



# Marie Skłodowska-Curie Actions Doctoral Networks and Twinning – Advanced Materials & Processes and Artificial Intelligence for Sustainability (Workshop)

22 – 23 March 2023

at Universität Regensburg

Auditory H 13, Building RWH, Faculty of Business, Economics, Management Information Systems,

Universität Regensburg



## Wednesday, March 22, 2023

13:00 | Registration and opening reception

### INTRODUCTION OF RESEARCH AND FUNDING PROGRAMS OF THE EUROPEAN UNION

Room: Auditory H 13, Building RWH, Faculty of Business, Economics, Management Information Systems,  
Universität Regensburg

14:00 | Welcoming

14:15 | Information session with questions & answers

Dr. Panteleimon Panagiotou, Head of Unit ICT,  
Engineering & Natural Sciences at the Bavarian Research Alliance (BayFOR)

- Marie Skłodowska-Curie Actions Doctoral Networks

15:15 | **PITCH TALKS (each 10 min)**

1. *Increasing energy efficiency of large-scale industrial processes*  
Prof. Dr. Werner Kunz, Institute of Physical and Theoretical Chemistry, Faculty of Chemistry  
and Pharmacy, Universität Regensburg

2. *Vibrational spectroscopy in nanoworld*  
PhD Marcela Dendisova, Department of Physical Chemistry, University of Chemistry and Technology Prague
3. *Data-Based Process Control and Estimation*  
Miroslav Fikar, Institute of Information Engineering, Automation and Mathematics, Slovak University of Technology in Bratislava
4. *Optimization and simulation of production processes*  
Prof. Dr. Michael Eley, Faculty of Engineering, Technische Hochschule Aschaffenburg
5. *Easyssem: a miniaturized electron microscope*  
Prof. Dr. Rupert Schreiner, Department of Applied Physics and Microsystems Technologies, Faculty of Applied Natural Sciences and Cultural Studies, OTH Regensburg

16:15 Coffee break

16:45 **PITCH TALKS (each 10 min)**

1. *Redox Photochemistry: towards functional molecules and materials*  
Dr. Tomas Slanina, Department of Redox Photochemistry, Institute of Organic Chemistry and Biochemistry in Prague
2. *Product ecology supporting sustainability*  
Prof. Vladimír Kočí, Department of Sustainability and Product Ecology, Faculty of Environmental Chemistry, University of Chemistry and Technology Prague
3. *Eco-friendly biodegradable composite materials based on the plant raw*  
Prof. Olha Hulai and Associate Professor Oksana Sadova, Department of Material Science, Faculty of Customs Affairs, Materials and Technologies, Lutsk National Technical University
4. *Conversion of lignocellulosic biomass to valuable materials and chemicals*  
Prof. Dr. Jernej Iskra, Chair of Organic Chemistry, Faculty of Chemistry and Chemical Technology, University of Ljubljana
5. *New methods in organic chemistry utilizing photo- electro- and mechano-chemical approaches*  
Dr. Michal Májek, Department of Organic Chemistry, Faculty of Natural Sciences, Comenius-University Bratislava
6. *Materials research opportunities at Laboratory for Advanced Materials*  
Dr. Milan Sykora, Laboratory for Advanced Materials, Faculty of Natural Sciences, Comenius-University Bratislava
7. *Structure-property relationships in soft magnetic Fe-based nanocomposites*  
Jozef Bednarčík, Department of Condensed Matter Physics, Faculty of Science, P.J. Šafárik University in Košice
8. *Intriguing materials based on guanine-rich DNA sequences*  
Prof. Dr. Irena Drevenšek Olenik, Department of Physics, Faculty of Mathematics and Physics, University of Ljubljana
9. *Graphene derivatives and applications*  
Masoud Khaleghiabbasabadi, Institute for Nanomaterials, Advanced Technology and Innovation, Technical University of Liberec

18:15	End
20:00	<b>COMMON DINNER</b> (Restaurant Weltenburger am Dom, Domplatz 3)

## Thursday, March 23, 2023

Room: Auditory H 13, Building RWH, Universität Regensburg

9:00	<p>Information session with questions &amp; answers</p> <p>Dr. Panteleimon Panagiotou, Head of Unit ICT, Engineering &amp; Natural Sciences at the Bavarian Research Alliance (BayFOR)</p> <ul style="list-style-type: none"> <li>– Widening participation and spreading excellence across Europe: boosting research and innovation performance throughout the Union (Horizon Europe) <ul style="list-style-type: none"> <li>• Teaming</li> <li>• Twinning</li> </ul> </li> </ul>
10:00	<p><b>BEST PRACTICES (each 20 min)</b></p> <ol style="list-style-type: none"> <li>1. <i>Twinning for development of world-class next generation batteries</i> Viera Pechancová, Center of Polymer Systems, University Institute, Tomas Bata University in Zlín</li> <li>2. <i>MSCA project GuEst: New Directions in Guaranteed Estimation of Nonlinear Dynamic Systems and Their Applications to Chemical Engineering Problems</i> Miroslav Fikar, Institute of Information Engineering, Automation and Mathematics, Slovak University of Technology in Bratislava</li> <li>3. <i>Marie-Curie Action „Initial Training Networks“: Functionalized Magnetic Nanoparticles and their Application in Chemistry and Biomedicine</i> Prof. Dr. Oliver Reiser, Institute of Organic Chemistry, Faculty of Chemistry and Pharmacy, Universität Regensburg</li> </ol>
11:00	Coffee break
11:15	<p><b>PITCH TALKS (each 10 min)</b></p> <ol style="list-style-type: none"> <li>1. Prof. Dr. Oliver Reiser, Institute of Organic Chemistry, Faculty of Chemistry and Pharmacy, Universität Regensburg</li> <li>2. <i>Symbiosis of Natural and Artificial in English-language Studies</i> PD Dr. Nataliia Lazebna, Chair of Didactics - Modern Foreign Languages, Institute of Modern Foreign Languages, JMU Würzburg</li> <li>3. <i>Artificial Intelligence based forecast decision support system in agricultural production against diseases, pests and weeds</i> Onur Yolay, Co-founder, Innnoway R&amp;D Kft.</li> <li>4. <i>Supervised classification algorithm in land use classification (AI)</i> Anna Slachciak, Statistics Poland</li> </ol>

5.	<i>Extending the lifetime of windmills: Sensor-integrated digital twin for high-performance fibre composite applications</i> Ursula Pähler, Department of Applied Computer Science & Bionics - Technology Campus Freyung, Faculty of AI Computer Science, Deggendorf Institute of Technology
6.	<i>Smart agriculture</i> Reza Moezzi, M.Sc., Mechatronics and interdisciplinary studies, TU Liberec
7.	<i>To capture, convert and store/utilize sunlight: dye-sensitized solar devices</i> Dr. Urša Opara Krašovec, Faculty of electrical engineering, University of Ljubljana
8.	<i>Applied Data Science at University of West Bohemia</i> Dr. Jan Pospíšil, Department, Faculty of Applied Sciences, University of West Bohemia
12:35	<b>CLUSTERING AND NETWORKING SESSION</b>  Dr. Panteleimon Panagiotou, Head of Unit ICT, Engineering & Natural Sciences at the Bavarian Research Alliance (BayFOR)
13:00	Farewell reception

## CONFERENCE LANGUAGE

The conference language is English.

## COSTS

The participation is free of charge. Free accommodation and grants for travel costs can be provided for a certain number of participants (to be indicated in the application form).

## DIRECTIONS

<https://www.uni-regensburg.de/contact/maps/index.html>

or <https://urwalking.ur.de/navi/?lang=en>



## WI-FI ACCESS FOR GUESTS

Establishment of the connection with BayernWLAN Hotspot

1. Turn on Wi-Fi on your device and select in the Wi-Fi settings the WLAN network (SSID) @BayernWLAN
2. Open a web page in your browser, if it does not automatically open (depending on the operating system and device).
3. Accept the terms of use on the home page of the hotspot. Click on "Connect" | "Verbinden"

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