



Tuesday, 29th June 2021

09:00-09:15

Opening Address:

Guido Grundmeier, *University of Paderborn, Germany*
 Fátima Montemor, *Instituto Superior Técnico, Portugal*
 Henrik Rudolph, *Defence Academy, The Netherlands*
 Yang Shen, *Tsinghua University, China*

09:15-10:45

Session 1 – Surface Science of Catalysis, Electrocatalysis and Photocatalysis

Session chair: Maria Dinescu, *National Institute for Laser Plasma and Radiation Physics, Magurele, Romania*

09:15-09:45 [INV.01]

First-principles data-driven machine learning for high functional catalyst design

Byungchan Han
Yonsei University, Republic of Korea

09:45-10:15 [INV.03]

How to effectively promote catalytic surfaces: the concept of tuning the electronic properties

Andrzej Kotarba
Jagiellonian University, Poland

10:15-10:45 [INV.05]

New insights into surface active sites in photocatalysis: Single-site and single-atom catalysts

Jennifer Strunk
University of Rostock, Germany

Session 2 – Biointerfaces

Session chair: *Monika Golda-Cepa, Jagiellonian University in Krako, Poland*

09:15-09:45 [INV.02]

The light way to polymer brushes

Han Zuilhof
Wageningen University, The Netherlands

09:45-10:15 [INV.04]

Control of cell and bacterial surface interactions with complex colloidal crystals

Peter Kingshott
Swinburne University of Technology, Australia

10:15-10:45 [INV.06]

Functionalization of zinc fine-tunes this resorbable material bioactivity for distinct biomedical applications

Marta M. Alves
Universidade de Lisboa, Portugal

10:45-11:15

Refreshment Break

11:15-12:15

Poster Session 1

12:15-12:45

Lunch Break

12:45-14:15

Session 3 – Electrochemistry and Corrosion

Session chair: *Jeff Terry, Illinois Institute of Technology, USA*

12:45-13:15 [INV.07]

Unassisted Solar Hydrogen Production by PV-electrolysis: Artificial Leaf System

Kijung Yong, *Pohang University of Science and Technology, Republic of Korea*

13:15-13:45 [INV.09]

Time resolved analysis of electrolyte/materials interfaces by means of Odd Random Phase Electrochemical Impedance Spectroscopy

Annick Hubin
Vrije Universiteit Brussel, Belgium

Session 4 – Advances in Surface and Interface Characterization

Session chair: *Matthew Linford, Brigham Young University, USA*

12:45-13:15 [INV.08]

Undressing the myth of apparent constant binding energy of the C 1s peak from adventitious carbon in x-ray photoelectron spectroscopy

Grzegorz Greczynski,
Linköping University, Sweden

13:15-13:45 [INV.10]

Probing surfaces at the atomic scale

Ulrike Diebold,
TU Wien, Austria

13:45-14:15 [INV.11]

Characterisation of chemically heterogeneous surfaces of Al alloys by 3D ToF-SIMS mapping

Jolanta Światowska

PSL Research University, France

13:45-14:15 [INV.12]

Growing and stabilizing metallic nanoparticles inside mesoporous oxide thin films

Paula C. Angelomé

National Atomic Energy Commission, Argentina

09:00-10:00	Poster Session 2	
10:00-10:30	Refreshment break	
10:30-12:00	<p>Session 5 – Energy storage Session chair: Debora Marani, <i>AddiFab, Denmark</i></p> <p>10:30-11:00 [INV.13] 2D materials for micro-electrochemical energy storage devices <u>Zhong-Shuai Wu</u> <i>Dalian Institute of Chemical Physics, China</i></p> <p>11:00-11:30 [INV.15] Advanced Sodium ion Batteries <u>Yan Yu</u> <i>University of Science and Technology of China, China</i></p> <p>11:30-12:00 [INV.17] Advanced high entropy materials for energy applications <u>Jyh-Ming Ting</u> <i>National Cheng Kung University, Taiwan</i></p>	<p>Session 6 – Materials Surfaces and Surface Technologies Session chair: Peter Schaaf, <i>Ilmenau University of Technology Institute of Materials Science and Engineering, Germany</i></p> <p>10:30-11:00 [INV.14] On the role of stress in microstructure evolution during thermo-chemical surface engineering <u>Marcel A.J. Somers</u> <i>Technical University of Denmark, Denmark</i></p> <p>11:00-11:30 [INV.16] Material-structure-performance integrated laser-metal additive <u>Dongdong Gu</u> <i>Nanjing University of Aeronautics and Astronautics, China</i></p> <p>11:30-12:00 [INV.18] Tapping into Charge-Dynamics of Ionic-Liquid Electrolytes within Energy Storage Devices with Operando X-Ray Photoelectron Spectroscopy <u>Sefik Suzer</u> <i>Bilkent University, Turkey</i></p>
12:00-12:30	Lunch Break	
12:30-14:00	<p>Session 7 – Surface Nanotechnology and Devices Session chair: Andrew Teplyakov, <i>University of Delaware, USA</i></p> <p>12:30-13:00 [INV.19] 2D graphene-like materials <u>Harold J.W. Zandvliet</u> <i>University of Twente, The Netherlands</i></p> <p>13:00-13:30 [INV.21] Exfoliated and Bulk b-Gallium Oxide Electronic and Photonic Devices <u>S.J. Pearton</u> <i>University of Florida, USA</i></p> <p>13:30-14:00 [INV.23] Multifunctional materials for emerging technologies <u>Prof Federico Rosei</u> <i>Institut National de la Recherche Scientifique, Canada</i></p>	<p>Session 8 – Theoretical Surface Science Session chair: Herbert Urbassek, <i>University of Kaiserslautern, Germany</i></p> <p>12:30-13:00 [INV.20] Identifying and understanding corrosion reactions: An ab initio approach <u>J. Neugebauer</u> <i>Max-Planck-Institut für Eisenforschung, Germany</i></p> <p>13:00-13:30 [INV.22] How long is a piece of string? On length scales and approximations in the modelling of applied surface science phenomena <u>Ian Shuttleworth</u> <i>Nottingham Trent University, UK</i></p> <p>13:30-14:00 [INV.24] Dissociative adsorption of methane on flat and stepped-like transition metal surfaces <u>H. Fabio Busnengo</u> <i>CONICET and Universidad Nacional de Rosario, Argentina</i></p>
14:00-14:15	Closing Remarks <p>Guido Grundmeier, <i>University of Paderborn, Germany</i> Fátima Montemor, <i>Instituto Superior Técnico, Portugal</i> Henrik Rudolph, <i>Defence Academy, The Netherlands</i> Yang Shen, <i>Tsinghua University, China</i></p>	