Conference programme

Tuesday 15.09.2026

Venue: Faculty of Physics, Warsaw University of Technology (ul. Koszykowa 75)

13:00-18:00 Registration

13:50-14:00 Opening Address:

Mariusz Zdrojek, Andrzej Wysmołek

Chair: Paweł Kowalczyk

14:00-15:00 Opening Lecture

Stephan Roche: *Artificial Intelligence as main innovation driver for next generation of 2D materials and related heterostructures and composites*

15:00-15:30 Invited Talk:

Tevfik Mentes: *Deep dive into 2D materials: graphene and borophene on transition metals*

15:30-16:00 Invited Talk:

Franciszek Krok: *Self-Organized Gold Nanoislands on MoS_2: Growth, Atomic-Scale Interface Characterization and Nanomanipulation*

16:00-18:00 Welcome Reception

Wednesday 16.09.2026

Venue: Faculty of Physics, University of Warsaw (ul. Pasteura 5, room 0.06)

08:30-19:00 Registration

Chair: Mikołaj Lewandowski

09:00-09:30 Invited Talk:

Artur Ciesielski: *Beyond Graphene: 2D Materials as Next-Generation Electrode Materials for Batteries and Hybrid Supercapacitors*

09:30-10:00 Invited Talk:

Ewa Młyńczak: *Structure and Electronic Properties of Pristine 2D Materials: From Epitaxial Sn to In-Situ Exfoliated MoS_2*

10:00-10:15 Contributed Talk:

Verónica Montes-García: *Harnessing Washing-Driven Oxidation to Engineer Mo2CTx/MoOx Hybrid Interfaces for Energy Storage*

10:15-10:30 Contributed Talk:

Karolina Wenelska: *Borophene-like/NiO and influence of defects for electroactivity of oxygen evolution reaction*

10:30-11:00 Coffee break

Chair: Joanna Jadczak

11:00-11:30 Invited Talk:

Bartłomiej Graczykowski: *Brillouin Light Scattering in Low-Dimensional Systems: GHz Phonon Engineering in Quasi-2D Nanostructures and Elastic–Photoelastic Metrology of van der Waals Crystals and Membranes*

11:30-12:00 Invited Talk:

Ryszard Zdyb: *Large scale single-layer antimonene oxide*

12:00-12:15 Contributed Talk:

Mikołaj Lewandowski: *2D iron sulfide on copper: Growth, structure and properties*

12:15-12:30 Contributed Talk (Renishaw Sp. z o.o.)

Agnieszka Sozańska: *In Situ Raman–SEM Imaging for Investigating Graphene and 2D Materials in Next-Generation Li-Ion Battery Electrodes*

12:30-14:00 Lunch break

Chair session A: Maciek Molas (room 0.03a)

Chair session B: Ewa Młyńczak (room 0.06)

14:00-14:15 Contributed Talks:

Session A: Jakub Kierdaszuk: *Photoluminescence enhancement in WSe_2 doped with Nb*

Session B: Kamila Klimza: *Influence of magnetic field on the performance of 2D material-based catalysts for electrochemical water splitting*

14:15-14:30 Contributed Talks:

Session A: Ewa Żuberek: *Upconversion photoluminescence excitation reveals exciton–trion and exciton–exciton interactions in hBN/MoS_2/hBN van der Waals heterostructures*

Session B: Sonnur Kurtulus: *Low-Dimensional Borophene-Like Layer Domains Stabilized in Carbon for Electrocatalysis*

14:30-14:45 Contributed Talks:

Session A: Gayatri: *Strain induced enhanced energy transfer process in TMD heterostructures*

Session B: Karolina Pietrusewicz: *Wet ball milling in defect mediated cleavage of β-Boron for the formation of Borophene-like nanoflakes*

14:45-15:00 Contributed Talks:

Session A: Aleksandra Kasprzak: *Sign Reversal of Interlayer Exciton Valley Polarization in a WS_2/WSe_2 Moiré Heterobilayer under Sub-Gap Excitation*

Session B: Natalia Grochowska: *Tetraphenylporphyrin-grafted copolymer as a modifier for thermally conductive graphene nanoplatelet composites*

15:00-15:15 Contributed Talks:

Session A: Piotr Tatarczak: *Green Single-Photon Emitters in Epitaxial BN – Properties and Engineering*

Session B: Aleksandra Pasik: *HAp-coated nonwoven graphitic materials for regeneration of bone tissue*

15:15-15:45 Coffee break

Chair session A: Tevfik Mentes (room 0.03a)

Chair session B: Ryszard Zdyb (room 0.06)

15:45-16:00 Contributed Talks:

Session A: Zuzanna Śnioch: *Composition-Dependent Magnon Dynamics in CrSBr Mixed Crystals*

Session B: Anna Wróblewska: *Distance-Dependent Interfacial Coupling in CNT/WSe_2 mixed-dimensional Heterostructures*

16:00-16:15 Contributed Talks:

Session A: Weronika Andrzejewska: *Structural stability of 2-dimensional iron nitride islands on copper under ambient and electrocatalytic conditions*

Session B: Magdalena Kopczyńska: *Strain-Induced Optical and Electrical Properties of BN Integrated with GaN NWs*

16:15-16:30 Contributed Talks:

Session A: Julia Warowna: *Oxidation of isolated antimonene islands on W(110)*

Session B: Lena Miler: *Isotopic Effects in Epitaxial hBN: Distinguishing Hydrogen-Related Defect Complexes*

16:30-16:45 Contributed Talks:

Session A: Igor Nowik: *Nucleation engineering for homoepitaxial MOVPE growth of natBN on ^{10}BN flakes*

Session B: Tymoteusz Plak: *Towards resonant energy transfer in a $MoSe_2/ReS_2$ 2D heterostructure with tunable interlayer separation*

16:45-17:15 Coffee break

17:15-19:00 Poster Session

Thursday 17.09.2026

Venue: Faculty of Physics, University of Warsaw (ul. Pasteura 5, room 0.06)

09:00-16:30 Registration

Chair: Leszek Bryja

09:00-09:30 Invited Talk:

David Brunel: *MBE-grown PtSe2 films for thermal investigations*

09:30-10:00 Invited Talk:

Arkadiusz P. Gertych: *Measuring Thermal Properties of 2D Materials and vdW Heterostructures*

10:00-10:15 Contributed Talk:

Piotr Wojnar: *Molecular beam epitaxy of optically active indium telluride/indium selenide van der Waals heterostructures*

10:15-10:30 Contributed Talk:

Jakub Sitek: *Facile synthesis of two-dimensional amorphous carbon for enhanced corrosion resistance*

10:30-11:00 Coffee break

Chair: Marcin Syperek

11:00-11:30 Invited Talk:

Paweł Krukowski: *Single-molecule chirality: can it be identified?*

11:30-12:00 Invited Talk:

Marta Pelc: *GRANAD: A tight-binding framework for light-matter interactions and its application to mode-selective spontaneous emission*

12:00-12:15 Contributed Talk:

Karol Szałowski: *Effect of strain and electric field on charge density wave orderings in monolayer tantalum dichalcogenides: a first-principles study*

12:15-12:30 Contributed Talk:

Jacek Majewski: *Theoretical studies of plasmon and external magnetic field effects on high-harmonic generation in graphene and transition metal carbides and nitrides*

12:30-14:00 Lunch break

Chair session A: Alessandro Surrente (room 0.03a)

Chair session B: Jacek Majewski (room 0.06)

14:00-14:15 Contributed Talks:

Session A: Jan Złotopolski-Pirczewski: *Understanding piezoelectricity in epitaxial boron nitride grown by MOVPE*

Session B: Martin Lukac: *Graphene encapsulation of FeI_2 monolayer: Induced Modifications of Electronic Structure and Lattice Dynamics*

14:15-14:30 Contributed Talks:

Session A: Izabela Rogala: *Spatially correlated TEM-AFM-KPFM imaging of BN piezoelectric domains*

Session B: Subrata Rakshit: *Torsion-Driven Electronic and Magnetic Phase Transition in Boron Atomic Chains*

14:30-14:45 Contributed Talks:

Session A: Bazlul Karim: *Second Harmonic Generation Induced UV Luminescence in Rhombohedral Boron Nitride Films*

Session B: Timon Moško: *Superconducting and dielectric properties of monolayer α-$TaSi_2N_4$*

14:45-15:00 Contributed Talks:

Session A: Aleksandra Nadolska: *Local Formation of Resistive States in Ultrathin α-MoO_3*

Session B: Abhishek Ghosh: *Purcell Enhancement by the Edge States of Zig-Zag Graphene Nanoflakes*

15:00-15:15 Contributed Talks:

Session A: Bartosz Kaczmarek: *Resonant enhancement of second harmonic generation in rBN metasurfaces*

Session B: Konrad Wilczyński: *Temperature-Dependent Vibrational Properties of Monolayer WS_2 Nanocrystals: From Harmonic Phonons to Ab-Initio Molecular Dynamics*

15:15-15:45 Coffee break

Chair session A: Paweł Krukowski (room 0.03a)

Chair session B: Marta Pelc (room 0.06)

15:45-16:00 Contributed Talks:

Session A: Teresa Bizoń: *Substrate dependent properties of epitaxial BN heterostructures*

Session B: Leo Sagan: *Cross-Plane Thermal Transport in vdW Heterostructures via Joule Heating and Raman Thermometry*

16:00-16:15 Contributed Talks:

Session A: Syed Hassan Abbas Jaffery: *Pristine 2D Interfaces: Eliminating Contamination via Mechanical Sweeping*

Session B: Jakub Cwynar: *Doping of MOVPE-Grown Layered Boron Nitride: Correlation Between Doping Process and Electrical Transport Mechanisms*

16:15-16:30 Contributed Talks:

Session A: Wojciech Kolesiński: *Field induced polarization enhancement in TMD monolayer as a sensitive probe of magnetic effects in 2D heterostructures*

Session B: Gabriela Szwed: *Conductive epitaxial boron nitride: SIMS studies on acceptor activation and electrical properties*

16:15-16:30 Contributed Talks:

Session A: Bartosz Furtak: *Epitaxial boron nitride as a platform for versatile moiré heterostructures - a cathodoluminescence study*

19:00-00:00 Networking Dinner
at the Faculty of Physics, Warsaw University of Technology (ul. Koszykowa 75)

Friday 18.09.2026
Venue: Faculty of Physics, University of Warsaw (ul. Pasteura 5, room 0.06)

09:00-12:00 Registration desk

Chair: Jan Suffczyński

09:00-09:30 Invited Talk:

Bernard Gil: *Polytypism in sp^2-bonded BN*

09:30-10:00 Invited Talk:

Alessandro Surrente: *Spin injection and emission helicity switching in a BA_2PbI_4/WSe_2 heterostructure*

10:00-10:15 Contributed Talk:

Mariusz Klimczak: *Spectral shaping of SHG in hybrid hBN/rBN epitaxial stacks*

10:15-10:30 Contributed Talk:

Michał Kobecki: *Periodic Excitation of Magnons in CrSBr*

10:30-11:00 Coffee break

Chair: Piotr Kossacki

11:00-11:30 Invited Talk:

Marcin Syperek: *$MoTe_2$ for near-infrared photonics*

11:30-12:00 Invited Talk:

Maciej Molas: *Magneto-Optics of Bright and Dark Excitons in a $MoWSe_2$ Monolayer Alloy*

12:00-12:15 Contributed Talk:

Tomasz Woźniak: *Extremely High Excitonic g-Factors in 2D Crystals by Alloy-Induced Admixing of Band States*

12:00-12:15 Closing

12:30-14:00 Lunch break