



Joint annual meetings of IRPs “2DM” and “TeraMIR”

November 30th – December 1st, 2020

Website:

irpmeeting.fuw.edu.pl

Videoconference:

<https://us02web.zoom.us/j/85153401333>

November 30th, 2020

8:50-9:00 Welcome session (Marek Potemski & Frédéric Teppe)

Session A. 9:00-10:30 (Chair.: **A. Babiński**)

- 9:00-9:30 **A. Patane** (University of Nottingham, Nottingham, United Kingdom) - *Polymorphs, Stoichiometries and Interfaces of 2D Indium Selenide with Enhanced Electronic Properties*
- 9:30-10:00 **T. Kazimierzuk** (University of Warsaw, Warsaw, Poland) *Dark excitons in monolayer tungsten dichalcogenides*
- 10:00-10:30 **D. Voiry** (Institut Européen des Membranes, ENSCM, UM, CNRS, France) *Exploring the role of the edges of two-dimensional materials in electrocatalysis*

10:30-10:45 Coffee break

Session B. 10:45-12.15 (Chair.: **D. Khokhlov**)

- 10:45-11:15 **M. Orlita** (LNCMI-Grenoble, CNRS, France) *Magneto-optics of Weyl semimetals*
- 11:15-11:45 **G. Grabecki** (Institute of Physics of PAS, Warsaw, Poland) *Conductance across superconductor/Weyl semimetal junctions*
- 11:45-12:15 **V. Kachorovskii** (Ioffe Institute, St. Petersburg, Russia) *Plasmonic interferometry*

12:15-13:45 Lunch

Session C. 13:45-15:15 (Chair.: **A. Patane**)

- 13:45-14:15 **G. Cassabois** (L2C, UM-CNRS, Montpellier, France) *Hexagonal boron nitride: novel optical properties in an old insulating material*
- 14:15-14:45 **J. Jadczyk** (Wrocław University of Science and Technology, Wrocław, Poland) - *Coupling between intra- and inter-valley exciton complexes in phonon-mediated up-conversion photoluminescence in hBN-encapsulated monolayer WSe₂*
- 14:45-15:15 **V. Fal'ko** (The University of Manchester, Manchester, United Kingdom) *Moiré superlattice and atomic reconstruction in twistrionic transition metal dichalcogenide structures*

15:15-15:30 Coffee break

Session D. 15:30-17:00 (Chair.: **M. Orlita**)

- 15:30-16:00 **D. Khokhlov** (Physics dpt. of Moscow State University, Russia) *Photoconductivity in topological HgCdTe films in the terahertz and radiofrequency domains*
- 16:00-16:30 **S. Morozov** (IPM, RAS, Nizhny Novgorod, Russia) - *Mid-IR and THz Stimulated Emission in HgCdTe QW Heterostructures with Dielectric and "Phonon" Waveguides*
- 16:30-17:00 **S. Rumyantsev** (CENTERA, Institute of High Pressure Physics PAS, Warsaw, Poland) *Low-Frequency Noise in Low-Dimensional Materials*

December 1st , 2020

Session E. 9:00-10:30 (Chair.: **V. Kachororskii**)

- 9:00-9:30 **A. Vasanelli** (LPENS, Université PSL, Paris, France) *Quantum effects in semiconductor plasmonics*
- 9:30-10:00 **W. Knap** (L2C, UM-CNRS, Montpellier, France & CENTERA, Institute of High Pressure Physics PAS, Warsaw, Poland) *Room-Temperature Amplification of Terahertz Radiation by Grating-Gate Graphene Structures*
- 10:00-10:30 **G. Fedorov** (Moscow Institute of Physics and Technology, Russia) *Graphene based terahertz range plasmonic interferometers*

10:30-10:45 Coffee break

Session F. 10:45-12:15 (Chair.: **A. Wójs**)

- 10:45-11:15 **M. Goryca** (MagLab, Los Alamos, United States of America) - *Thermodynamic "valley noise" in monolayer semiconductors*
- 11:15-11:45 **B. Piot** (LNCMI-Grenoble, CNRS, France) *Quantum spin Hall effect with Landau levels*
- 11:45-12:15 **P. Kapuściński** (Wrocław University of Science and Technology, Wrocław, Poland) *Rydberg series of bright and dark excitons in ReS₂*

12:15-13:45 Lunch

Session G. 13:45-15:15 (Chair.: **D. Voiry**)

- 13:45-14:15 **W. Pacuski** (University of Warsaw, Warsaw, Poland) *Optical properties of MBE grown transition metal dichalcogenides*
- 14:15-14:45 **C. Faugeras** (LNCMI-Grenoble, CNRS, France) *Optics of exciton complexes in heterobilayers of layered semiconductors*
- 14:45-15:15 **M. Grzeszczyk** (University of Warsaw, Warsaw, Poland) *Interlayer interactions in van der Waals heterostructures*

15:15-15:30 Coffee break

Session H. 15:30-17:00 (Chair.: **W. Knap**)

- 15:30-16:00 **S.A. Dvoretzky & N.N. Mikhailov** (Rzhanov Institute of Semiconductor Physics, Novosibirsk, Russia) *Growth of (013)HgCdTe/GaAs alloys and quantum structures by MBE*
- 16:00-16:30 **F. Teppe** (L2C, UM-CNRS, Montpellier, France) *Landau emission in crossed electric and magnetic fields*
- 16:30-17:00 **I. Yahniuk** (CENTERA, Institute of High Pressure Physics PAS, Warsaw, Poland) *Tuning the topological properties of HgTe quantum wells due to hydrostatic pressure and temperature*

17.00-Closing session