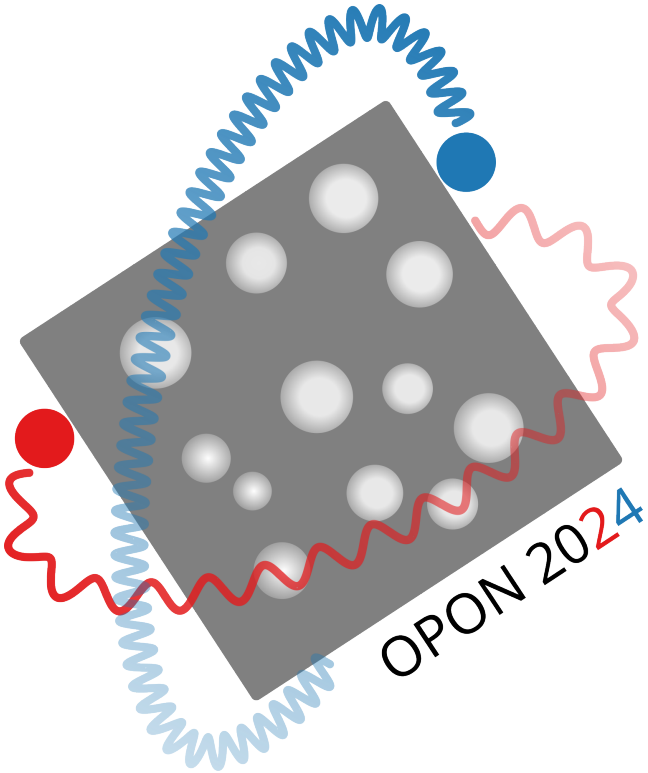
7th International Workshop on the Optical Properties of Nanostructures

Wrocław, 14-16 February 2024



Program

UNTERSTÜTZT VON / SUPPORTED BY

Alexander von HUMBOLDT STIFTUNG

Politechnika Wrocławska

Universität Münster

Schedule OPON 2024

	Wednesday 14 February	Thursday 15 February	Friday 16 February
09:00	Registration		
	Opening	Birowska	Cygorek
	Nysten	Bratschitsch	Villafañe
10:00	Hagen		
	Mayer	Grzybowski	Dalla
	Jürgens	Łopion	Michaelis de Vasconcellos
	Weiß	Woźniak	Mrowiński
11:00	Coffee Break	Coffee Break	Coffee Break
	Knorr	Niehues	Pieczarka
12:00	Rosati	Akimov	Goryca
	Zięba-Ostój	Dyksik	Gawełczyk
	Steeger	Kopteva	Closing
	Heckötter	Wagner	
13:00	Lunch	Lunch	Lunch
14:00			
	Reitzenstein	Bracht	
15:00	Gawarecki	Syperek	
	Vajner	Nimmesgern	
16:00	Coffee Break	Coffee Break	
	Kazimierczuk	Poster	
17:00	Wigger		
	Komar		
18:00	City walk		
19:00			
20:00			

Conference Program

Wednesday, 14 February 2024

08:45 – 09:00 Registration

09:00 – 09:15 Opening session

Session We A: *Phonons*

Chair: Tilmann Kuhn

09:15 – 09:45 We A-1 (invited)

E. D. S. Nysten[1], M. Weiß[1], B. Mayer[1], T. Petzak[2], C. Strobl[1], U. Wurstbauer[1], and H. J. Krenner[1]

[1]*Physikalisches Institut, University of Münster, Münster, Germany,* [2]*Lehrstuhl für Experimentalphysik 1, Universität Augsburg, Augsburg, Germany*

Acousto-optoelectric spectroscopy on transition metal dichalcogenide monolayer with surface acoustic waves

09:45 – 10:00 We A-2

P. C. A. Hagen[1], M. Bozzio[2], M. Cygorek[3], A. Vagov[1], D. E. Reiter[3], and V. M. Axt[1]

[1]*Universität Bayreuth, Bayreuth, Germany,* [2]*University of Vienna, VCQ, Vienna, Austria,* [3]*TU Dortmund, Dortmund, Germany*

Phonons can increase Photon Number Coherence

10:00 – 10:15 We A-3

B. Mayer, C. Strobl, M. Weiß, H. J. Krenner, U. Wurstbauer, and E. D. S. Nysten

Institute of Physics, University of Münster, Münster, Germany

Surface acoustic wave-controlled photocurrent in few-layer WSe_2

10:15 – 10:30 We A-4

K. Jürgens[1], D. Wigger[2], and T. Kuhn[1]

[1]*Institute of Solid State Theory, University of Münster, Münster, Germany,* [2]*Department of Physics, University of Münster, Münster, Germany*

Phonon sidebands in the absorption spectra of moiré exciton-polaritons

10:30 – 10:45 We A-5

D. D. Bühler[1], A. Crespo-Poveda[2], E. D. S. Nysten[3], J. J. Finley[4], K. Müller[4], P. V. Santos[2], M. M. De Lima Jr.[1], H. J. Krenner[3], and **M. Weiß**[3]

[1]*Materials Science Institute (ICMUV), Universitat de València, Valencia, Spain,* [2]*Paul-Drude-Institut für Festkörperelektronik, Berlin, Germany,* [3]*Institute of Physics, University of Münster, Münster, Germany,* [4]*Walter Schottky Institut and Electrical Engineering, TU München, Garching, Germany*

On-chip generation and dynamic piezo-optomechanical rotation of single photons

10:45 – 11:15 Coffee Break

Session We B: *Excitons*

Chair: Rudolf Bratschitsch

11:15 – 11:45 We B-1 (invited)

A. Knorr, L. Greten, H. Mittenzwey, R. Salzwedel, and M. Katzer

Nichtlineare Optik und Quantenelektronik von Halbleitern, Institut für Theoretische Physik, Technische Universität Berlin, Berlin, Germany

How to make dark excitons bright

11:45 – 12:15 We B-2 (invited)

R. Rosati[1], I. Paradisanos[2,3], L. Huang[4], Z. Gan[5], A. George[5], K. Watanabe[6], T. Taniguchi[6], L. Lombez[2], P. Renucci[2], A. Turchanin[5], B. Urbaszek[2,7], and E. Malic[1]

[1]*Department of Physics, Philipps-Universität Marburg, Marburg, Germany,* [2]*Université de Toulouse, INSA-CNRS-UPS, LPCNO, Toulouse, France,* [3]*Institute of Electronic Structure and Laser, Heraklion, Greece,* [4]*Department of Chemistry, Purdue University, West Lafayette, IN, USA,* [5]*Friedrich Schiller University Jena, Institute of Physical Chemistry, Jena, Germany,* [6]*National Institute for Materials Science, Namiki, Tsukuba, Japan,* [7]*Institute of Condensed Matter Physics, Technische Universität Darmstadt, Germany*

Interface engineering of charge-transfer excitons in 2D lateral heterostructures

12:15 – 12:30 We B-3

E. Zięba-Ostój[1], E. Rogowicz[1], A. Paralikis[2], C. Piccinini[2], R. Perea-Causin[3], E. Malic[4], B. Munkhbat[2], and M. Syperek[1]

[1]*Department of Experimental Physics, Faculty of Fundamental Problems of Technology, Wrocław University of Science and Technology, Wrocław, Poland,* [2]*DTU Electro, Technical University of Denmark, Kongens Lyngby, Denmark,* [3]*Department of Physics, Chalmers University of Technology, Göteborg, Sweden,* [4]*Department of Physics, Philipps-Universität Marburg, Marburg, Germany*

Optical properties and dynamics of neutral and charged excitons in the $MoTe_2$ monolayer in a metal-oxide-semiconductor device

12:30 – 12:45 We B-4

P. Steeger[1], J.-H. Graalmann[2], R. Schmidt[1], P. Marauhn[2], M.-C. Heissenbüttel[2], J. Nellesen[2], I. Kupenko[3], C. Sanchez-Valle[3], S. Michaelis de Vasconcellos[1], M. Rohlfing[2], and R. Bratschitsch[1]

[1]*Institute of Physics, University of Münster, Münster, Germany,* [2]*Institute of Solid State Theory, University of Münster, Münster, Germany,* [3]*Institute of Mineralogy, University of Münster, Münster, Germany*

Optical spectroscopy of intra- and interlayer excitons in atomically thin MoS_2 under high pressure

12:45 – 13:00 We B-5

J. Heckötter, M. Bergen, B. Panda, K. Brägelmann, M. Harati, S. Siegeroth, M. Aßmann, and M. Bayer

Experimentelle Physik 2a, Technische Universität Dortmund, Dortmund, Germany

Giant interactions of Rydberg excitons in Cu2O

13:00 – 14:30 Lunch

Session We C: *Quantum dots I*

Chair: Grzegorz Sęk

14:30 – 15:00 We C-1 (invited)

S. Reitzenstein

Institute of Solid State Physics, Technische Universität Berlin, Berlin, Germany

Deterministically fabricated single-quantum-dot devices for photonic quantum technologies

15:00 – 15:30 We C-2 (invited)

K. Gawarecki

Institute of Theoretical Physics, Wrocław University of Science and Technology, Wrocław, Poland

Atomistic and continuous media approaches to model spectral properties of semiconductor quantum dots

15:30 – 15:45 We C-3

D. A. Vajner[1], P. Holewa[2,3,4], E. Zięba-Ostój[2], M. Wasiluk[2], M. von Helversen[1], A. Sakanas[3], A. Huck[5], K. Yvind[3,4], N. Gregersen[3], A. Musiał[2], M. Syperek[2], E. Semenova[3,4], and T. Heindel[1]

[1]*Institute of Solid State Physics, Technical University of Berlin, Germany,* [2]*Department of Experimental Physics, Faculty of Fundamental Problems of Technology, Wrocław University of Science and Technology, Wrocław, Poland,* [3]*DTU Electro, Department of Electrical & Photonics Engineering, Techn. Univ. of Denmark,* [4]*NanoPhoton - Center for Nanophotonics, Technical University of Denmark,* [5]*Center for Macroscopic Quantum States (bigQ), Technical University of Denmark*

Progress in telecom C-band single photon generation using semiconductor quantum dots

15:45 – 16:15 Coffee Break

Session We D: *Dynamics and optical properties of 2D systems*

Chair: Magdalena Birowska

16:15 – 16:45 We D-1 (invited)

T. Kazimierczuk

Faculty of Physics, University of Warsaw, Poland

Ultrafast dynamics of excitons in monolayers of semiconductor TMDs

16:45 – 17:15 We D-2 (invited)

D. Wigger[1], T. Hahn[2], P. Machnikowski[3], T. Kuhn[2], and J. Kasprzak[4]

[1] *Department of Physics, University of Münster, Münster, Germany,* [2] *Institute of Solid State Theory, University of Münster, Münster, Germany,* [3] *Institute of Theoretical Physics, Wrocław Tech, Wrocław, Poland,* [4] *Institut Néel, University of Grenoble, Grenoble, France*

Local field effects and a new destructive photon echo in a 2D semiconductor

17:15 – 17:30 We D-3

R. Komar[1], A. Łopion[1], K. Mosina[2], A. Soll[2], Z. Sofer[2], P. Kossacki[1] and T. Kazimierczuk[1]

[1] *Faculty of Physics, University of Warsaw, Warsaw, Poland,* [2] *Department of Inorganic Chemistry, University of Chemistry and Technology Prague, Prague, Czech Republic*

Magnetically tunable reflectivity features in 2D layered magnetic semiconductor CrSBr

18:00 – 20:00 City walk

Thursday, 15 February 2024

Session Th A: *Magnetism and spin-related phenomena*

Chair: Piotr Kossacki

09:00 – 09:30 Th A-1 (invited)

M. Birowska

Faculty of Physics, University of Warsaw, Warsaw, Poland

Tuning magnetic and optical properties of layered MPX_3 crystals

09:30 – 10:00 Th A-2 (invited)

R. Bratschitsch

Institute of Physics and Center for Nanotechnology, University of Münster, Münster, Germany

Broadband high-performance Faraday rotation spectroscopy of 2D materials and thin magnetic films

10:00 – 10:15 Th A-3

M. J. Grzybowski[1], C. Autieri[2], J. Domagala[3], C. Krasucki[1,3], A. Kaleta[3], S. Kret[3], K. Gas[3,4], M. Sawicki[3], R. Bożek[1], J. Suffczyński[1], and W. Pacuski[1]

[1]*Faculty of Physics, University of Warsaw, ul. Pasteura 5, Warsaw, Poland,* [2]*International Research Centre Magtop, Institute of Physics, Polish Academy of Sciences, Warsaw, Poland,* [3]*Institute of Physics, Polish Academy of Sciences, Warsaw, Poland,* [4]*Center for Science and Innovation in Spintronics, Tohoku University, Sendai, Japan*

Wurtzite MnSe – epitaxy and properties of an altermagnetic candidate

10:15 – 10:30 Th A-4

A. Łopion, A. Bogucki, K. E. Połczyńska, W. Pacuski, T. Kazimierczuk, A. Golnik, and P.Kossacki

Faculty of Physics, Institute of Experimental Physics, University of Warsaw, Warszawa, Poland

Temperature of magnetic ions in optically detected magnetic resonance measurement of p-type doped (Cd,Mn)Te QWs

10:30 – 10:45 Th A-5

T. Woźniak[1,2], P. E. Faria Junior[3], A. Chaves[4,5], and J. Kunstmann[6]

[1]*Wrocław University of Science and Technology, Poland,* [2]*University of Warsaw, Poland,* [3]*University of Regensburg, Germany,* [4]*Universidade Federal do Cear'a, Brazil,* [5]*University of Antwerp, Belgium,* [6]*Technische Universität Dresden, Germany*

Engineering of excitonic g-factors in van der Waals structures

10:45 – 11:15 Coffee Break

Session Th B: *Perovskites, spectroscopy*

Chair: Joanna Jadczak

11:15 – 11:45 Th B-1 (invited)

I. Niehues[1,2]

[1] *Institute of Physics, University of Münster, Münster, Germany,* [2] *CIC nanoGUNE BRTA, Donostia-San Sebastian, Spain*

Investigating the properties of 2D materials with near-field techniques on the nanoscale

11:45 – 12:15 Th B-2 (invited)

I. Akimov

Experimentelle Physik 2, Technische Universität Dortmund, Dortmund, Germany

Coherent optical spectroscopy in perovskites semiconductors

12:15 – 12:30 Th B-3

M. Dyksik[1], D. Beret[2], M. Baranowski[1], H. Duim[3], S. Moyano[2], K. Posmyk[1,4], A. Mlayah[5], S. Adjokatse[3], D. K. Maude[4], M. A. Loi[3], P. Puech[2], and P. Płochocka[1,4]

[1] *Department of Experimental Physics, Faculty of Fundamental Problems of Technology, Wrocław University of Science and Technology, Wrocław, Poland,* [2] *CEMES-UPR8011, CNRS, University of Toulouse, Toulouse, France,* [3] *Zernike Institute for Advanced Materials, University of Groningen, Groningen, The Netherlands,* [4] *Laboratoire National des Champs Magnétiques Intenses, EMFL, CNRS UPR 3228, University Grenoble Alpes, University Toulouse, University Toulouse 3, INSA-T, Grenoble and Toulouse, France,* [5] *LAAS, University of Toulouse, CNRS, UPS, Toulouse, France*

Polaron vibronic progression shapes the optical response of 2D perovskites

12:30 – 12:45 Th B-4

N. E. Kopteva[1], D. R. Yakovlev[1], E. Yalcin[1], I. A. Akimov[1], M. O. Nestoklon[1], M. M. Glazov[2], M. Kotur[1], D. Kudlacik[1], E. A. Zhukov[1], E. Kirstein[1], and M. Bayer[1]

[1] *Experimentelle Physik 2, Technische Universität Dortmund, Dortmund, Germany,* [2] *Ioffe Institute, Russian Academy of Sciences, St. Petersburg, Russia*

Optical orientation of exciton spins in perovskite crystals

12:45 – 13:00 Th B-5

M. Wagner[1,2], M. Barra Burillo[2], M. Schnell[2,3], R. Hillenbrand[2,3,4], and L. M. Liz-Marzán[1,3,5,6]

[1] *CIC biomaGUNE, Basque Research and Technology Alliance (BRTA), Donostia-San Sebastián, Spain,* [2] *CIC nanoGUNE BRTA, Donostia-San Sebastián, Spain,* [3] *Ikerbasque, Basque Foundation for Science, Bilbao, Spain,* [4] *Department of Electricity and Electronics, UPV/ EHU, Bilbao, Spain,* [5] *CIC Ciber-BBN, Donostia-San Sebastián, Spain*

Importance of analyte location in a combined surface-enhanced infrared and Raman sensor

13:00 – 14:30 Lunch

Session Th C: *Quantum dots II*

Chair: Hubert Krenner

14:30 – 15:00 Th C-1 (invited)

T. K. Bracht[1,2], M. Cygorek[2,3], V. M. Axt[4], and D. E. Reiter[1]

[1] *Condensed Matter Theory, TU Dortmund, Germany,* [2] *Institute of Solid State Theory, University of Münster, Germany,* [3] *Institute of Photonics and Quantum Sciences, Heriot-Watt University, Edinburgh, UK,* [4] *Theoretical Physics III, University of Bayreuth, Germany*

Photons from quantum dots excited by the SUPER scheme

15:00 – 15:30 Th C-2 (invited)

M. Syperek

Department of Experimental Physics, Faculty of Fundamental Problems of Technology, Wrocław University of Science and Technology, Wrocław, Poland

Deterministic and scalable Purcell-enhanced single-photon emitters in the telecom C-band

15:30 – 15:45 Th C-3

L. Nimmesgern[1], M. Cygorek[2,3], D. E. Reiter[3], A. Vagov[1], and V. M. Axt[1]

[1] *Theoretical Physics III, University of Bayreuth,* [2] *Institute of Photonics and Quantum Sciences, Heriot-Watt University,* [3] *Condensed Matter Theory, TU Dortmund*

Multimodal photon number distributions in quantum dot–cavity–systems

15:45 – 16:15 Coffee Break

Session Th P: *Posters*

16:15 – 18:15 **Poster Session**

Friday, 16 February 2024

Session Fr A: *Quantum emitters*

Chair: Stephan Reitzenstein

09:00 – 09:30 Fr A-1 (invited)

M. Cygorek

Open Quantum Systems Group, Technical University of Dortmund, 44227 Dortmund, Germany

Cooperative emission from solid-state quantum emitters

09:30 – 10:00 Fr A-2 (invited)

M. Rieger[1], **V. Villafañe**[2], L. Todenhagen[1], S. Appel[2], M. Brandt[1], K. Mueller[2], and J. J. Finley[1]

[1]*Walter Schottky Institute, School of Natural Sciences and MCQST, Technical University of Munich, Garching, Germany,* [2]*Walter Schottky Institute, School of Computation, Information and Technology and MCQST, Technical University of Munich, Garching, Germany*

Ultrafast electrical switching and charge state control of silicon vacancy centers in diamond

10:00 – 10:15 Fr A-3

N. Dalla[1], P. Kulboka[1], M. Kobecki[1], K. Oreszczuk[1], T. Kazimierczuk[1], P. Kossacki[1], R. J. Warburton[2], and T. Jakubczyk[1]

[1]*University of Warsaw, Warsaw, Poland,* [2]*Department of Physics, University of Basel, Basel, Switzerland*

High-finesse and low-mode volume cavity for novel emitters in the visible spectral range

10:15 – 10:30 Fr A-4

J. A. Preuß[1], D. Groll[2], R. Schmidt[1], T. Hahn[2], P. Machnikowski[3], T. Kuhn[2], R. Bratschitsch[1], D. Wigger[2,3,4], and **S. Michaelis de Vasconcellos**[1]

[1]*University of Münster, Department of Physics and Center for Nanotechnology, Münster, Germany,* [2]*University of Münster, Institute of Solid State Theory, Münster, Germany,* [3]*Wrocław University of Science and Technology, Department of Theoretical Physics, Wrocław, Poland,* [4]*School of Physics, Trinity College Dublin, Dublin, Ireland*

Coherent state manipulation of a single quantum emitter in hBN

10:30 – 10:45 Fr A-5

P. Mrowiński[1], M. Burakowski[1], P. Holewa[1,2,3], A. Sakanas[2,3], E. Semenova[2,3], and M. Syperek[1]

[1]*Department of Experimental Physics, Faculty of Fundamental Problems of Technology, Wrocław University of Science and Technology, Wrocław, Poland,* [2]*DTU Electro, Technical University of Denmark, Kongens Lyngby, Denmark,* [3]*NanoPhoton-Center for Nanophotonics, Technical University of Denmark, Kongens Lyngby, Denmark*

On-chip coupling of single photon emission from InAs/InP quantum dots at telecom range

10:45 – 11:15 Coffee Break

Session Fr B: *Interactions in 2D systems*

Chair: Andreas Knorr

11:15 – 11:45 Fr B-1 (invited)

M. Pieczarka[1], M. Gębski[2], A. N. Piasecka[1], J. A. Lott[3], A. Pelster[4], M. Wasiak[2], and T. Czyszanowski[2]

[1] *Department of Experimental Physics, Wrocław University of Science and Technology, Wrocław, Poland,* [2] *Institute of Physics, Lodz University of Technology, Łódź, Poland,* [3] *Institute of Solid State Physics and Center of Nanophotonics, Technical University Berlin, Berlin, Germany,* [4] *Department of Physics and Research Center OPTIMAS, Rheinland-Pfälzische Technische Universität Kaiserslautern-Landau, Kaiserslautern, Germany*

Thermalization and Bose-Einstein condensation of light in semiconductor lasers

11:45 – 12:15 Fr B-2 (invited)

M. Goryca

Institute of Experimental Physics, Faculty of Physics, University of Warsaw, Poland

Transition Metal Dichalcogenide monolayers as a platform to study electron-electron interactions and many-body correlations

12:15 – 12:30 Fr B-3

M. Gawełczyk[1,2], G. W. Bryant[3,4], and M. Zieliński[1]

[1] *Institute of Physics, Faculty of Physics, Astronomy and Informatics, Nicolaus Copernicus University, Toruń, Poland,* [2] *Institute of Theoretical Physics, Wrocław University of Science and Technology, Wrocław, Poland,* [3] *Atom Based Device Group, National Institute of Standards and Technology, Gaithersburg, MD, USA,* [4] *Joint Quantum Institute, University of Maryland, College Park, MD, USA*

Transport through dopant arrays in silicon

12:30 – 12:45 Closing session

12:45 – 14:30 Lunch

Poster Session

Th P-1 **M. S. Alam**[1], F. Gorrini[2,3], M. Gawełczyk[1], D. Wigger[4], G. Coccia[5], Y. Guo[6,7], S. Shahbazi[8,9], V. Bharadwaj[5,8,10], A. Kubanek[8,9], R. Ramponi[5], P. E. Barclay[1]1, A. J. Bennett[6,7], J. P. Hadden[6,7], A. Bifone[2,3], S. M. Eaton[5], and P. Machnikowski[1]

[1]*Institute of Theoretical Physics, Wrocław University of Science and Technology, Wrocław, Poland,* [2]*Department of Molecular Biotechnology and Health Sciences, University of Torino, Torino, Italy,* [3]*Center for Sustainable Future Technologies, Istituto Italiano di Tecnologia, Torino, Italy,* [4]*Department of Physics, University of Münster, Münster, Germany,* [5]*Institute for Photonics and Nanotechnologies (IFN) CNR, Milano, Italy,* [6]*School of Engineering, Cardiff University, Cardiff, United Kingdom,* [7]*Translational Research Hub, Cardiff, United Kingdom,* [8]*Institute for Quantum Optics, Ulm University, Ulm, Germany,* [9]*Center for Integrated Quantum Science and Technology (IQst), Ulm University, Ulm, Germany,* [10]*Department of Physics, Indian Institute of Technology Guwahati, Assam, India,* [11]*Institute for Quantum Science and Technology, University of Calgary, Calgary, Canada*

Strain characterization in diamond waveguides using zero-field ODMR spectra of NV^- center ensembles

Th P-2 **M. Betke**[1], A. N. Piasecka[1], M. Gębski[2], J. A. Lott[3], T. Czyszanowski[3], and M. Pieczarka[1]

[1]*Department of Experimental Physics, Faculty of Fundamental Problems of Technology, Wrocław University of Science and Technology, Wrocław, Poland,* [2]*Institute of Physics, Lodz University of Technology, Łódź, Poland,* [3]*Institute of Solid State Physics and Center of Nanophotonics, Technical University Berlin, Berlin, Germany*

Spectral tomography of modes in nontrivial VCSEL geometries

Th P-3 **D. Groll**[1], F. Paschen[1], P. Machnikowski[2], O. Hess[3,4], D. Wigger[5], and T. Kuhn[1]

[1]*Institute of Solid State Theory, University of Münster, Germany,* [2]*Institute of Theoretical Physics, Wrocław University of Science and Technology, Poland,* [3]*School of Physics, Trinity College Dublin, Ireland,* [4]*CRANN Institute and Advanced Materials and Bioengineering Research (AMBER), Trinity College Dublin, Ireland,* [5]*Department of Physics, University of Münster, Germany*

Readout of phonon statistics via resonance fluorescence of a single-photon emitter

Th P-4 **A. Bieganowska**[1], M. Betke[1], C. Schneider[2], S. Höfling[3], S. Klembt[3], M. Syperek[1], and M. Pieczarka[1]

[1]*Department of Experimental Physics, Faculty of Fundamental Problems of Technology, Wrocław University of Science and Technology, Wrocław, Poland,* [2]*Institue of Physics, University of Oldenburg, Oldenburg, Germany,* [3]*Technische Physik and Wilhelm-Conrad-Röntgen-Research Center for Complex Material Systems, Universität Würzburg, Würzburg, Germany*

Probing the phase diagram of an optically trapped exciton-polariton condensate

Th P-5 **D. Biegańska**[1], M. Pieczarka[1], C. Schneider[2], S. Höfling[3], S. Klembt[3], and M. Syperek[2]

[1]*Department of Experimental Physics, Wrocław University of Science and Technology, Wrocław, Poland,* [2]*Institute of Physics, University of Oldenburg, Oldenburg, Germany,* [3]*Technische Physik, Wilhelm-Conrad-Röntgen-Research Center for Complex Material Systems, and Würzburg Dresden Cluster of Excellence ct.qmat, University of Würzburg, Würzburg, Germany*

Anomalous dispersion and dissipative coupling in quantum well exciton-polariton structure

Th P-6 **F. M. Ehring**, B. Mayer, C. Strobl, M. Weiß, H. Krenner, U. Wurstbauer, and E. D. S. Nysten

Institute of Physics, University of Münster, Germany

Optically gated acousto-electric effect in 2D semiconductors

Th P-7 **R. A. Bogaczewicz**[1], D. Wigger[2], H. Krenner[3], and P. Machnikowski[1]

[1]*Institute of Theoretical Physics, Wrocław University of Science and Technology, Wrocław, Poland,* [2]*Department of Physics, University of Münster, Münster, Germany,* [3]*Institute of Physics, University of Münster, Münster, Germany*

Coherence in resonance fluorescence from an acoustically modulated quantum dot with noise

Th P-8 **A. Bogucki**, A. Łopion, Z. Śnioch, K. E. Połczyńska, W. Pacuski, T. Kazimierczuk, A. Golnik, and P. Kossacki

Institute of Experimental Physics, Faculty of Physics, University of Warsaw, Warszawa, Poland

Characterization of Mn^{2+} spin relaxation dynamics in (Cd, Mn)Te/(Cd, Mg)Te quantum wells: Impact of magnetic field and temperature

Th P-9 **A.Dydniański**, A. Lopion, M. Raczyński, K. E. Polczyńska, T. Kazimierczuk, and P. Kossacki

Institute of Experimental Physics, Faculty of Physics, University of Warsaw, Warsaw, Poland

Spatial (in)homogeneity of (Cd,Mn)Te quantum well studied with the use of μ-ODMR

Th P-10 **J. Grumm** and A. Knorr

Institut für Theoretische Physik, Nichtlineare Optik und Quantenelektronik, Technische Universität Berlin, Berlin, Germany

Microscopic theory of the non-linear THz response of thin gold films

Th P-11 **M. Jaworski**[1,2], P. Mrowiński[1], M. Burakowski[1], P. Holewa[1,3,4], M. Syperek[1], E. Semenova[3,4], and G. Sęk[1]

[1]*Department of Experimental Physics, Faculty of Fundamental Problems of Technology, Wrocław University of Science and Technology, Wrocław, Poland,* [2]*Nanores, Wrocław, Poland,* [3]*DTU Electro, Technical University of Denmark, Kongens Lyngby, Denmark,* [4]*NanoPhoton-Center for Nanophotonics, Technical University of Denmark, Kongens Lyngby, Denmark*

Fabrication of photonic structures by Xenon Plasma Focused Ion Beam for application in III telecommunication window based on InAs/InP quantum dots

Th P-12 **K. Kawa**[1], T. Kuhn[2], and P. Machnikowski[1]

[1]*Institute of Theoretical Physics, Wrocław University of Science and Technology, Wrocław, Poland* [2]*Institute of Solid State Theory, University of Münster, Münster, Germany*

Optically controlled singlet-triplet qubit in a quantum dot molecule

Th P-13 **M. Kuniej**, M. Gawełczyk, and P. Machnikowski

Institute of Theoretical Physics, Wrocław University of Science and Technology, Wrocław, Poland

Hybrid acousto-optical control of a quantum emitter

Th P-14 **N. Spitzner**[1], P. Zhao[1], R. Liang[2], C. H. Sharma[1], L. Tiemann[1], and R. H. Blick[1]

[1]*Center for Hybrid Nanostructures, University of Hamburg, Hamburg, Germany,* [2]*School of Integrated Circuits, Tsinghua University, Beijing, China*

Optimizing electrical transport and SAW propagation in MoS_2

Th P-15 **K. Mickiewicz**[1] and M. Gawełczyk[2]

[1]*Institut für Theoretische Physik, Technische Universität Dresden, Dresden, Germany,* [2]*Institute of Theoretical Physics, Wrocław University of Science and Technology, Wrocław, Poland*

Interplay of various transfer mechanisms for excitons in dense quantum-dot ensembles

Th P-16 **E. Olbińska** and M. Gawełczyk

Institute of Theoretical Physics, Wrocław University of Science and Technology, Wrocław, Poland

Optically active gate-defined quantum dot

Th P-17 **A. N. Piasecka**[1], M. Gębski[2], J. A. Lott[3], T. Czyszanowski[2], and M. Pieczarka[1]

[1]*Department of Experimental Physics, Wrocław University of Science and Technology, Wrocław, Poland,* [2]*Institute of Physics, Łódź University of Technology, Łódź, Poland,* [3]*Institute of Solid State Physics and Center of Nanophotonics, Technical University Berlin, Berlin, Germany*

Direct probing of the local confining potential for photons in a large-area VCSEL

Th P-18 **M. Raczyński**, T. Kazimierczuk, W. Pacuski, and P. Kossacki

Division of Solid State Physics, Institute of Experimental Physics, Faculty of Physics, University of Warsaw, Warsaw, Poland

Importance of photonic environment for optical benchmark of $MoSe_2$ monolayers grown by molecular beam epitaxy

Th P-19 **J. Rosiński**[1], B. Mayer[2], D. Wigger[3], M. Weiß[2], H. Krenner[2], and P. Machnikowski[1]

[1]*Institute of Theoretical Physics, Wrocław University of Science and Technology, Wrocław, Poland,* [2]*Institute of Physics, University of Münster, Münster, Germany,* [3]*Department of Physics, University of Münster, Münster, Germany*

Optimised phononic waveguides for quantum dot optomechanics

Th P-20 **W. Rudno-Rudziński**[1], M. Gawełczyk[2], P. Podemski[1], V. Sichkovskyi[3], J. P. Reithmaier[3], and G. Sęk[1]

[1]*Department of Experimental Physics, Faculty of Fundamental Problems of Technology, Wrocław University of Science and Technology, Wrocław, Poland,* [2]*Institute of Theoretical Physics, Faculty of Fundamental Problems of Technology, Wrocław University of Science and Technology, Wrocław, Poland,* [3]*Technological Physics, Institute of Nanostructure Technologies and Analytics, CINSaT, University of Kassel, Kassel, Germany*

Optical properties of third telecom window emitting InAs/InGaAlAs quantum dots grown on silicon substrates

Th P-21 **J. Sturm**[1], D. Christiansen[1], I. Maliyov[2], M. Selig[1], M. Bernardi[2], and A. Knorr[1]

[1]*Institut für Theoretische Physik, Nichtlineare Optik und Quantenelektronik, Technische Universität Berlin, Berlin, Germany,* [2]*Department of Applied Physics and Materials Science, California Institute of Technology, Pasadena, CA, USA*

A Bloch approach to X-ray absorption spectroscopy

Th P-22 E. Pruszyńska-Karbownik[1], D. Jandura[2], M. Dems[3], Ł. Zinkiewicz[1], A. Broda[4], M. Gębski[3], J. Muszalski[4], D. Pudiš[5,6], T. Czyszanowski[3], and **J. Suffczyński**[1]

[1]*Institute of Experimental Physics, Faculty of Physics, University of Warsaw, Warsaw, Poland,* [2]*Department of Physics, Faculty of Electrical Engineering and Information Technology, Univ. of Žilina, Žilina, Slovakia,* [3]*Institute of Physics, Łódź University of Technology, Łódź, Poland,* [4]*Łukasiewicz Research Network, Institute of Microelectronics and Photonics, Warsaw, Poland,* [5]*Department of Physics, Faculty of Electrical Engineering and Information Technology, University of Žilina, Žilina, Slovakia,* [6]*University Science Park of the University of Žilina, Žilina, Slovakia*

Concept of Inverted Refractive-Index-Contrast Grating Mirror and Exemplary Fabrication by 3D Microprinting

Th P-23 **A.K. Szczerba**[1], J. Kucharek[1], J. Pawłowski[1], T. Taniguchi[2], K. Watanabe[3], and W. Pacuski[1]

[1]*Faculty of Physics, University of Warsaw, Warsaw, Poland,* [2]*Research Center for Materials Nanoarchitectonics, National Institute for Materials Science, Tsukuba, Japan,* [3]*Research Center for Electronic and Optical Materials, National Institute for Materials Science, Tsukuba, Japan*

MBE growth of CdTe structures on hBN

Th P-24 **M. Volz**, E. D. S. Nysten, M. Weiss, and H. J. Krenner

Universität Münster, Physikalisches Institut, Münster, Germany

Design of lithium niobate on silicon surface acoustic waveguide for hybrid integrated phononic circuits

Th P-25 D. A. Vajner[1], **M. Wasiluk**[2], P. Holewa[2,3,4], E. Zięba-Ostój[2], M. von Helversen[1], A. Sakanas[3], A. Huck[5], K. Yvind[3,4], N. Gregersen[3], A. Musiał[2], M. Syperek[2], E. Semenova[3,4], and T. Heindel[1]

[1]*Institute of Solid State Physics, Technical University of Berlin, Berlin, Germany,* [2]*Department of Experimental Physics, Faculty of Fundamental Problems of Technology, Wrocław University of Science and Technology, Wrocław, Poland,* [3]*DTU Electro, Department of Electrical and Photonics Engineering, Technical University of Denmark, Kongens Lyngby, Denmark,* [4]*NanoPhoton-Center for Nanophotonics, Technical University of Denmark, Kongens Lyngby, Denmark,* [5]*Center for Macroscopic Quantum States (bigQ), Department of Physics, Technical University of Denmark, Kongens Lyngby, Denmark*

Single indistinguishable photons emitted at 1.55 µm by InAs(P)/InP QDs

Th P-26 **M. Wlazło**[1], M. Langer[1,2], and S. Osella[1]

[1]*Chemical and Biological Systems Simulation Lab, Centre of New Technologies, University of Warsaw, Warsaw, Poland,* [2]*Regional Centre of Advanced Technologies and Materials, Czech Advanced Technology andResearch Institute (CATRIN), Palacký University Olomouc, Olomouc, Czech Republic*

Direct energy transfer in optically-excited hybrid carbon nanostructures

Th P-27 **W. Kolesiński** and M. Goryca

Institute of Experimental Physics, Faculty of Physics, University of Warsaw, Warsaw, Poland

Electrically gated TMD heterostructures as a step towards 1D excitonic states