

Semiconductor Physics Division Fachverband Halbleiterphysik (HL)

Christoph Lienau
Carl von Ossietzky Universität Oldenburg
Ammerländer Heerstraße 114-118
26129 Oldenburg
christoph.lienau@uni-oldenburg.de

Overview of Invited Talks and Sessions

(Lecture rooms POT 06, 81, 51, 112, 151, 251, and HSZ 403; Poster P1A, P1C, P2-OG2, and P2-OG3)

Invited Talks

HL 5.1	Mon	9:30–10:00	POT 81	Van der Waals heterostructures: tunnelling and interaction with light — ●ARTEM MISHCHENKO
HL 5.6	Mon	11:30–12:00	POT 81	Excitons in ultra-thin perovskites & van der Waals crystals — ●ALEXEY CHERNIKOV
HL 6.1	Mon	9:30–10:00	POT 51	Optical Coherent Multidimensional Spectroscopy of Semiconductor Nanostructures — ●STEVEN CUNDIFF
HL 7.11	Mon	12:30–13:00	POT 151	Carbon nanotubes as excitonic insulators — ●MASSIMO RONTANI
HL 15.1	Mon	14:45–15:15	POT 81	2D / 3D Heterostructures for Optoelectronics — ●MAX LEMME
HL 15.6	Mon	16:45–17:15	POT 81	Excitons in colloidal 2D-CdSe nanocrystals — ●ULRIKE WOGGON
HL 16.1	Mon	14:45–15:15	POT 51	The role of phonons for the optical control of semiconductor quantum dots — ●DORIS REITER
HL 33.1	Tue	9:30–10:00	POT 81	Deterministic Single Quantum Dot Devices: Building Blocks for Photonic Quantum Networks — ●STEPHAN REITZENSTEIN
HL 34.7	Tue	11:30–12:00	POT 51	Influence of dark states on excitonic spectra of transition metal dichalcogenides — ●MALTE SELIG, DOMINIK CHRISTIANSEN, GUNNAR BERGHÄUSER, ERMIN MALIC, ANDREAS KNORR
HL 35.1	Tue	9:30–10:00	POT 151	Edge conduction in the 2D topological insulator candidate InAs/GaSb — ●SUSANNE MUELLER, MATIJA KARALIC, CHRISTOPHER MITTAG, LARS TIEMANN, THOMAS TSCHIRKY, QUANSHENG WU, ALEXEY A. SOLUYANOV, ATIN NATH PAL, CHRISTOPHE CHARPENTIER, MATTHIAS TROYER, WERNER WEGSCHEIDER, KLAUS ENSSLIN, THOMAS IHN
HL 35.4	Tue	10:30–11:00	POT 151	Progress in Edge Channel Transport of Two-Dimensional Topological Insulators — ●HARTMUT BUHMANN
HL 35.5	Tue	11:30–12:00	POT 151	Transport and capacitance in HgTe-based topological insulators — ●DIETER WEISS
HL 35.7	Tue	12:15–12:45	POT 151	Giant Spin-Orbit Splitting in Inverted InAs/GaSb Double Quantum Wells — ●FABRIZIO NICHELE, MORTEN KJAERGAARD, HENRI J. SUOMINEN, RAFAL SKOLASINSKI, MICHAEL WIMMER, BINH-MINH NGUYEN, ANDREY A. KISELEV, WEI YI, MARKO SOKOLICH, MICHAEL J. MANFRA, FANMING QU, ARJAN J. A. BEUKMAN, LEO P. KOUWENHOVEN, CHARLES M. MARCUS
HL 50.1	Wed	9:30–10:00	POT 251	Photoactivated chemical processes on group III-nitride nanostructures and nanohybrids — PAULA NEUDERTH, SARA HÖLZL, PASCAL HILLE, JÖRG SCHÖRMANN, CHRISTIAN REITZ, MARIONA COLL, JORDI ARBIOL, ROLAND MARSCHALL, ●MARTIN EICKHOFF
HL 51.1	Wed	9:30–10:00	POT 112	Coupling atomic and solid state quantum systems — ●VAL ZWILLER
HL 51.5	Wed	10:45–11:15	POT 112	Strain-tunable quantum dots interfaced with atomic vapors — ●RINALDO TROTTA
HL 51.6	Wed	11:45–12:15	POT 112	Atomic-vapor-enabled variable optical delay for triggered single-photons from a semiconductor quantum dot — ●HÜSEYİN VURAL, JONAS WEBER, MARKUS MÜLLER, SIMON KERN, JULIAN MAISCH, MATTHIAS WIDMANN, ROBERT LÖW, JÖRG WRACHTRUP, ILJA GERHARDT, SIMONE PORTALUPI, MICHAEL JETTER, PETER MICHLER

HL 51.8	Wed	12:30–13:00	POT 112	Correlating independent spins via single-photon projections — •METE ATATURE
HL 58.1	Wed	14:45–15:15	POT 151	Towards an ideal semiconductor source of polarization entangled photons — •FEI DING
HL 67.5	Thu	10:45–11:15	POT 81	2D Quasicrystals from Semiconducting Perovskite Oxides — •WOLF WIDDRA, STEFAN FÖRSTER
HL 68.1	Thu	9:30–10:00	POT 51	Solar-driven photoelectrochemical water splitting and carbon dioxide reduction — •JOEL AGER
HL 68.4	Thu	10:30–11:00	POT 51	Quantum confined colloidal semiconductor nanocrystals for solar fuels — •FRANK JÄCKEL
HL 68.7	Thu	12:00–12:30	POT 51	Photo-electrochemistry modelling beyond idealised surfaces and the computational hydrogen electrode — •HARALD OBERHOFER
HL 70.1	Thu	9:30–10:00	POT 251	Sub-nm probing of Topological insulators and Rashba systems — •MARKUS MORGENSTERN
HL 75.1	Thu	14:45–15:15	POT 151	Spectroscopy on self-assembled quantum dots: Transport meets optics — •MARTIN GELLER
HL 83.1	Fri	9:30–10:00	POT 51	New Frontiers in Quantum Matter Heterostructures — •JOCHEN MANNHART

Invited talks of the joint symposium SYLI

See SYLI for the full program of the symposium.

SYLI 1.1	Mon	9:30–10:00	HSZ 02	Interfacial challenges in solid-state Li ion: some perspectives from theory — •ALAN LUNTZ, SASKIA STEGMAIER, JOHANNES VOSS, KARSTEN REUTER
SYLI 1.2	Mon	10:00–10:30	HSZ 02	Will solid electrolytes enable lithium metal anodes in solid state batteries? — •JÜRGEN JANEK, DOMINIK WEBER, WOLFGANG ZEIER
SYLI 1.3	Mon	10:30–11:00	HSZ 02	Hybrid Electrolytes for Solid-State Batteries — •HANS-DIETER WIEMHÖFER
SYLI 1.4	Mon	11:15–11:45	HSZ 02	Neutron diffraction on solid-state battery materials — •HELMUT EHRENBERG, ANATOLIY SENYSHYN, MYKHAILO MONCHAK, SYLVIO INDRIS, JOACHIM BINDER
SYLI 1.5	Mon	11:45–12:15	HSZ 02	Sulfate-based Solid-State Batteries — •YUKI KATOH

Invited talks of the joint symposium SYNS

See SYNS for the full program of the symposium.

SYNS 1.1	Wed	15:00–15:30	HSZ 02	The Limits to Lithography: How Electron-Beams Interact with Materials at the Smallest Length Scales — •KARL K. BERGGREN
SYNS 1.2	Wed	15:30–16:00	HSZ 02	High precision fabrication for light management at nanoscale — •SAULIUS JUODKAZIS, ARMANDAS BALCYTIS
SYNS 1.3	Wed	16:00–16:30	HSZ 02	Directed self-assembly of performance materials — •PAUL NEALEY
SYNS 1.4	Wed	16:45–17:15	HSZ 02	Nanometer accurate topography patterning using thermal Scanning Probe Lithography — •ARMIN W. KNOLL
SYNS 1.5	Wed	17:15–17:45	HSZ 02	High resolution 3D nanoimprint lithography — •HARTMUT HILLMER

Invited talks of the joint symposium SYQO

See SYQO for the full program of the symposium.

SYQO 1.1	Thu	9:30–10:00	HSZ 02	Quantum dot based quantum technologies — •PASCALE SENELLART
SYQO 1.2	Thu	10:00–10:30	HSZ 02	Controlled strong coupling of a single quantum dot to a plasmonic nanoresonator at room temperature — HEIKO GROSS, JOACHIM M. HAMM, TOMMASO TUFARELLI, ORTWIN HESS, •BERT HECHT
SYQO 1.3	Thu	10:30–11:00	HSZ 02	High efficiency and directional emission from a nanoscale light source in a planar optical antenna — •MARIO AGIO
SYQO 1.4	Thu	11:30–12:00	HSZ 02	Tailoring quantum states by measurement — •JÖRG WRACHTRUP
SYQO 1.5	Thu	12:00–12:30	HSZ 02	Quantum optics and quantum control at the nanoscale with surface plasmon polaritons — •STÉPHANE GUÉRIN

Invited talks of the joint symposium SYLM

See SYLM for the full program of the symposium.

SYLM 1.1	Thu	15:00–15:30	HSZ 02	Light matter interaction in TMDs and their heterostructures — •URSULA WURSTBAUER
SYLM 1.2	Thu	15:30–16:00	HSZ 02	Quantum optics with deterministically positioned quantum emitters in a two-dimensional semiconductor — •BRIAN GERARDOT
SYLM 1.3	Thu	16:00–16:30	HSZ 02	Light-matter coupling with atomic monolayers in microcavities — •CHRISTIAN SCHNEIDER
SYLM 1.4	Thu	17:00–17:30	HSZ 02	Properties of Synthetic 2D Materials and Heterostructures — •JOSHUA ROBINSON
SYLM 1.5	Thu	17:30–18:00	HSZ 02	Exciton spectroscopy in transition metal dichalcogenide monolayers and van der Waals heterostructures — •BERNHARD URBASZEK
SYLM 1.6	Thu	18:00–18:30	HSZ 02	Strain-induced single-photon emitters in layered semiconductors — •RUDOLF BRATSCHITSCH

Invited talks of the joint symposium SYES

See SYES for the full program of the symposium.

SYES 1.1	Fri	10:30–11:00	HSZ 02	Going Beyond Conventional Functionals with Scaling Corrections and Pairing Fluctuations — •WEITAO YANG
SYES 1.2	Fri	11:00–11:30	HSZ 02	Multi-reference density functional theory — •ANDREAS SAVIN
SYES 1.3	Fri	11:30–12:00	HSZ 02	Density functionals from machine learning — •KIERON BURKE
SYES 1.4	Fri	12:00–12:30	HSZ 02	Taming Memory-Dependence in Time-Dependent Density Functional Theory — •NEEPA MAITRA
SYES 1.5	Fri	12:30–13:00	HSZ 02	Quantum Embedding Theories — •FRED MANBY

Sessions

HL 1.1–1.3	Sun	16:00–18:15	HSZ 403	Tutorial: Photocatalysis
HL 2.1–2.5	Mon	9:30–12:15	HSZ 02	SYLI: Symposium Interfacial Challenges in Solid-State Li Ion Batteries - Invited talks
HL 3.1–3.13	Mon	9:30–13:00	HSZ 204	Transport: Topological Insulators (jointly with DS, MA, HL, O)
HL 4.1–4.6	Mon	9:30–12:15	CHE 89	Focused Session: Inhomogeneous Materials for Solar Cells I
HL 5.1–5.9	Mon	9:30–12:45	POT 81	Focus Session: Two-dimensional materials I (joined session with TT)
HL 6.1–6.10	Mon	9:30–12:45	POT 51	Ultrafast Phenoma I
HL 7.1–7.11	Mon	9:30–13:00	POT 151	Spintronics I (joined session with TT)
HL 8.1–8.8	Mon	9:30–11:45	POT 251	Photovoltaics
HL 9.1–9.10	Mon	9:30–12:30	POT 112	Quantum Dots: Preparation and Characterization
HL 10.1–10.10	Mon	9:30–12:30	POT 06	Semiconductor Lasers I
HL 11.1–11.10	Mon	10:30–13:00	TRE Ma	Plasmonics and Nanooptics I: Light-Matter Interactions
HL 12.1–12.10	Mon	10:30–13:00	GER 38	Electronic-Structure Theory: New Concepts and Developments in Density Functional Theory and Beyond - I
HL 13.1–13.8	Mon	11:00–13:00	ZEU 260	Organic Electronics and Photovoltaics I: Light-Emitting Devices
HL 14.1–14.18	Mon	14:00–18:00	P2-OG3	Poster: Two-Dimensional Materials and Topological Insulators
HL 15.1–15.10	Mon	14:45–18:15	POT 81	Focus Session: Two-dimensional materials II (joined session with TT)
HL 16.1–16.8	Mon	14:45–17:30	POT 51	Ultrafast Phenoma II
HL 17.1–17.7	Mon	14:45–17:00	POT 151	Spintronics II (joined session with TT)
HL 18.1–18.9	Mon	14:45–17:30	POT 06	Semiconductor Lasers II
HL 19.1–19.12	Mon	15:00–18:15	HSZ 204	Transport: Graphene and Carbon Nanostructures (jointly with DY, DS, HL, MA, O)
HL 20.1–20.9	Mon	15:00–18:15	ZEU 222	Fundamentals of Perovskite Photovoltaics II (joint session CPP/DS/HL)
HL 21.1–21.9	Mon	15:00–18:15	ZEU 222	Fundamentals of Perovskite Photovoltaics II (joint session CPP/DS/HL)

HL 22.1–22.11	Mon	15:00–18:15	ZEU 260	Organic Electronics and Photovoltaics II: Doping	
HL 23.1–23.7	Mon	15:00–16:45	TRE Ma		Plasmonics and Nanooptics II: Light-Matter Interaction
HL 24.1–24.12	Mon	15:00–18:15	GER 38		
HL 25.1–25.24	Mon	15:00–19:00	P2-OG2	Electronic-Structure Theory: New Concepts and Developments in Density Functional Theory and Beyond - II	
HL 26.1–26.3	Mon	16:30–17:15	CHE 89	Poster: Nitrides	
HL 27.1–27.6	Mon	17:00–18:30	TRE Ma	Focussed Session: Frontiers in Exploring and Applying Plasmonic Systems II (Joint Session of CPP, DS, HL, MM, and O, organized by DS)	
HL 28.1–28.30	Mon	18:30–21:00	P1A		
HL 29.1–29.14	Tue	9:30–13:15	HSZ 103	Plasmonics and Nanooptics III: Light-Matter Interaction	
HL 30.1–30.10	Tue	9:30–12:30	ZEU 222	Poster: Fundamentals of Perovskite Photovoltaics (joint session CPP, DS, HL)	
HL 31.1–31.12	Tue	9:30–12:45	ZEU 260	Transport: Quantum Coherence and Quantum Information Systems - Theory (jointly with MA, HL)	
HL 32.1–32.6	Tue	9:30–12:45	CHE 89	Fundamentals of Perovskite Photovoltaics III (joint session CPP/DS/HL)	
HL 33.1–33.11	Tue	9:30–13:00	POT 81	Organic Electronics and Photovoltaics III: Mobile and Trapped Charges	
HL 34.1–34.12	Tue	9:30–13:15	POT 51	Focussed Session: Frontiers in Exploring and Applying Plasmonic Systems I (Joint Session of CPP, DS, HL, MM, and O, organized by DS)	
HL 35.1–35.7	Tue	9:30–12:45	POT 151	Quantum Dots: Optical Properties I	
HL 36.1–36.13	Tue	9:30–13:15	POT 251	Two-dimensional materials III (joined session with TT)	
HL 37.1–37.10	Tue	9:30–12:30	POT 112	Focus Session: Topological Insulators on Coupled Quantum Wells (joined session with TT)	
HL 38.1–38.6	Tue	9:30–11:15	POT 06	Organic Semiconductors (joined session with CPP, DS)	
HL 39.1–39.10	Tue	10:30–13:00	TRE Ma	III-V Semiconductors	
HL 40.1–40.9	Tue	10:30–13:00	GER 38	Zinc Oxide	
HL 41.1–41.5	Tue	11:45–13:00	POT 06	Plasmonics and Nanooptics IV: Light-Matter Interaction	
HL 42.1–42.7	Tue	14:00–16:00	ZEU 222	Electronic-Structure Theory: New Concepts and Developments in Density Functional Theory and Beyond - III	
HL 43.1–43.8	Tue	14:00–16:00	TRE Ma	Nitrides: Preparation	
HL 44.1–44.5	Tue	14:45–16:00	POT 81	Fundamentals of Perovskite Photovoltaics IV (joint session CPP/DS/HL)	
HL 45.1–45.13	Wed	9:30–13:00	HSZ 03	Plasmonics and Nanooptics V: Light-Matter Interaction	
HL 46.1–46.12	Wed	9:30–12:45	HSZ 201	Quantum Dots: Optical Properties II	
HL 47.1–47.11	Wed	9:30–12:45	POT 81	Transport: Quantum Coherence and Quantum Information Systems - Experiment (jointly with MA, HL)	
HL 48.1–48.13	Wed	9:30–13:15	POT 51	Transport: Molecular Electronics and Photonics (jointly with CPP, HL, MA, O)	
HL 49.1–49.11	Wed	9:30–12:45	POT 151	Organic Photovoltaics and Electronics I (joined session with CPP)	
HL 50.1–50.11	Wed	9:30–13:00	POT 251	Two-dimensional materials IV (joined session with TT)	
HL 51.1–51.8	Wed	9:30–13:00	POT 112	Quantum Dots: Optical Properties III	
HL 52.1–52.7	Wed	9:30–11:30	POT 06	Nitrides: Preparation and Characterization	
HL 53.1–53.8	Wed	10:15–12:45	ZEU 250	Focus Session: Hybrid Quantum-Dot / Atom Systems	
HL 54.1–54.8	Wed	10:30–12:30	TRE Ma	Devices	
HL 55.1–55.9	Wed	10:30–13:00	GER 38	Fundamentals of Perovskite Photovoltaics V (joint session CPP/DS/HL)	
HL 56.1–56.9	Wed	10:30–13:00	GER 38	Plasmonics and Nanooptics VI: Light-Matter Interactions and Characterisation	
HL 57.1–57.10	Wed	14:45–17:45	POT 81	Electronic-Structure Theory: New Concepts and Developments in Density Functional Theory and Beyond - IV	
HL 58.1–58.11	Wed	14:45–18:15	POT 151	Electronic-Structure Theory: New Concepts and Developments in Density Functional Theory and Beyond - IV	
HL 59.1–59.10	Wed	14:45–17:45	POT 251	Organic Photovoltaics and Electronics II (joined session with CPP)	
HL 60.1–60.12	Wed	15:00–18:30	ZEU 260	Quantum Dots: Optical Properties IV	
HL 61.1–61.12	Wed	15:00–18:00	TRE Ma	Nitrides: Preparation and Characterization II	
				Organic Electronics and Photovoltaics IV: OPV	
				Plasmonics and Nanooptics VII: Applications and Other Aspects	

HL 62.1–62.13	Wed	15:00–18:15	GER 38	Electronic-Structure Theory: New Concepts and Developments in Density Functional Theory and Beyond - V
HL 63.1–63.80	Wed	15:00–19:00	P1A	Poster: Quantum Dots and Optics
HL 64.1–64.46	Wed	15:00–19:00	P1C	Poster: Photovoltaics and Optics
HL 65.1–65.5	Thu	9:30–12:30	HSZ 02	Quantum Optics on the Nanoscale: From Fundamental Physics to Quantum Technologies (joined session, HL, DS, O, TT, organized by HL)
HL 66.1–66.8	Thu	9:30–13:00	HSZ 03	Focus Session on 2D Materials: Ballistic Quantum Transport in Graphene (jointly with DY, DS, HL, MA, O)
HL 67.1–67.5	Thu	9:30–11:15	POT 81	Perovskites, Hybrid Photovoltaics and Plasmonics
HL 68.1–68.7	Thu	9:30–12:30	POT 51	Focus Session: Semiconductor Materials and Nanostructure for Photocatalysis
HL 69.1–69.10	Thu	9:30–12:30	POT 151	Quantum Dots: Transport Properties I
HL 70.1–70.10	Thu	9:30–12:45	POT 251	Topological Insulators I (joined session with TT)
HL 71.1–71.7	Thu	9:30–11:30	POT 112	Transport Properties
HL 72.1–72.7	Thu	9:30–11:45	POT 06	Nitrides: Devices
HL 73.1–73.13	Thu	10:30–13:45	GER 38	Electronic-Structure Theory: New Concepts and Developments in Density Functional Theory and Beyond - VI
HL 74.1–74.5	Thu	12:00–13:15	POT 06	Group IV: Si/Ge/SiC
HL 75.1–75.5	Thu	14:45–16:15	POT 151	Quantum Dots: Transport Properties II
HL 76.1–76.6	Thu	14:45–16:45	POT 251	Topological Insulators II (joined session with TT)
HL 77.1–77.6	Thu	14:45–16:30	POT 112	Transport in High Magnetic Fields
HL 78.1–78.6	Thu	15:00–18:30	HSZ 02	Optics and Light-Matter Interaction with Excitons in 2D Materials (SYLM) (joined session DS, DY, HL, TT, organized by HL)
HL 79.1–79.31	Thu	15:00–19:00	P2-OG3	Poster: New Materials
HL 80.1–80.9	Thu	16:00–18:30	GER 38	Electronic-Structure Theory: New Concepts and Developments in Density Functional Theory and Beyond - VII
HL 81.1–81.8	Fri	9:30–11:30	HSZ 03	Transport: Spintronics, Spincalorics and Magnetotransport (jointly with DS, HL, MA)
HL 82.1–82.6	Fri	9:30–11:15	POT 81	Quantum Information Systems
HL 83.1–83.10	Fri	9:30–12:45	POT 51	Oxide Semiconductors (joined session with CPP, DS)
HL 84.1–84.11	Fri	9:30–12:45	POT 151	Heterostructures and Interfaces
HL 85.1–85.10	Fri	9:30–12:30	POT 251	Topological Insulators III (joined session with TT)
HL 86.1–86.11	Fri	9:30–12:45	POT 112	New Materials
HL 87.1–87.10	Fri	9:30–12:30	POT 06	Carbon: Diamond and others
HL 88.1–88.10	Fri	10:15–13:15	ZEU 255	Organic Electronics and Photovoltaics V: OPV
HL 89.1–89.5	Fri	10:30–13:00	HSZ 02	Frontiers of Electronic-Structure Theory: New Concepts and Developments in Density Functional Theory and Beyond
HL 90.1–90.6	Fri	11:30–13:00	POT 81	Inhomogeneous Materials for Solar Cells

Annual General Meeting of the Semiconductor Physics Division

Thursday 18:00–19:00 POT 81