

# STER Summer school in Redox Processes

**Monday, June 10**

<b>8:30 – 13:00</b>		<b>Registration at the IPC PAS</b>
<b>9:00 – 9:10</b>		<b>Opening Ceremony</b>
<b>9:10 – 12:15</b>		<b>Morning session</b>
		<b>Juan Antonio Anta</b>
9:10 – 10:30	T01	Introduction to semiconductor photoelectrochemistry and fundamentals of photon-to-electron and photon-to-fuel conversion
<b>10:30 – 10:45</b>		<b>Coffee break</b>
		<b>Juan Antonio Anta</b>
10:45 – 11:30	T01	Introduction to semiconductor photoelectrochemistry and fundamentals of photon-to-electron and photon-to-fuel conversion
		<b>Nilesh Manwar</b>
11:30 – 11:45	S01	Photo-redox Versus Electro-redox Processes: Bridging Organic Synthesis with Photocatalysis (BOSS-Photocat)
		<b>Nabila Nawaz</b>
11:45 – 12:00	S02	Investigations of Earth Abundant Materials based Metal Oxide Photo-Electrodes for Solar Energy Conversion
		<b>Mewin Vincent</b>
12:00 – 12:15	S03	In-situ investigation of Li <sup>+</sup> and Na <sup>+</sup> intercalation to the TiO <sub>2</sub> nanotubes using Raman spectroscopy
<b>12:15 – 13:15</b>		<b>Lunch Break</b>
<b>13:15 – 15:45</b>		<b>Afternoon session</b>
		<b>Daniel Prochowicz</b>
13:15 – 14:00	L01	Lead halide perovskites for optoelectronic devices
<b>14:00 – 14:15</b>		<b>Coffee break</b>
		<b>Adam Kubas</b>
14:15 – 15:00	L02	Beyond DFT: selected applications and developments of wavefunction-based methods for redox-active, open-shell systems
		<b>Gonzalo Angulo</b>
15:00 – 15:45	L03	Basic Photophysics for <del>Electrochemists</del> <b>Electrochemists</b> : Everybody

# STER Summer school in Redox Processes

**Tuesday, June 11**

<b>9:00 – 10:30</b>		<b>Registration at the IPC PAS</b>
<b>9:30 – 12:15</b>		<b>Morning session</b>
9:30 – 10:30	T02	<b>Kristina Tschulik</b> Electrochemical Charge Transfer at Nanomaterials – part I
<b>10:30 – 10:45</b>		<b>Coffee break</b>
10:45 – 11:30	T02	<b>Kristina Tschulik</b> Electrochemical Charge Transfer at Nanomaterials – part II
11:30 – 12:15	L04	<b>Wojciech Nogala</b> Redox activity mapping
<b>12:15 – 13:15</b>		<b>Lunch Break</b>
<b>13:15 – 15:00</b>		<b>Afternoon session</b>
13:15 – 14:00	L05	<b>Tomasz Wójtowicz</b> Modern Applications of the Patch-Clamp Method
<b>14:00 – 14:15</b>		<b>Coffee break</b>
14:15 – 14:30	S04	<b>Grzegorz Bubak</b> Ionic liquid-based actuators – insights in their property-characterization relations, ways of improving performance, and possible applications.
14:30 – 14:45	S05	<b>Izabela Kurzydym</b> Mechanisms for deNO <sub>x</sub> and deN <sub>2</sub> O Processes on FAU Zeolite with Cu-Fe Dimer DFT Theoretical Calculations
14:45 – 15:00	S06	<b>Marcin Szymon Filipiak</b> Carbon Nanomaterial Field-Effect Transistor Based Biosensors: Bridging the Gap Between Research and Real-World Applications
<b>15:00 – 19:00</b>		<b>Barbecue and informal networking</b>

# STER Summer school in Redox Processes

Wednesday, June 12

<b>9:00 – 10:30</b>		<b>Registration at the IPC PAS</b>
<b>9:30 – 12:15</b>		<b>Morning session</b>
9:30 – 10:30	T03	<b>Elena Ferapontova</b> Post-Pandemic Biosensor Research for Biomedical Applications
<b>10:30 – 10:45</b>		<b>Coffee break</b>
10:45 – 11:30	T03	<b>Elena Ferapontova</b> Bioelectrochemical Platforms for Cancer Diagnosis and Prognosis
11:30 – 12:15	L06	<b>Lukasz Póltorak</b> Why bother with color interpretation when we have electroanalytical tools? Case study: illicit drugs.
<b>12:15 – 13:15</b>		<b>Lunch Break</b>
<b>13:15 – 17:00</b>		<b>Afternoon session</b>
13:15 – 13:30	S07	<b>Abdelatif Laroui</b> Effects of Magnetic Nanoparticles Fe <sub>3</sub> O <sub>4</sub> on Ion Transfer at the Polarized Liquid-Liquid Interface
13:30 – 13:45	S08	<b>Angelika Holzinger</b> Beyond Redox Processes – Adsorption of Peptides at the ITIES
13:45 – 14:00	S09	<b>Katarzyna Dusilo</b> Biphasic oxygen reduction reaction at selected interfaces
14:00 – 14:45	T04	<b>Stepan Shipovskov</b> Industrial R&D career: pros and cons
<b>14:45 – 16:30</b>		<b>Poster session with coffee</b>

# STER Summer school in Redox Processes

Thursday, June 13

<b>9:00 – 10:30</b>		<b>Registration at the IPC PAS</b>
<b>9:30 – 12:15</b>		<b>Morning session</b>
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		<b>Wolfgang Schumann</b>
9:30 – 10:30	T05	Challenges of single-entity electrochemistry experiments
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<b>10:30 – 10:45</b>		<b>Coffee break</b>
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		<b>Wolfgang Schumann</b>
10:45 – 11:30	T05	From high-throughput catalyst discovery and nanoelectrochemistry to electrolyzers for energy conversation reactions
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		<b>Wojciech Macyk</b>
11:30 – 12:15	L07	Solar to chemical energy conversion – what is the potential of photocatalysis?
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<b>12:15 – 13:15</b>		<b>Lunch Break</b>
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<b>13:15 – 16:30</b>		<b>Afternoon session</b>
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		<b>Mario Krenn</b>
13:15 – 14:15	T06	Towards an Artificial Muse for New Ideas in Physics
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<b>14:15 – 14:30</b>		<b>Coffee break</b>
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14:30 – 16:00		Panel discussion - future of physical chemistry: <b>Krenn, Ferapontova, Schuhmann</b>
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# STER Summer school in Redox Processes

**Friday, June 14**

<b>9:00 – 10:30</b>		<b>Registration at the IPC PAS</b>
<b>9:30 – 12:15</b>		<b>Morning session</b>
		<b>Jan Bitenc</b>
9:30 – 10:30	T07	Batteries from niche applications towards transforming our energy system
<b>10:30 – 10:45</b>		<b>Coffee break</b>
		<b>Jan Bitenc</b>
10:45 – 11:30	T07	Multivalent metal anode batteries: Overcoming challenges
		<b>Leszek Niedzicki</b>
11:30 – 12:15	L08	TBA
<b>12:15 – 13:15</b>		<b>Lunch Break</b>
<b>13:15 – 14:15</b>		<b>Afternoon session</b>
		<b>Klaudia Glowacz</b>
13:15 – 14:00	L09	Chemometric Methods in the Analysis of Voltammetric Data in Sensing Applications
<b>14:00 – 14:15</b>		<b>Coffee break</b>
<b>14:15 – 14:45</b>		<b>Official closure and Best Poster award</b>
14:45 – 15:30		Lab visit 1 (upon registration)
15:30 – 16:15		Lab visit 2 (upon registration)