Scientific Programme of the 8th international conference Progress in Applied Surface, Interface, and Thin Film Science – Solar Renewable Energy News VIII (SURFINT-SREN VIII). November 20 – 22, 2023



| Monday, 20 No | ovember 2023                              |   |  |  |  |
|---------------|---|---|--|--|--|
| 9:00 - 10:30  |   |   |  |  |  |
| 10:30 - 10:40 |   |   |  |  |  |
| Moderator:    |   |   |  |  |  |
| 10:40 - 11:20 | IL1<br>Prof. Marco Fanciulli              | Donors in ultrathin silicon-on-<br>insulator device layers for classical<br>and quantum computing   | University of Milano Bicocca,<br>Department of Materials Science,<br>Italy   |  |  |
| 11:20 - 12:00 | IL2<br>Assoc.Prof. Miroslav<br>Mikolášek  | Electrical characterization techniques<br>for states of health (SOH), state of<br>safety (SOS) estimation and aging<br>analysis of Li-ion batteries | Faculty of Electrical Engineering and<br>Information Technology, Slovak<br>University of Technology in<br>Bratislava, Slovakia |  |  |
| 12:00 - 13:30 | ) Lunch                                   |   |  |  |  |
| 13:30 - 14:10 | IL3<br>Prof. Thomas Chassé                | Beyond Pentacene – Organic-Metal<br>Interfaces based on Hexacene and<br>Heptacene Molecular Layers  | Institut für Physikalische und<br>Theoretische Chemie, Universität<br>Tübingen, Germany  |  |  |
| 14:10 - 14:50 | IL4<br>Prof. Giovanni Ausanio             | Biocompatible hybrid graphenic thin<br>coating on flexible substrates through<br>Matrix-Assisted Pulsed Laser<br>Evaporation (MAPLE)                | "E. Pancini" Physics Department<br>UNIVERSITY OF NAPLES<br>"FEDERICO II", Italy  |  |  |
| 14:50 - 15:10 | Coffee Break                              |   |  |  |  |
| Moderator:    | Ms. Maria Pincikova, Bratislava, Slovakia |   |  |  |  |
| 15:10 - 15:50 | 1<br>Dr. Emil Pinčík                      | About optical properties of black<br>porous silicon and corresponding<br>solar cell applications  | Institute of Physics SAS, Bratislava,<br>Slovakia  |  |  |
| 18:30         | Welcome party                             |   |  |  |  |

| Tuesday, 21 N | ovember 2023   |  |  |  |  |
|---------------|--|--|--|--|--|
| 8:00 – 9:30   | Breakfast  |  |  |  |  |
| Moderator:    | Ms. Maria Pincikova, Bratislava, Slovakia                                  |  |  |  |  |
| 9:30 - 10:10  | IL5<br>Prof. Masao Takahashi   | Application of electrochemically<br>formed thin films to electronic<br>devices   | Tokyo University of Technology, Japan  |  |  |
| 10:10 - 10:20 | Coffee break   |  |  |  |  |
| 10:20 - 11:00 | IL6<br>Dr. Aarne Kasikov   | Change of the Optical Properties of<br>Thin Oxide Films During the Initial<br>Stage of Atomic Layer Deposition                                   | Institute of Physics, Univesity of Tartu,<br>Estonia                                       |  |  |
| 11:00 - 11:40 | IL7<br>Dr. Štefan Chromik  | MoS2 and WS2 two-dimensional<br>systems prepared by pulsed laser<br>deposition and some obstacles at film<br>preparation on different substrates | Institute of Electrical Engineering SAS,<br>Bratislava, Slovakia                           |  |  |
| 11:40 - 13:00 | Lunch  |  |  |  |  |
| Moderator:    | Ms. Maria Pincikova, Bratislava, Slovakia                                  |  |  |  |  |
| 13:00 - 13:40 | IL8<br>Prof. Loredana Parlato  | Ultra-thin superconducting microstrip for single photon detector.  | "E. Pancini" Physics Department<br>UNIVERSITY OF NAPLES<br>"FEDERICO II", Italy            |  |  |
| 13:40 - 14:15 | 2<br>PhD. Student Zuzana<br>Košelová                                       | Fabrication and Characterization of<br>Thermally Oxidized Tungsten-Based<br>Thin Films for Application in Cold<br>Field Emission Sources         | Institute of Scientific Instruments of the<br>Czech Academy of Sciences, Czech<br>Republic |  |  |
| 14:15 - 16:00 | Coffee break + Poster session  |  |  |  |  |
| 18:00 - 22:00 | Visit of Ballet in Slovak National Theatre, Bratislava: FASHION BALLET '23 |  |  |  |  |
| 18:00 - 19:00 | Dinner   |  |  |  |  |

| POSTER SESSION |  |   |  |  |  |
|----------------|--|---|--|--|--|
| 1              | PhD. Student Martin Kemeny               | Incremental capacity analysis (ICA)<br>extracted from the galvanostatic<br>intermittent titration technique (GITT)<br>dataset for analysis of conventional Li-<br>ion batteries | Faculty of Electrical Engineering and<br>Information Technology, Slovak University<br>of Technology in Bratislava, Slovakia            |  |  |
| 2              | Assoc.Prof. Marián Palcut                | High temperature oxidation resistance<br>of multilayer nitride coatings prepared<br>by physical vapor deposition  | Faculty of Materials Science and Technology<br>in Trnava, Slovak University of Technology<br>in Bratislava, , Slovakia                 |  |  |
| 3              | PhD. Student Michal Bennár               | Dichloromethane as a potential hole<br>density enhancer in high-temperature<br>superconductors.   | Institute of Electrical Engineering SAS,<br>Bratislava, Slovakia   |  |  |
| 4              | PhD. Student<br>Mohammad Sharif Shazileh | Effects of sulfurization temperature<br>and substrate type on the optical<br>properties of WS2 thin film  | Faculty of Electrical Engineering and<br>Information Technology, Slovak University of<br>Technology in Bratislava, Slovakia            |  |  |
| 5              | PhD. Student<br>Mohammad Sharif Shazileh | Nanostructuring of metal films on<br>glass using laser ablation and their<br>hydrogen responses   | Faculty of Electrical Engineering and<br>Information Technology, Slovak University of<br>Technology in Bratislava, Slovakia            |  |  |
| 6              | Assoc.Prof. Andrea Šagátová              | Analysis of active area of GaAs<br>sensor by micro-focused X-ray beam   | Faculty of Electrical Engineering and<br>Information Technology, Slovak University<br>of Technology in Bratislava, Slovakia            |  |  |
| 7              | Dr. Zakia Fekih                          | Filling the pores of porous silicon (p-<br>s) by metallic alloys electrodeposited   | Belhadj Bouchaib University Ain<br>Temouchent, Algeria   |  |  |
| 8              | Dr. Peter Ondrejka                       | Preparation of nickel sulfide layers for<br>supercapacitors and electrochemical<br>water splitting.   | Faculty of Electrical Engineering and<br>Information Technology, Slovak University<br>of Technology in Bratislava, Slovakia            |  |  |
| 9              | Dr. Souad OUIR                           | Luminescent properties of ZnO/CuO<br>nanocomposites   | Physics Department, Faculty of Sciences,<br>University of Blida1, Algeria  |  |  |
| 10             | Dr. Pavol Vojtek<br>Dr. Emil Pinčík      | Investigation of changes of the<br>photoluminescence signal of the<br>porous p-type Si induced by the<br>exciting light source  | Faculty of Mathematics, Physics, and<br>Informatics, Comenius University, Bratislava<br>Institute of Physics SAS, Bratislava, Slovakia |  |  |

| Wednesday, 22 November 2023 |   |   |   |  |  |  |
|-----------------------------|---|---|---|--|--|--|
| 8:00 - 9:30                 | Breakfast   |   |   |  |  |  |
| Moderator:                  | Ms. Maria Pincikova, Bratislava, Slovakia                         |   |   |  |  |  |
| 9:30 – 10:10                | IL9<br>Assoc.Prof. Stanislav<br>Jurecka                           | Microstructural, electrical, and optical<br>properties of selected semiconductor<br>systems for water splitting | Institute of Aurel Stodola, University of Žilina,, Slovakia |  |  |  |
| 10:10 - 10:30               | Coffee break  |   |   |  |  |  |
| 10:30 - 11:00               | 3<br>Dr. Emil Pinčík  | Photoluminescence of high doped multicrystalline porous silicon   | Institute of Physics SAS, Bratislava,<br>Slovakia           |  |  |  |
| 11:00 - 11:15               | Conclusion – results of competition of works of young researchers |   |   |  |  |  |
| 11:15 - 13:00               | Lunch   |   |   |  |  |  |
| 13:00 - 16:00               | Trip – Devin Castle   |   |   |  |  |  |