**Program of the 46th International School & Conference on the Physics of Semiconductors, Szczyrk, Poland, June 17th – 23rd, 2017**

## Saturday June 17th, 2017

14:20 - 14:30 **Marta Gryglas-Borysiewicz** – School opening address

14:30 - 16:15 **Jeremy Levy** (University of Pittsburgh, Pittsburgh, PA, USA)

*Physics of $SrTiO_3$-based heterostructures and nanostructures* - SaI1

16:15 - 16:45 Coffee Break

16:45 - 18:30 **Saskia F. Fischer** (Humboldt-Universität zu Berlin, Germany)

*Thermoelectric properties of nanomaterials and quantum systems* - SaI2

18:30 **Barbecue**

## Sunday June 18th, 2017

11:45 - 13:30 **Milan Orlita** (LNCMI, Grenoble, France)

*Optics of solids with relativistic-like electrons* - SuI1

13:30 - 14:30 Lunch Break

14:30 - 16:15 **Michał Matuszewski** (Institute of Physics, Polish Academy of Sciences, Poland)

*Bose-Einstein condensation in semiconductors and beyond* - SuI2

16:15 - 16:45 Coffee Break

16:45 - 18:30 **Christopher Bauerle** (Institut NEEL, Grenoble, France)

*Electrons surfing on a Sound Wave* - SuI3

20:00 - 21:00 **Concert in the memory of prof. Jan Gaj - chamber music performed by the outstanding, talented children supported by the Polish Children's Fund**

21:05 **Welcoming glass of wine**

**Monday June 19th, 2017**

8:50 - 9:00 **Andrzej Wysmołek** – Conference opening address

9:00 - 9:45 **Mark Fox** (University of Sheffield, United Kingdom)
*Semiconductor-based quantum photonic circuits* - MoI1

9:45 - 10:00 **Krzysztof Sawicki**, J.G. Rousset, R. Rudniewski, W. Pacuski, M. Nawrocki, J. Suffczyński
*Lasing from a Se-based microcavity embedding a CdSe/(Cd, Mg)Se superlattice* - MoO1

10:00 - 10:15 **Paweł Mrowiński**, A. Somers, J.P. Reithmaier, S. Höfling, J. Misiewicz, G. Sęk
*Controlling polarization anisotropy of excitonic emission from single quantum dots* - MoO2

10:15 - 10:30 **Anna Musiał**, C. Hopfmann, A. Carmele, M. Strauß, M. Kamp, C. Schneider, S. Höfling, A. Knorr, S. Reitzenstein
*Coherently-driven quantum dot exciton strongly coupled to a fundamental mode of a micropillar cavity* - MoO3

10:30 - 10:45 **Roberto Rosati**, D.E. Reiter, T. Kuhn
*Spatio-temporal Dynamics of Carrier Capture Processes: Lindblad and Quantum Kinetics Approaches in Comparison* - MoO4

10:45 - 11:15 Coffee Break

11:15 - 12:00 **Józef Spałek** (Jagiellonian University in Kraków, Poland)
*From Mott or Kondo Semiconductor to Unconventional Superconductor: Emergence of Strongly Correlated Quantum Matter on Examples* - MoI2

12:00 - 12:15 **Khrystyna Levchenko**, T. Prokscha, J. Sadowski, J.Z. Domagała, M. Trzyna, R. Jakieła, I. Radelytskyi, T. Andrearczyk, T. Figielski, T. Wosiński
*Muon-Spin-Relaxation Study of Ferromagnetism in (Ga,Mn)(Bi,As) Dilute Magnetic Semiconductor* - MoO5

12:15 - 13:00 **Karol Nogajewski** (LNCMI-CNRS-Grenoble, France)
*Technology of mechanical exfoliation: fabrication of structures and their characterization* - MoI3

13:00 - 14:30 Lunch Break

14:30 - 15:30 MONDAY POSTER SESSION A (MoP1 ... MoP48)

18:30 - 19:30 Dinner

19:30 - 20:15 **Ermin Malic** (Chalmers University of Technology, Sweden)
*Exciton dynamics in atomically thin 2D materials* - MoI4

20:15 - 20:30 **Maciej Molas**, C. Faugeras, A.O. Slobodeniuk, K. Nogajewski, M. Bartos, D.M. Basko, M. Potemski
*Brightening of dark excitons in monolayers of semiconducting transition metal dichalcogenides* - MoO6

20:30 - 20:45 **Tomasz Kazimierczuk**, A. Bogucki, C. Faugeras, M. Potemski, P. Kossacki
*Time-resolved magneto-Raman study of the carrier dynamics at low Landau-levels in graphene* - MoO7

20:45 - 21:00 **Agnieszka Sozańska**
*Raman imaging - a modern tool for novel materials analysis* - MoO8

21:00 - 22:00 MONDAY POSTER SESSION B (MoP1 ... MoP48)

**Tuesday June 20th, 2017**

9:00 - 9:45 **Lucia Sorba**, (Nest, Istituto Nanoscienze-CNR, Italy)
*Catalyst composition tuning: the key for the growth of straight axial nanowire heterostructures* - TuI1

9:45 - 10:00 **Maciej Winiarski**
*Band Gap Engineering in Group III Nitride Semiconductors* - TuO1

10:00 - 10:15 **Jakub Kierdaszuk**, P. Kaźmierczak, R. Bożek, J. Grzonka, I. Pasternak, A. Krajewska, Z.R. Zytkiewicz, M. Kamińska, A. Wysmołek, A. Drabińska
*Effect of surface roughness on enhanced Raman scattering in graphene on GaN nanowires matrix* - TuO2

10:15 - 10:30 **Igor Wlasny**, Z. Klusek, A. Wysmołek
*Laser-induced modification of electronic and optical properties of hexagonal boron nitride* - TuO3

10:30 - 10:45 **Agnieszka Jamróz**, J.A. Majewski
*Stability and electronic structure of C-B-N hexagonal 2D structures* - TuO4

10:45 - 11:15 Coffee Break

11:15 - 12:00 **Gunther Springholz** (University of Linz, Austria)
*Multiferroic and topological properties of thin layers of IV-VI semiconductors* - TuI2

12:00 - 12:15 **Magdalena Majewicz**, G. Grabecki, P. Nowicki, Ł. Szyller, J. Wróbel, M. Zholudev, V. Gavrilenko, N.N. Mikhailov, S.A. Dvoretskii, W. Knap, F. Teppe, T. Dietl
*Length Dependence of Edge Channel Resistance in Microstructures of HgTe/(Hg,Cd)Te Quantum Wells* - TuO5

12:15 - 12:30 **Andrzej Łusakowski**
*Mirror and Spin Chern Number Analysis of Band Structure Topology of PbTe and SnTe* - TuO6

12:30 - 12:45 P. Potasz, P. Kaczmarkiewicz, **Błażej Jaworowski**, M. Kupczyński, A.D. Güçlü
*Wigner Crystallization in Topological Flat Bands* - TuO7

12:45 - 13:00 **Rafał Rechciński**, M. Galicka, V.V. Volobuev, M. Simma, O. Caha, P.S. Mandal, E. Golikas, J. Sánchez-Barriga, A. Varykhalov, O. Rader, G. Bauer, G. Springholz, P. Kacman, R. Buczko
*Topological Surface State, Size Quantization and Rashba Effect in PbSnSe Topological Crystalline Insulator Quantum Wells* - TuO8

13:00 - 14:30 Lunch Break

14:30 - 15:30 TUESDAY POSTER SESSION A (TuP1 ... TuP47)

18:30 - 19:30 Dinner

19:30 - 20:15 **Ido Schwartz**, (Technion - Israel Institute of Technology, Israel)
*Deterministic Generation of a Cluster State of Polarization Entangled Photons* - TuI3

20:15 - 20:30 **Jan Krzywda**, P. Szańkowski, Ł. Cywiński
*Using measurements of two-qubit coherence to localize a fluctuating magnetic moment* - TuO9

20:30 - 20:45 **Damian Kwiatkowski**, Ł. Cywiński
*Entanglement dynamics of NV centers coupled to a bath of C-13 nuclear spins* - TuO10

20:45 - 21:00 **Edyta Osika**, B. Szafran
*Simulations of Photon-Assisted Tunneling in Carbon Nanotube Double Quantum Dots* - TuO11

21:00 - 22:00 TUESDAY POSTER SESSION B (TuP1 ... TuP47)

**Wednesday June 21st, 2017**

9:00 - 9:45 **Ilya Akimov**, (TU Dortmund, Germany)
*Long-term photon echoes retrieved from electron spin ensemble in semiconductor nanostructures* - WeI1

9:45 - 10:00 **Magnus Molitor**, D. Wigger, T. Kuhn, D.E. Reiter
*Theoretical Description of Two Dimensional Spectroscopy in a CdTe Quantum Dot doped with a Single Mn Ion* - WeO1

10:00 - 10:15 **Aleksander Bogucki**, M. Goryca, W. Pacuski, P. Kossacki
*Determination of strain-related spin Hamiltonian parameters by angle-dependent optically detected magnetic resonance* - WeO2

10:15 - 10:30 **Michael Hakl**, S. Tchoumakov, I. Crassee, A. Akrap, B. Piot, C. Faugeras, G. Martinez, O. Caha, J. Novak, E. Arushanov, A. Nateprov, W. Lee, M. Goerbig, M. Potemski, M. Orlita
*Landau level spectroscopy of Kane electrons in Cadmium Arsenide* - WeO3

10:30 - 10:45 **Krzysztof Ptaszyński**
*Waiting time distribution revealing the internal spin dynamics in a double quantum dot* - WeO4

10:45 - 11:15 Coffee Break

11:15 - 12:00 **Pavlos Lagoudakis**, (University of Southampton, United Kingdom)
*Polariton lattices: a novel platform for analogue simulation* - WeI2

12:00 - 12:15 M. Król, R. Mirek, K. Lekenta, J.G. Rousset, M. Matuszewski, M. Nawrocki, W. Pacuski, J. Szczytko, **Barbara Piętka**
*Spin polarization of semimagnetic exciton-polariton condensates in semiconductor microcavities* - WeO5

12:15 - 12:30 **Maciej Pieczarka**, M. Syperek, Ł. Dusanowski, J. Misiewicz, F. Langer, C. Schneider, S. Hoefling, G. Sęk
*Spatial Dynamics of an Extended Exciton-Polariton Condensate in a Disordered Environment* - WeO6

12:30 - 12:45 B. Pietka, N. Bobrovska, D. Stephan, M. Teich, M. Król, S. Winnerl, A. Pashkin, R. Mirek, K. Lekenta, F. Morier-Genoud, H. Schneider, B. Deveaud, M. Helm, M. Matuszewski, **Jacek Szczytko**
*Exciton-polaritons in a strong terahertz field - doubly dressed bosons* - WeO7

12:45 - 13:00 **Joe Wilkes**, C. Mills

*Electrically driven crossover from repulsive to attractive interactions between dipolar excitons* - WeO8

13:00 - 14:30 Lunch Break

14:30 - 15:30 WEDNESDAY POSTER SESSION A (WeP1 ... WeP47)

18:30 - 19:30 Dinner

19:30 - 20:15 **Joanna Jadczak**, (Wrocław University of Technology, Poland)

*Free and localized excitonic complexes in atomically thin transition metal dichalcogenides* - WeI3

20:15 - 20:30 **Aleksandra Łopion**, M. Goryca, K. Nogajewski, M. Potemski, P. Kossacki

*Temperature dependent photoluminescence lifetime of atomically thin $WSe_2$ layer* - WeO9

20:30 - 20:45 **Johannes Binder**, R. Stepniewski, W. Strupinski, A. Wysmolek

*Measurement and Manipulation of the Carrier Concentration of Graphene Directly on Conductive Substrates* - WeO10

20:45 - 21:00 **Ewa Łacińska**, I. Lutsyk, Z. Klusek, A. Wysmołek

*Raman scattering spectra of 1T-$TaS_2$* - WeO11

21:00 - 22:00 WEDNESDAY POSTER SESSION B (WeP1 ... WeP47)

**Thursday June 22nd, 2017**

9:00 - 9:45 **Enrique Calleja** (ETSI Telecomunicacion. Polytechnical University, Spain)
*III-Nitride Nanostructures: some Basics and Applications* - ThI1

9:45 - 10:00 **Marcin Siekacz**, P. Wolny, G. Staszczak, T. Suski, E. Grzanka, I. Gorczyca, T. Ernst, M. Anikeeva, T. Schulz, M. Albrecht, C. Skierbiszewski
*The Digital Alloy of InN/InGaN Superlattices Grown by Plasma Assisted MBE* - ThO1

10:00 - 10:45 **Marc Assmann** (TU Dortmund, Germany)
*Rydberg Excitons in $Cu_2O$* - ThI2

10:45 - 11:15 Coffee Break

11:15 - 12:00 **Piotr Wojnar** (Institute of Physics, Polish Academy of Sciences, Poland)
*Optically active heterostructures in II-VI nanowires* - ThI3

12:00 - 12:15 **Kacper Oreszczuk**, M. Goryca, W. Pacuski, T. Smoleński, M. Nawrocki, P. Kossacki
*Origin of luminescence quenching in structures containing CdSe/ZnSe quantum dots with a few $Mn^{2+}$ ion* - ThO2

12:15 - 12:30 **Michał Szot**, S. Chusnutdinow, K. Dybko, B. Turowski, A.M. Witowski, L. Kowalczyk, M. Wiater, T. Wojtowicz, T. Story, G. Karczewski
*Single PbSe/CdSe quantum well studied by photoluminescence* - ThO3

12:30 - 12:45 **Rafał Kuna**, S. Petit, P. Baroni, R. Minikayev, A. Szczerbakow, W. Szuszkiewicz
*Temperature Dependence of Phonon Dispersion and TO-Phonon Anharmonicity in PbTe and (Pb,Cd)Te Solid Solution* - ThO4

12:45 - 13:00 **Tomasz Słupiński**, D. Wasik, J. Przybytek
*Chemical partial short-range order (SRO) of donor impurity atoms in double-doped GaAs:Te,Ge above the equilibrium doping limit from Hall effect under pressure studies* - ThO5

13:00 - 14:30 Lunch

20:00 **Conference Banquet**

**Friday June 23rd, 2017**

10:00 - 10:45 **Marek Napiórkowski** (University of Warsaw)
*Nobel Prize in Physics in 2016* - FrI1

10:45 - 11:15 Coffee Break

11:15 - 11:30 **Ivan Yahniuk**, Krishtopenko, G. Grabecki, C. Consejo, B. Jouault, A.M. Kadykov, M. Majewicz, G. Cywiński, J. Wróbel, V.I. Gavrilenko, T. Dietl, S.A. Dvoretsky, N. N. Mikhailov, F. Teppe, W. Knap
*Graphene-like band structure (Hg,Cd)Te Quantum Wells for Quantum Hall Effect Metrology Applications* - FrO1

11:30 - 11:45 **Ewa Bobko**, D. Płoch, D. Śnieżek, M. Majewicz, M. Fołtyn, M. Wiater, T. Wojtowicz, J. Wróbel
*University of Rzeszow* - FrO2

11:45 - 12:00 **Kajetan Fijalkowski**, S. Grauer, S. Schreyeck, M. Winnerlein, K. Brunner, R. Thomale, C. Gould, L.W. Molenkamp
*Axionic Screening in the Scaling of the Quantum Anomalous Hall Effect* - FrO3

12:00 - 12:45 **Haim Beidenkopf** (Weizmann Institute of Science, Israel)
*Surface Fermi arcs to bulk Weyl semimetal correspondence*- FrI2

12:45 - 13:00 **Andrzej Wysmołek – Conference closing address**

13:00 - 14:00 Lunch

14:30 Departure of conference buses to Bielsko-Biała

## Monday Poster Session

1. *K. Gołasa, Ł. Bala, M. Bartos, M.R. Molas, K. Nogajewski, A. Wysmołek, A. Babiński, M. Potemski*
   Excitonic Properties Of Superacid Treated $MoS_2$ Monolayer
2. *M. Gawełczyk, K. Gawarecki, P. Machnikowski*
   The impact of adjacent defects on the optical properties of quantum dots
3. *M. Gawełczyk, P. Machnikowski*
   The role of the intraband dipole moment in the luminescence from highly elongated quantum dots
4. *M. Sadek, J.A. Majewski*
   Investigation of graphene interactions with hexagonal boron nitride layers - the density functional studies
5. *A. Ciechan, P. Bogusławski*
   Electronic and magnetic structure of 3d impurities in ZnO: Fermi level effects on p-d coupling
6. *G.V. Lashkarev, M.V. Radchenko, M.E. Bugaiova, E.I. Slynko, V.I. Ivanov, W. Knoff, T. Story, A.I. Dmitriev*
   Temperature Dependence Magnetic Anisotropy in $Co/Al_2O_3$ Nanocomposite Films.
7. *L.I. Ovsiannikova, G.V. Lashkarev, V.V. Kartuzov, M. Godlewski*
   The study of native defects and their interaction with donor Al impurity in ZnO by the help of fullerene like model
8. *K. Łempicka, K. Norowski, K. Lekenta, M. Grzeszczyk, B. Piętka, J. Szczytko*
   Correlation between optical properties and thickness of the exfoliated transition metal dichalcogenides – $MoS_2$, $MoSe_2$, $MoTe_2$, $WSe_2$
9. *O. Kravcov, J. Mickevičius, G. Tamulaitis*
   Recombination Dynamics In III-Nitride Semiconductors With Carrier Localization
10. *A. Wardak, A. Mycielski, D. Kochanowska, M. Witkowska-Baran, B. Witkowska, M. Szot, J. Domagała, R. Jakieła, B. Witkowski, A. Reszka*
    Influence of annealing on the Cd(Te,Se) and (Cd,Mn)(Te,Se) crystals properties
11. *B.A. Orłowski, M. Galicka, K. Gwóźdź, E. Płaczek-Popko, S. Chusnutdinow, M.A. Pietrzyk, B.J. Kowalski*
    Illumination Intensity Spectra of semiconductors junction
12. *A.M. Witowski, K. Gas, W. Szuszkiewicz*
    Multiphonon Absorption as a Test of Lattice Vibration Model: ZnO Case
13. *E. Łusakowska, S. Adamiak, P. Adamski, R. Kuna, R. Minikayev, P. Skupiński, A. Szczerbakow, W. Szuszkiewicz*
    Young's Modulus Anisotropy in Semiconductors Crystallizing in the Rock Salt Structure: (Pb,Cd)Te and (Pb,Sn)Se Solid Solutions
14. *A. Opala, M. Pieczarka, G. Sęk*
    Optical Trapping and Propagation of Nonresonantly Driven One-Dimensional Exciton-Polariton Condensate

15. *B. Seredyński, M. Król, P. Starzyk, R. Mirek, D. Stephan, J. Szczytko, B. Piętka, W. Pacuski*
    Lift-off process for II-VI semiconductor microcavity and for optical transmission studies of exciton-polaritons
16. *A. Sulich, E. Łusakowska, P. Dziawa, J.Z. Domagala*
    Structural Anisotropy of MBE-grown CdTe/SnTe/CdTe//GaAs(001)
17. *D. Benyahia, Ł. Kubiszyn, K. Michalczewski, A. Kębłowski, P. Martyniuk, J. Piotrowski, A. Rogalski*
    Comparative Study of the Molecular Beam Epitaxial Growth of InAs/GaSb Superlattices on GaAs and GaSb Substrates
18. *M. Omelchenko, J. Wojnarowicz, J. Rybusinski, A. Majhofer, A. Twardowski, W. Lojkowski, J. Szczytko*
    Magnetic properties of $Zn_{1-x}Mn_xO$ and $Zn_{1-x}Co_xO$ nanoparticles synthesized by solvothermal method
19. *I. Ilkiv, K. Kotlyar, D. Amel'chuk, S. Lebedev, A. Bouravleuv*
    Thermal penetration of gold nanoparticles into silicon oxide
20. *T. Tarkowski, J. Łusakowski*
    Surface metallic pattern for enhancement of a THz field in a two-dimensional electron plasma
21. *K. Michalczewski, Ł. Kubiszyn, D. Benyahia, A. Kębłowski, P. Martyniuk, J. Piotrowski, A. Rogalski*
    Dark current reduction in InAsSb mid-wave infrared HOT detectors through two step passivation technique
22. *M. Kupczynski, P. Kaczmarkiewicz, B. Jaworowski, P. Potasz*
    Stability of FCI states on kagome lattice
23. *J. Polaczyński, A. Witowski, M. Szot, M. Zięba, T. Story*
    Mid-infrared Optical Properties of Epitaxial $Sn_{1-x}Mn_xTe$ Layers ($x \approx 0.04$)
24. *M. Bieniek, P. Potasz, A. Wójs*
    Electronic and thermoelectric properties of bismuth (111) bilayer
25. *M. Bieniek, L. Szulakowska, P. Potasz, I. Ozfidan, M. Korkusiński, P. Hawrylak*
    Band nesting, massive Dirac Fermions and valley Lande and Zeeman effects in transition metal dichalcogenides
26. *A. Reszka, K.P. Korona, G. Tchutchulashvili, M. Sztyber, A. Pieniążek, M. Sobanska, K. Klosek, Z.R. Zytkiewicz, B.J. Kowalski*
    Cross-sectional cathodoluminescence and EBIC characterization of (Al,Ga)N/GaN nanowire light emitting diodes
27. *K. Gas, G. Kunert, D. Sztenkiel, S. Figge, T. Baraniecki, R. Jakieła, D. Hommel, M. Sawicki*
    Quantitative Studies of Magnetic Anisotropy in Insulating Dilute Ferromagnet (Ga,Mn)N
28. *D. Gilek, K.E. Hnida, G.D. Sulka*
    Synthesis and heat treatment of semiconducting InSb nanowires with different diameters

29. *T. Chwiej*
    Effect of Single Ultrashort Magnetic Pulse On Energy Subbands Dynamics In Bilayer Nanowire
30. *A. Maryński, P. Mrowiński, P. Podemski, K. Gawarecki, P. Machnikowski, A. Musiał, J. Misiewicz, D. Quandt, A. Strittmatter, S. Rodt, S. Reitzenstein, G. Sęk*
    Optimizing the InGaAs/GaAs quantum dots for 1.3 µm emission
31. *M. Król, R. Mirek, K. Lekenta, K. Nogajewski, M.R. Molas, A. Ciesielski, A. Babiński, M. Potemski, J. Szczytko, B. Piętka*
    Photoluminescence from the $WSe_2$ monolayers embedded in dielectric cavities
32. *F. Spitzer, O. Borovkova, I.A. Akimov, V.I. Belotelov, M. Wiater, T. Wojtowicz, G. Karczewski, D. Yakovlev, M. Bayer*
    Exciton-assisted TMOKE in CdMnTe/CdMgTe quantum well structures
33. *J. Pawlowski*
    Valley qubit in gated MoS$_2$ monolayer quantum dot
34. *P. Holewa, Ł. Dusanowski, P. Mrowiński, A. Musiał, J. Misiewicz, D. Quandt, A. Strittmatter, T. Heuser, N. Srocka, S. Rodt, S. Reitzenstein, G. Sęk*
    High-Purity Single Photon Emission from InGaAs/GaAs Quantum Dots in the Telecommunication O-Band
35. *P. Klenovský, J. Aberl, J.S. Wildmann, J. Martín-Sánchez, T. Fromherz, E. Zallo, J. Humlíček, A. Rastelli, R. Trotta*
    Inversion of permanent exciton dipole moment in self-assembled In(Ga)As quantum dots using nonlinear “piezotronic” effect
36. *P.T. Różański, M. Zieliński*
    Efficient atomistic calculation of excitonic properties of crystal-phase quantum dots
37. *W. Rudno-Rudziński, M. Syperek, A. Maryński, J. Andrzejewski, J. Misiewicz, S. Bauer, V.I. Sichkovskyi, J.P. Reithmaier, G. Sęk*
    Dynamic and polarisation properties of InAs/InAlGaAs/InP hybrid quantum well-quantum dot structures emitting at 1.55 µm
38. *M. Kuhnert, F. Saeed, I.A. Akimov, V.L. Korenev, G. Karczewski, T. Wojtowicz, A.S. Bhatti, D.R. Yakovlev, M. Bayer*
    Spin pumping of resident electrons in CdTe quantum wells under resonant excitation of trions with a periodic sequence of optical pulses
39. *L. Wang, M. Yin, J. Jaroszynski, J.H. Park, G. Mbamalu, T. Datta*
    Linear magnetoresistance in 3-dimensional carbon nanostructure with periodic spherical voids
40. *M.J. Grzybowski, M. Majewicz, P. Wadley, K.W. Edmonds, R. Campion, B.L. Gallagher, T. Dietl, M. Sawicki*
    Fabrication of CuMnAs Microdevices for Imaging Current-Induced Switching of Single Antiferromagnetic Domains
41. *K. Kluczyk, Z. Krzemińska, W.A. Jacak*
    Absorption enhancement in Si solar cells by incorporation of metallic nano-particles: improved COMSOL numerical study including quantum corrections

42. *D. Śnieżek, K. Dybko, P. Dziawa, M. Szot, R. Rudniewski, M. Aleszkiewicz, M. Wiater, T. Wojtowicz, T. Story, T. Dietl, J. Wróbel*
    Non-local transport in multi-terminal nanostructure patterned of a 3-dimensional topological crystalline insulator SnTe
43. *P. Bugajny, P. Potasz, A. Wójs*
    Topological Mott Insulator
44. *B.S. Witkowski, P. Dłużewski, Ł. Wachnicki, S. Gierałtowska, B. Kurowska, M. Godlewski*
    Ultra-fast epitaxial growth of ZnO nano/microrods on a GaN substrate, using the microwave-assisted hydrothermal method
45. *K. Gwóźdź, E. Płaczek-Popko, E. Zielony, Z. Gumienny, K.M. Paradowska, R. Pietruszka, B.S. Witkowski, K. Kopalko, M. Godlewski*
    Defects in ZnO/Si and ZnO NR/Si heterojunctions
46. *K.M. Paradowska, E. Przeździecka, E. Zielony, A. Wierzbicka, M. Stachowicz, R. Jakieła, W. Lisowski, A. Reszka, E. Płaczek-Popko, A. Kozanecki*
    Structural studies of PA-MBE ZnO layers doped with antimony
47. *E. Zielony, F. Oriold, K. Gwóźdź, E. Płaczek-Popko, K. Paradowska, M.A. Pietrzyk, A. Kozanecki*
    Electro-optical studies of deep levels in MBE grown n-ZnMgO/p-Si heterostructures with ZnO/ZnMgO quantum wells
48. *N. Tataryn, O. Yastrubchak, Ł. Gluba, M. Sawicki, J.Z. Domagała, T. Wosiński, J. Żuk, W. Grudzinski, J. Sadowski*
    Fundamental properties investigation of (Ga,Mn)As and (Ga,Fe)As LT-MBE layers

**Tuesday Poster Session**

1. *A. Musiał, Ł. Dusanowski, P. Mrowiński, J. Misiewicz, T. Heuser, N. Srocka, D. Quandt, A. Strittmatter, S. Rodt, S. Reitzenstein, G. Sęk*
   Biexciton-exciton cascade in MOCVD-grown GaAs-based QDs emitting at 1.3 µm
2. *A.I. Ievtushenko, V.A. Karpyna, P.M. Lytvyn, A.A. Korchovyi, S.P. Starik, O.I. Olifan, S.F. Korichev, S.V. Tkach, E.F. Kuzmenko, V.A. Baturin, O.Y. Karpenko, G.V. Lashkarev*
   Influence of Technological Parameters on the Properties of NiO Thin Films Deposited on Si and Glass Substrates by the Layer-by-layer Growth Method at Magnetron Sputtering
3. *A.I. Ievtushenko, V.A. Karpyna, O.I. Bykov, V.V. Strelchuk, O.F. Kolomys, S.V. Rarata, O.I. Olifan, V.A. Baturin, O.Y. Karpenko, G.V. Lashkarev*
   Investigation of Al-doped ZnO Thin Films Deposited by Magnetron Sputtering on Si and Glass Substrates at Various Bias Voltages
4. *P. Kapuściński, J. Jadczak, Y.S. Huang, A. Wójs, L. Bryja*
   Influence of the substrate and environment on the optical properties of the $WSe_2$ monolayers
5. *L.Yu. Kharkhalis, K.E. Glukhov, T. Babuka*
   Electronic and Optical Properties of Heterostructures Based on Indium Chalcogenides
6. *T. Babuka, K. Glukhov, M. Makowska-Janusik, Y. Vysochanskii*
   Layered $AgInP_2S_6$ semiconductor: insight into properties of the $Me1Me2P_2X_6$ crystalline family
7. *B. Sawicki, M. Piz, E. Filipek, T. Groń, H. Duda*
   Electrical transport properties of $Yb_{8-x}Y_xV_2O_{17}$ (x=0, 2, 8)
8. *J. Sito, M. Grodzicki, R. Wasielewski, K. Lament, P. Mazur, A. Ciszewski*
   Electronic Properties of Structures Containing Films of Alq3 and LiBr Deposited on Si Crystals
9. *K. Lament, M. Grodzicki, W. Kamiński, P. Mazur, A. Ciszewski*
   Photoelectron Spectroscopy Studies of PTCDI-C8 Thin Films Growth on Si(100) and Si(110)
10. *M. Tokarczyk, A.K. Dąbrowska, K. Pakuła, G. Kowalski, A. Wysmołek, R. Stępniewski*
    Structural Investigations of sp2 - Hybridized BN Layers Grown on Sapphire/AlN Substrates by Low Pressure MOVPE
11. *J.-G. Rousset, M. Król, R. Mirek, K. Lekenta, J. Szczytko, B. Piętka, M. Nawrocki, W. Pacuski*
    Effect of Magnetic Field on the Condensation Threshold of Semimagnetic Cavity Polaritons
12. *R. Mirek, M. Król, K. Lekenta, J.G. Rousset, M. Nawrocki, W. Pacuski, M. Matuszewski, A. Pashkin, H. Schneider, M. Helm, D. Stephan, J. Szczytko, B. Piętka*
    Tuning of localized exciton-polariton condensates in external magnetic field.
13. *T. Słupiński, W. Pacuski, J. Suffczyński*
    Growth by MBE and magneto-photoluminescence of single quantum dots $In_{0.4}Al_{0.45}Ga_{0.15}As$:Mn / $Al_{0.75}Ga_{0.25}As$ doped with single Mn impurity

14. *S. Adamiak, K. Matracki, E. Dynowska, P. Dziawa, B. Taliashvili, M. Wiater, T. Wojtowicz, w. Szuszkiewicz*
    Microhardness Measurements for MBE-Grown, Metal Telluride Layers: 'Pop-In' Effect and Dislocations
15. *S. Adamiak, M. Zieba, R. Minikayev, A. Reszka, B. Taliashvili, W. Szuszkiewicz*
    Microhardness and Young's Modulus of Thin, MBE-Grown, (Sn,Mn)Te Layers Containing up to 8% of MnTe
16. *J. Płachta, M. Szot, A. Kaleta, S. Kret, A. Petruchik, L.T. Baczewski, G. Karczewski, T. Wojtowicz, J. Kossut, P. Wojnar*
    Growth and properties of type II ZnTe/CdSe radial nanowire heterostructures
17. *J. Płachta, E. Grodzicka, A. Kaleta, M. Goryca, T. Kazimierczuk, L.T. Baczewski, A. Petruchik, G. Karczewski, T. Wojtowicz, J. Kossut, P. Wojnar*
    Light hole excitons in (Cd,Mn)Te/(Cd,Mg)Te core/shell nanowires
18. *J. Kutrowska-Girzycka, J. Jadczak, E. Zdanowicz, A. Wójs, L. Bryja*
    Optical probing of the dispersive 'b'-mode in 1L-$MoS_2$
19. *M. Ściesiek, W. Pacuski, J.G. Rousset, M. Parlińska-Wojtan, A. Golnik, J. Suffczyński*
    Optical Properties of Coupled Photonic Molecules in Single Micropillar Geometry
20. *P. Karwat, D.E. Reiter, T. Kuhn, P. Machnikowski, O. Hess*
    Thermal phonon lasing in nanoscopic quantum systems
21. *N. Nouri, P. Potasz, M. Bieniek, P. Hawrylak, A. Wojs*
    Analysis of electronic and optical properties of $MoS_2$ monolayer and nanostructures using minimal-basis tight-binding model
22. *G. Tchutchulashvili, K.P. Korona, K. Klosek, M. Sobanska, Z.R. Zytkiewicz*
    GaN/polymer nanostructures for hybrid photovoltaic applications
23. *P.A. Dróżdż, M. Sarzyński, K.P. Korona, R. Czernecki, T. Suski*
    Achieving monolithic wideband InGaN/GaN LED arrays.
24. *K.P. Korona, T. Slupinski, J. Borysiuk, R. Bożek, J. Papierska, J. Suffczynski*
    Dynamics of Exciton Transport and Recombination in InAlGaAs Quantum Dots
25. *K.P. Korona, A.K. Dąbrowska, K. Pakuła, I. Własny, A. Wysmołek, R. Stępniewski*
    Ultraviolet Photoluminescence of Hexagonal Boron Nitride
26. *A. Rodek, P. Starzyk, T. Kazimierczuk, P. Kossacki*
    Spectroscopy of single II-VI quantum dots using single-mode optical fibers.
27. *D. Biegańska, W. Rudno-Rudziński, M. Pieczarka, C. Gilfert, E.M. Pavelescu, J.P. Reithmaier, F. Lelarge, B. Rousseau, M. Syperek, J. Misiewicz, G. Sęk*
    Lateral Diffusion of Photogenerated Carriers in Coupled Quantum Dot – Quantum Well Structures Emitting at 1.55 µm
28. *P. Mrowiński, Ł. Dusanowski, A. Somers, S. Höfling, J.P. Reithmaier, J. Misiewicz, G. Sęk*
    InAs on InP quantum dashes as single photon emitters at the second telecommunication window: optical, kinetic and excitonic properties

29. *K. Połczyńska, E. Janik, P. Kossacki, W. Pacuski*
    Coupling of quantum dots with quantum wells in a system based on (Cd,Mg)Te
30. *M. Deresz, G. Karczewski, T. Wojtowicz, J. Łusakowski*
    Photoluminescence of CdTe/CdMgTe double quantum wells with a two-dimensional electron gas
31. *M. Świderski, M. Zieliński*
    Atomistic theory of excitonic fine structure in $InAs_xP_{1-x}$/InP nanowire quantum dot molecules
32. *P. Karwat, K. Gawarecki, P. Machnikowski*
    Polaron states in two coupled self-assembled quantum dots
33. *P. Steindl, P. Klenovsky, D. Geffroy*
    Multi-excitonic structure of type-II quantum dots
34. *P.A. Starzyk, B. Seredyński, W. Pacuski, P. Kossacki, T. Kazimierczuk*
    Towards resonant spectroscopy of individual quantum dots: development of structures and experimental techniques
35. *A. Grochot, W. Knoff, B. Taliashvili, W. Wołkanowicz, R. Minikayev, A. Pieniążek, M. Sawicki, W. Jantsch, T. Story, H. Przybylińska*
    Magnetic and structural studies of GeMnSnTe epitaxial layers
36. *G.P. Mazur, J. Sadowski, T. Story, M. Sawicki, T. Dietl*
    Critical behaviour of resistivity in dilute ferromagnetic semiconductors
37. *D. Yavorskiy, K. Karpierz, P. Kopyt, M. Grynberg, J. Łusakowski*
    Sub-terahertz emission form field-effect transistors
38. *D. Yavorskiy, K. Karpierz, M. Grynberg, J. Łusakowski*
    Response of InSb at sub-THz and THz frequencies
39. *Z. Ogorzałek, M. Gryglas-Borysiewicz, A. Kwiatkowski, A. Lemaître, M. Sawicki, M. Baj, D. Wasik*
    Magnetocurrent Anisotropy of (Ga,Mn)As/GaAs Esaki Diodes
40. *B. Kuśmierz, A. Wójs*
    Jack states and two-body pseudopotentials
41. *T. Woźniak, J. Jadczak, P. Scharoch, A. Wójs*
    First-principles investigations of lattice dynamics of chosen transition metal dichalcogenides systems
42. *E. Łusakowska, A. Szczerbakow, P. Dziawa, R. Minikayev, A. Reszka, T. Story*
    Atomic steps at cleaved (001) surface of bulk $Pb_{1-x}Sn_xSe$ topological crystalline insulator crystals
43. *D. Jarosz, H. Teisseyre, M. Stachowicz, J. Domagała, A. Kozanecki*
    Influence of substrate temperature on incorporation of magnesium into ZnMgO layers grown by PA-MBE.
44. *M.A. Pietrzyk, M. Stachowicz, P. Dluzewski, A. Wierzbicka, D. Jarosz, A. Kozanecki*
    Characterization of ZnO/ZnMgO quantum wells in ZnMgO nanocolumns grown on polar and semi-polar $Al_2O_3$ substrate by MBE

45. *P. Podemski, A. Maryński, M. Pieczarka, J. Misiewicz, G. Sęk*
    Photoluminescence Excitation Spectroscopy of Zero-dimensional Nanostructures at Telecommunication Wavelengths
46. *M. Masłyk, M.A. Borysiewicz, K.D. Pągowska, M. Wzorek, M. Ekielski, E. Kamińska*
    Enhanced Luminescence of GaN-based UV LED With ZnMgO:Al Transparent p-Type Electrode by The Application of a Thin Ni Interlayer
47. *M. Wlazło, J.A. Majewski*
    Ab Initio Free Energy Profiles of Methane Decomposition on Graphene

**Wednesday Poster Session**

1. *P. Mickiewicz, G. Gawlik, P. Cieplewski, W. Strupiński, J.M. Baranowski, M. Kamińska, A. Drabińska*
   Contactless weak localization measurements of graphene implanted with $He^+$ ions
2. *T. Tarkowski, J.A. Majewski, N. GonzalezSzwacki*
   What is the true structure of borophene?
3. *T. Smolenski, T. Kazimierczuk, M. Goryca, M. Koperski, M. Molas, C. Faugeras, A. Bogucki, K. Nogajewski, M. Potemski, P. Kossacki*
   Magnetic Field Induced Polarization Enhancement in Monolayer Tungsten Dichalcogenides
4. *R. Wasielewski, M. Grodzicki, J. Sito, K. Lament, P. Mazur, A. Ciszewski*
   Morphology of Ruthenium Thin Films on n-type GaN(0001)
5. *T. Groń, E. Tomaszewicz, M. Berkowski, J. Kusz, M. Oboz, B. Sawicki*
   Structural, electrical and magnetic properties of $Yb^{3+}$-doped cadmium molybdato-tungstate single crystal
6. *K. Ryczko, G. Sęk*
   Towards broad and spectrally tuned polarization-independent gain of interband cascade lasers in the mid-infrared
7. *D. Głowienka, J. Szmytkowski*
   Modeling of transient photocurrent in organic semiconductors incorporating the annihilation of excitons on charge carriers
8. *D. Ziemkiewicz, S. Zielińska-Raczyńska, G. Czajkowski*
   Electro- and Magneto-optical Functions of Rydberg Excitons
9. *D. Ziemkiewicz, S. Zielińska-Raczyńska, G. Czajkowski*
   Electromagnetically Induced Transparency and nonlinear optics with Rydberg Excitons in Cu2O
10. *P. Grzączkowska, J. Mikulski, P. Kowalik, T. Wojciechowski, K. Fronc, R. Rudniewski, R. Minikayev, M. Łapiński, A. Gardias, J. Rybusiński, D. Elbaum, B. Sikora, A. Twardowski, J. Szczytko*
    Preparation and Characterization of Magnetic $Fe_3O_4$ Nanoparticles Doped with Yttrium Ions with Potential Application in Biomedicine
11. *P. Dziawa, J. Sadowski, S. Kret, A. Kaleta, W. Knoff, M. Wojtyniak, T. Story*
    Characterization of SnTe Nanowires and Nanoplates Grown by MBE on Graphene
12. *S.A. Barakat*
    Structural and Optical Properties of ZnS Thin Films Prepared by Chemical Bath Deposition Technique
13. *A. Mielnik-Pyszczorski, K. Gawarecki, P. Machnikowski*
    Conduction Band Effective Mass Equation for a Nanostructure

14. *G. Lashkarev, D. Myroniuk, M. Godlewski, R. Pietruszka, V. Maslyuk, M. Dranchuk, V. Karpyna, I. Timofeeva, L. Petrosyan*
    Electron irradiation effect on crystal structure and electrical properties of aluminum doped ZnO films
15. *M. Radchenko, A. Baibara, M. Bugayova, G. Lashkarev, Y. Stelmakh, L. Krushinskaya, W. Knoff, T. Story*
    New features of giant thermoelectric power in magnetic field for $Co/Al_2O_3$ nanocomposites below the percolation threshold
16. *G. Grabecki, K. Grasza, W. Paszkowicz, P. Skupiński, A. Avdonin, I. Yahniuk, E. Łusakowska, R. Jakieła, A. Barcz, A. Reszka, M. Majewicz, K. Dybko, A. Łusakowski, T. Dietl*
    Temperature Driven n to p Transition in $(Cd_{0.40}Zn_{0.60})_3As_2$
17. *J. Rybusiński, A. Gardias, M. Król, R. Mirek, B. Sikora, P. Kowalik, I. Kamińska, T. Wojciechowski, K. Fronc, D. Elbaum, A. Majhofer, A. Twardowski, J. Szczytko*
    Magnetic properties and up-conversion of $NaYF_4$ nanoparticles doped with rare earth elements, for bio-medical imaging and treatment.
18. *K. Lekenta, K. Łempicka, M. Król, M. Omelchenko, R. Mirek, E. Górecka, D. Pociecha, A. Ciesielski, K. Nogajewski, M.R. Molas, M. Potemski, B. Piętka, J. Szczytko*
    Temperature tunable liquid crystal mirror for the construction of optical cavities
19. *M. Trzyna, W. Bochnowski, S. Adamiak, A. Dziedzic, N. Berchenko, J. Cebulski*
    Investigation of oxide layers produced on the stainless steel after annealing
20. *M. Brzezińska, M. Bieniek, P. Potasz, A. Wójs*
    Entanglement spectrum of bismuth-based thin films
21. *K. Kalbarczyk, M. Foltyn, R. Adhikari, A. Bonanni, T. Dietl, M. Sawicki*
    Achieving electrical connections to (sub-)micrometer size vertical transport structures based on GaN.
22. *M. Grodzicki, P. Mazur, A. Ciszewski*
    Modification of Electronic Structure of GaN(0001) Surface by N-ion Bombardment
23. *V. Janonis, V. Jakštas, I. Kašalynas, P. Prystawko, M. Leszczynski*
    Reflectivity of plasmon–phonon modes in grating-coupled AlGaN/GaN heterostructures grown on SiC and GaN substrates
24. *R.R. Reznik, I.V. Ilkiv, K.P. Kotlyar, I.P. Soshnikov, I.V. Shtrom, E.V. Nikitina, S.A. Kukushkin, A.V. Osipov, G.E. Cirlin*
    MBE Growth and Optical Properties of GaN, InN and $A^3B^5$ Nanowires on SiC/Si(111) Hybrid Substrate
25. *A. Rimkus, E. Pozingyte, R. Nedzinskas, B. Čechavičius, J. Kavaliauskas, G. Valušis, L. Li, E.H. Linfield*
    Optical study of vertically elongated InGaAs/GaAs quantum dots grown using $As_2$ and $As_4$ sources
26. *J. Mikulski, B. Sikora, K. Fronc, Z. Adamus, P. Aleshkevych, P. Wojnar, Ł. Kłopotowski, J. Kossut*
    Synthesis and magnetooptical studies of colloidal CdSe/ZnSe quantum dots doped with copper

27. *K. Gawarecki, P. Machnikowski*
    Fine structure of hole states in a self-assembled quantum dot
28. *O. Volnianska, P. Boguslawski*
    Electronic and magnetic properties of Cu in wurtzite bulk and quantum dot (QD) ZnO. GGA +U approach
29. *P. Mrowiński, K. Gawarecki, P. Machnikowski, A. Musiał, J. Misiewicz, N. Srocka, T. Heuser, D. Quandt, A. Strittmatter, S. Rodt, S. Reitzenstein, G. Sęk*
    Excitonic complexes in single InGaAs/GaAs quantum dots emitting at the telecommunication O-band
30. *P.A. Wroński, M. Pieczarka, J.-G. Rousset, M. Nawrocki, W. Pacuski, G. Sęk*
    Impact of Disorder on Properties of CdTe-Based Strongly Coupled Quantum Well – Microcavity System: Temperature Dependence
31. *V.Yu. Ivanov, T.S. Shamirzaev, D.R. Yakovlev, M. Bayer*
    ODMR of photoexited electrons in indirect band gap (In,Al)As/AlAs QDs with type-I band alignment
32. *D. Sztenkiel, W. Zaleszczyk, M. Foltyn, M. Sawicki, T. Wojtowicz, T. Dietl*
    Towards electrical control of magnetization in (Zn,Mn)Te:N
33. *T. Groń, M. Piątkowska, E. Tomaszewicz, M. Oboz, H. Duda*
    Spin-orbit coupling in $Ca_{1-x}Mn_x(MoO_4)_{0.50}(WO_4)_{0.50}$ solid solution (where 0 < x £ 0.15)
34. *M. Krzykowski, M. Gawełczyk, K. Gawarecki, P. Machnikowski*
    Controlling electron spin decoherence in a coupled quantum dot
35. *E. Maciążek, E. Malicka, M. Karolus, J. Panek, Z. Stokłosa, T. Groń, H. Duda, A. Gudwański*
    Magnetic characteristics of $CuCr_2S_4$ nanospinels obtained by mechanochemical synthesis of $CuS-Cr_2S_3$ (1:1) mixture
36. *O. Yastrubchak, Ł. Gluba, N. Tataryn, J.Z. Domagała, T. Wosiński, J. Żuk, W. Grudzinski, J. Sadowski*
    Band structure analysis of (Ga,Mn)(Bi,As) and (Ga,Bi)As epitaxial layers
37. *J. Wilkes, E.A. Muljarov, Y.Y. Kuznetsova, C.J. Dorow, E.V. Calman, L.V. Butov, K.L. Campman, A.C. Gossard*
    Indirect exciton transport in high magnetic fields
38. *L.V. Khoi, R.R. Gałązka*
    Fine Structure Splitting of Bright and Dark Mixed Excitons Bound to Single $Mn^{2+}$ Ions in Bulk Semimagnetic Semiconductor: $Zn_{1-x}Mn_xTe$
39. *K. Dybko, W. Zawadzki, M. Szot, A. Szczerbakow, M. Gutowska, T. Zajarniuk, A. Szewczyk, T. Story*
    Bulk reservoir in oscillatory charge transfer and magnetization of SnTe topological crystalline insulator
40. *A. Pieniążek, H. Teisseyre, D. Jarosz, B.S. Witkowski, A. Reszka, K. Kopalko, A. Kozanecki, M. Godlewski, B.J. Kowalski*
    Axial $ZnO/Zn_{1-x}Mg_xO$ multiple quantum wells on vertical ZnO microrods

41. *A. Łusakowski, W. Szuszkiewicz*
    Magnetic Anisotropy Energy in Highly Co-Doped ZnO: Results of ab initio Studies
42. *E. Guziewicz, E. Przezdziecka, D. Snigurenko, D. Jarosz, B.S. Witkowski, P. Dluzewski, W. Paszkowicz*
    Abundant Acceptor Luminescence from p-doped ZnO Films Grown under Oxygen-Rich Conditions
43. *E. Guziewicz, R. Ratajczak, M. Stachowicz, S. Prucnal, T.A. Krajewski, D. Snigurenko, K. Goscinski, A. Turos*
    Optical properties of epitaxial ZnO-ALD films implanted with Rare Earth
44. *K. Król, N. Kwietniewski, S. Gierałtwoska, Ł. Wachnicki, M. Sochacki*
    Electronic Properties of Stacked $ZrO_2$ Films Fabricated by Atomic Layer Deposition on 4H-SiC
45. *S.J. Zelewski, R. Kudrawiec*
    Photoacoustic Spectroscopy of Energy Gap in van der Waals Crystals
46. *A. Kwiatkowski, M. Baj, M. Kończykowski, A. Szczerbakow, K. Dybko, D. Wasik*
    Electron Transport Properties of $Pb_{0.7}Sn_{0.3}Se$ Irradiated with Electron Beam
47. *A.J. Wincukiewicz, K.P. Korona, M.K. Kamińska*
    Influence of thickness of hole transport layer on performance of perovskite solar cells