



**Program of the 9th International conference
Progress in Applied Surface, Interface and
Thin Film Science –
Solar Renewable Energy News
2025**



Tuesday, 18 November 2025			
9:00 – 10:30	Registration of participants (it will continue during whole day)		
10:30 – 10:40	Opening		
Moderator:	Mgr. art. Maria Pincikova, Bratislava, Slovakia		
10:40 – 11:20	IL1 Prof. Dietrich R.T. Zahn	Nanoscale Investigations of Two-dimensional Semiconductor Interfaces Using Tip-enhanced Photoluminescence.	Chemnitz University of Technology, Chemnitz, Germany
11:20 – 12:00	IL2 Assoc. Prof. Tomas Plecenik	Concepts and prospects of hybrid memristive-chemiresistive gas sensors based on Pt/TiO ₂ /Pt sandwich structures	Faculty of Mathematics, Physics and Informatics, Comenius University in Bratislava, Slovakia
12:00 – 13:30	Lunch		
13:30 – 14:10	IL3 Prof. Harri Lipsanen	Broadband miniaturized spectrometers with van der Waals junctions	Aalto University, Finland
14:10 – 14:50	IL4 Dr. Štefan Chromík	Peculiarities of the MoS ₂ /AlN/Si structure behaviour	Institute of Electrical Engineering Slovak Academy of Sciences, Bratislava, Slovakia
14:50 – 15:15	1 Prof. Liutauras Marcinauskas	Investigation of microstructure and properties of metal doped diamond-like carbon films	Lithuanian Energy Institute, Lithuania
15:15 – 15:35	Coffee Break		
Moderator:	Mgr. art. Maria Pincikova, Bratislava, Slovakia		
15:35 – 16:00	2 Dr. Miroslav Behul	PEC characterization of BDD/WO ₃ and BDD/WO _x electrodes using DIY measurement setup	Faculty of Electrical Engineering and Information Technology, Slovak University of Technology in Bratislava, Slovakia
16:00 – 16:25	3 Prof. Mikhail Belogolovskii	Integration of transparent superconducting oxides in next-generation solar cells	Faculty of Mathematics, Physics and Informatics, Comenius University Bratislava, Slovakia
16:25 – 16:55	4 Dr. Emil Pinčík	Interaction of cyanide solutions with n-i-p-TCO/glass structure	Institute of Physics, Slovak Academy of Sciences, Bratislava, Slovakia
18:00 – 20:00	Welcome party		

Wednesday, 19 November 2025			
8:00 – 9:30	Breakfast		
Moderator:	<i>Mgr. art. Maria Pincikova, Bratislava, Slovakia</i>		
9:30 – 10:10	IL5 Prof. Jun Xu	Semiconductor/Metal Hybrid Structures for High-efficiency Photo-thermal Conversion of Solar Energy	Nantong University, China
10:10 – 10:30	Coffee break		
10:30 – 11:10	IL6 Assoc. Prof. Miroslav Mikolasek	Mathematical Models for Battery Research and Development: From Cell to System Level	Faculty of Electrical Engineering and Information Technology, Slovak University of Technology in Bratislava, Slovakia
11:10 – 11:50	IL7 Prof. Marco Fanciulli	Charge transport in thin silicon on insulators doped with phosphorus	Department of Chemistry, University of Torino, Italy
11:50 – 13:30	Lunch		
Moderator:	<i>Mgr. art. Maria Pincikova, Bratislava, Slovakia</i>		
13:30 – 14:10	IL8 Prof. Grzegorz Jung	Magnetic Passivation Using Chiral Molecular Interface	Ben Gurion University, Israel
14:10 – 14:50	IL9 Assoc. Prof. Tomáš Roch	Improvement of thermal and mechanical properties of selected hard coatings based on transition metal borides	Faculty of Mathematics, Physics and Informatics, Comenius University in Bratislava, Slovakia
14:50 – 15:15	5 Dr. Veronika Vavruňková	Laser treatment of graphene grown by atmospheric pressure CVD	University of West Bohemia, New Technologies-Research Centre, Plzeň, Czech Republic
15:15 – 17:00	Coffee break + Poster session		
17:30 – 22:00	Visit of Theatre Nová scéna, Bratislava: Sisa Sklovská		
18:00 – 19:00	Dinner		

POSTER SESSION			
1	Dr. Elena Zhitlukhina	Robust edge states in stacked Al/Ni-based multilayers	Faculty of Mathematics, Physics and Informatics, Comenius University in Bratislava, Slovakia
2	PhD.Student Zulfihar Khalil	Application of thin coatings of Zr and Ti on AlO ₃ granules using magnetron sputtering for metal hydride formation, accompanied by a numerical assessment of the hydrogenation process.	Lithuanian Energy Institute, Lithuania
3	PhD.Student Stephen Boahene	Comparative analysis of polyaniline heterostructures on boron doped diamond, Glassy carbon and FTO: Structure property relationship for next generation super capacitors	Institute of Physics, Czech Academy of Sciences, Czech Republic
4	Dr. Emil Pinčík	About Photoluminescence of Black and Porous Silicons	Institute of Physics, Slovak Academy of Sciences, Bratislava, Slovakia
5	Dr. Emil Pinčík	Investigation of etched Si wafer surfaces by the photoluminescence and spectral reflectance	Institute of Physics, Slovak Academy of Sciences, Bratislava, Slovakia
6	PhD.Student Naman Kumar	Temperature-driven transient gas sensing response of WS ₂ and MoS ₂ films on IDE.	Faculty of Electrical Engineering and Information Technology, Slovak University of Technology in Bratislava, Slovakia
7	Dr. Magdaléna Poláčková	Proximity phenomena in heterostructures consisting of superconductor – ferromagnet	Faculty of Mathematics, Physics and Informatics, Comenius University in Bratislava, Slovakia
8	Dr. Róbert Brunner	FTIR reflectance spectra of layered solar cell structures	Institute of Physics, Slovak Academy of Sciences, Bratislava, Slovakia
9	Dr. Ľubomír Staňo	Nickel and titanium nanoclusters prepared by magnetron sputtering for hydrogen gas sensing and electrocatalysis applications	Faculty of Mathematics, physics and informatics, Comenius University in Bratislava, Slovakia
10	Dr. Vinicius Cruz San Martin	Porous Ni-based thin films prepared by magnetron sputtering for hydrogen gas sensing and production	Faculty of Mathematics, physics and informatics, Comenius University in Bratislava, Slovakia
11	PhD.Student Muhammad Aqif	Bi-Doped LaFeO ₃ Perovskite for Fast and Stable Humidity Sensing	Faculty of Mathematics, physics and informatics, Comenius University in Bratislava, Slovakia

Thursday, 20 November 2025

8:00 – 9:30	Breakfast		
Moderator:	<i>Mgr. art. Maria Pincikova, Bratislava, Slovakia</i>		
9:30 – 10:00	IL10 Assoc. Prof. Martin Kopani	Ferritin-Based Nanodevices and Neuromelanin Quantum Dots for Bioelectronics	Institute of Medical Physics, Biophysics, Informatics and Telemedicine MF CU, Slovakia
10:00 – 10:25	6 PhD.Student Faizan Ahmad	Synthesis of thickness controlled Bi ₂ O ₂ Se nanosheets on sapphire substrate via chemical vapor deposition	Institute of Electrical Engineering, Slovak Academy of Sciences, Slovakia
10:25 – 10:45	Coffee break		
10:45 – 11:10	7 Dr. Emil Pinčík	Investigation of KCN treated structures deposited on n-type c-Si(100) and p-type c-Si(100)	Institute of Physics, Slovak Academy of Sciences, Bratislava, Slovakia
11:10 – 11:35	8 PhD.Student Naman Kumar	Edge rich WS ₂ nanostructures thin films for highly sensitive ammonia detection	Faculty of Electrical Engineering and Information Technology, Slovak University of Technology in Bratislava, Slovakia
11:35 – 11:50	Conclusion – results of competition of works of young researchers		
11:50 – 13:00	Lunch		
13:00 – 15:00	Trip – Pezinok Castle		