

PROGRAM
International Conference of
“Advances in Material Science & Photonics”
15-18 July 2025 Bansko, Bulgaria

1ST DAY TUESDAY – 15 July

12:00-15.00 Arrival, lunch at the hotel, accommodation and conference registration

15:00-15.30 **Opening:**

Welcome greetings

Conference Remarks: Vera Marinova

SESSION I

Presider: Nikolay Nedyalkov

15:30 “Selective Color Appearance of Liquid-Crystal-Aided Laser-Induced Periodic Surface Structures (LIPSS)” **Jieh-Wen Tsung (NYCU)**

16:00 **Coffee break (group photo)**

16:30 “Augmented Reality Glasses with Volume Holographic Optical Elements”
..... **Shiuan Huei Lin (NYCU)**

17:00 “Liquid Crystals Nanocomposites for Electro-optics” **Yordan G. Marinov (ISSP-BAS)**

17:30 “Automated Bird Tracking and Non-Invasive
Laser Repulsion Method” **Yu-Pin Lan (NYCU)**

18:00-20.00 **Dinner**

20:00-21.30 **Round Table Discussions**

2ND DAY WEDNESDAY – 16 July

SESSION II

Presider: Shiuan Huei Lin

- 09:00** “The Unique World of Laser Micro- and Nanostructuring: Technologies With no Efficient Alternative” **Nikolay Nedyalkov (IE-BAS)**
- 09:30** “Terahertz Spectroscopy for the Electromagnetic Characterization of Resistive and Reactive thin Films” **Dimitrios Zografopoulos (AUTH, CNR-IMM)**
- 10:00** **Coffee break**
- 10:30** “Macromolecular design and evaluation of amphiphilic copolymers for advanced biotechnological applications” **Darinka Christova (IE-BAS)**
- 11:00** “Developing Biosensor Technology in IOMT: Present and Prospects” **Georgi Dyankov (IOMT-BAS)**
- 11:30** “Overview of the Taiwan Instrumentation and Detector Consortium and Its Key Initiatives” **Chia-Ming Kuo (NCU)**
- 12:00-14:00** **Lunch break**

SESSION III

Presider: Jenh-Yih Juang

- 14:30** “Molecular Beam Epitaxy and Characteristics of III-VI Compound Semiconductors” **Wu-Ching Chou (NYCU)**
- 15:00** “Harnessing Theory for Unique 2D Ferroelectricity and Wafer-Scale Quantum Devices” **Hung-Chung Hsueh (NTU)**
- 15:30** “Multilayer Van der Waals Materials for Nanophotonic Applications” **P. G. Zotev (University of Sheffield)**
- 16:00** **Coffee break**
- 16:30** “Al-doped ZnO Thin Films as Transparent Conductors in Liquid Crystal Devices” **Dimitre Dimitrov (ISSP-BAS)**
- 16:50** “Hollow Fiber Fabrication via Electrospinning and Atomic Layer Deposition for Gas Sensing ” **B. Blagoev (ISSP-BAS)**
- 17:10** “Surface modification of titanium and Ti-based alloys” **Stefan Valkov (IE-BAS)**
- 17:30** **Companies presentations**
- 18:00-20.00** **Dinner**
- 20:00-21.30** **Round Table Discussions**

3RD DAY THURSDAY – 17 July

SESSION IV

Presider: Jieh-Wen Tsung

- 9:00** “A Comparative Study on the Magnetocaloric Effect of ReVO_4 (Re = Tb, Ho, Lu) and Eu-doped HoMn_2O_5 Crystals” **Jenh-Yih Juang (NYCU)**
- 9:30** “Electronic Structure of $\text{La}_3\text{Ni}_2\text{O}_7$ thin Films and Implications for Superconductivity ” ...
..... **Jiunn-Yuan Lin (NYCU)**
- 10:00** **Coffee break**
- 10:30** “Development of High-Quality Layered PdSe_2 Crystal” **Dimitre Dimitrov (ISSP-BAS)**
- 11:00** “Applying Surface Techniques to Improve Next-Generation Semiconductors”.....
..... **Chun-Liang Lin (NYCU)**
- 11:30** “Growth of Single Crystalline Compounds at TCECM” **Chin Shan Lue (NCKU)**

12:00-14:00 **Lunch break**

SESSION V

Presider: Stefan Valkov

- 14:30** “Light-Driven Surface Functionalization: Advanced Laser Processing for Antibacterial Applications” **Albena Daskalova (IE-BAS)**
- 15:00** “Laser speckle photometry for monitoring of dynamic events”.....
..... **Elena Stoykova (IOMT-BAS)**
- 15:30** “Phase-shifting methods in ESPI for dynamic deformation studies”
..... **Violeta Madjarova (IOMT-BAS)**

16:00 **Coffee break**

SESSION VI

- 16:00-18.30** **Poster Session (farewell drink)**
- 18:30-20:00** **Dinner time**
- 20.00-21:30** **Round Table Discussions**

SESSION VII

YOUNG SCIENTIST PRESENTATIONS

Presider: Elena Stoykova

- 09:00-09:20** “SPR as an effective technique for pesticides detection”
.....**Evdokiya Hikova (IOMT-BAS)**
- 09:20-09:40** “Change of the optical properties of polarization sensitive polymer (PAZO) after heating – an overview”.....**Georgi Mateev (IOMT-BAS)**
- 09:40-10:00** “Pt-based metal dichalcogenides: synthesis, properties and applications”
.....**Nikolay Minev (IOMT-BAS)**

10:00 Coffee break

- 10:30-10:50** “Synthesis and Characterization of MoSe₂ and MoS₂ and their heterostructures”
.....**Blagovest Napoleonov (IOMT-BAS)**
- 10:50-11:10** “Search for non-resonant Higgs boson pair production in the bbyγ final state for CMS Run-2”
.....**Yu-Hsuan Chou (NCU)**

11:30 Closing remarks, best young scientist presentation and best poster awards

12:00 Departure to Sofia