuven, Belgium)

The ambivalent relationship between sustainability and semiconductor manufacturing - How to turn frenemies into friends



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**Mats Johansson-Jöesaar** (Seco Tools AB, Sweden)

Towards sustainable PVD tool coatings

**Jolanta-Ewa Klemberg-Sapieha** (Polytechnique Montréal, Canada)

Surface engineering and coating solutions for future-generation green aircraft

**Kristina Komander** (Uppsala University, Sweden)

Nanosized transition metal hydrides investigated with high energetic ion beams

**Nikola Koutná** (Linköping University, Sweden)

Crack initiation processes in ceramics via machine-learning-assisted molecular dynamics

**Khalid Mahmood** (Government College University Faisalabad, Pakistan)

Thermoelectric power generation potential of oxide thin films

**Henrik Pedersen** (Linköping University, Sweden)

Green CVD – Toward a sustainable philosophy for thin film deposition by chemical vapor deposition

**María Teresa Perez Prado** (IMDEA Materials Institute, Spain)

3D printing of metals for energy saving applications

**Oleksandr Pshyk** (EMPA, Coating Technologies, Switzerland)

Towards energy-efficient magnetron sputtering: replacing external heating by high-mass metal ion irradiation

**Barbara Putz** (EMPA, Mechanics of Materials, Switzerland)

Nanoscale microstructure and interface engineering for sustainable thin film solutions

**Jan-Eric Sundgren** (Göteborg, Sweden)

Advanced materials – a key for industrial competitiveness and for the green transition

**Yeliz Unutulmazsoy** (Leibniz Institute of Surface Engineering, Germany)

Understanding the impact of kinetic and potential ion energies on thin film structure: A path toward energy-efficient thin film deposition

More details about the workshop can be found on the website [www.iuvsta100.rwth-aachen.de](http://www.iuvsta100.rwth-aachen.de) including information regarding registration.

If you have questions regarding the workshop or need more information, please write an email to [iuvsta100@mch.rwth-aachen.de](mailto:iuvsta100@mch.rwth-aachen.de).

Best regards and see you in Ludwigsburg, Germany, in October!

The organizing committee

Grzegorz Greczynski (Linköping University, Sweden)

Marcus Hans (RWTH Aachen University, Germany)

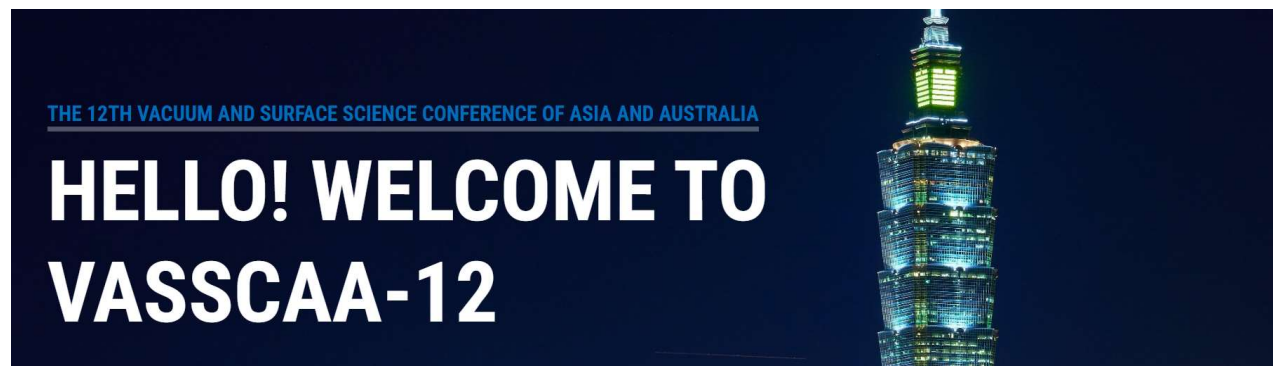
Christian Mitterer (Montanuniversität Leoben, Austria)

Claus Rebholz (University of Cyprus, Cyprus)

Sven Ulrich (Karlsruhe Institute of Technology, Germany)



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<https://www.taiwanvacuum.org/vasscaa-12/>

The 12<sup>th</sup> Vacuum and Surface Sciences Conference of Asia and Australia (VASSCAA-12) will be held from 14<sup>th</sup> to 17<sup>th</sup> of October 2024 in Taipei, Taiwan.

Collected papers presented in the conference will be published in the special issues of Applied Surface Science and Vacuum.

Topics covered by VASSCAA-12 are:

- Accelerator and Radiation Sciences and Technology
- Applied Surface Science
- Biosurfaces, interfaces, nanostructures
- Electronic Materials/Processing
- Magnetic surfaces, interfaces and nanostructures
- Nanometer-Scale Science & Technology
- Catalytic materials and processes
- Plasma Science & Techniques
- Surface Engineering
- Surface Science
- Thin Film
- Vacuum Science and Technology
- Renewable Energy Technologies.

**→ Abstract submission is extended to August 30th, 2024**



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Conference organized by AVS with several IUVSTA Member Societies

### Overview

The AVS Pacific Rim Symposium on Surfaces, Coatings and Interfaces (PacSurf 2024) will be held on the Big Island of Hawaii from December 8-12, 2024. This conference is being organized by AVS with a Steering Committee composed of representatives from **Australia, Canada, China, Japan, Mexico, New Zealand, the Philippines, South Korea, Taiwan, and the United States**. Symposium attendees will interact during morning and evening sessions, including plenary, invited, and contributed presentations. The main topics for PacSurf 2024 will be focused on the latest advances in **Biomaterial Surfaces and Interfaces, Nano and 2D Materials, Renewable Energy and Energy Storage, and Thin Films and Surface Modification**. We will have morning and evening technical sessions with the afternoons free for other activities and discussions.

The conference will be held in the Waikoloa Beach Marriott Resort and Spa on the Big Island of Hawaii. We are confident you will benefit by attending PacSurf 2024 and networking with the other attendees.

### Plenary Speaker

#### Yang Shao-Horn, MIT, USA

Yang Shao-Horn is JR East Professor of Engineering at Massachusetts Institute of Technology (M.I.T.). Her research programs are centered on exploiting chemical/materials physics and physical/materials chemistry principles to understand and design charge transfer, kinetics and dynamics at the solid-gas and solid-liquid interfaces, critical to enable the deployment of clean air and clean energy technologies.



Abstract Submission Deadline: August 9, 2024; <https://pacsurf2024.avs.org/>

General Chair: Dave Castner, University of Washington, USA

Program Chair: Greg Herman, Argonne National Laboratory, USA