

Semiconductor Physics Division Fachverband Halbleiterphysik (HL)

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Overview of Invited Talks and Sessions

(Lecture rooms A151, EW015, EW201, EW202, and EW203; Posters B (H Galeria) and F (tent))

Invited Talks

HL 12.1	Mon	16:45–17:15	EW 201	III-Nitride Quantum Dots as Single Photon Emitters — ●MARK HOLMES, KANG GAO, FLORIAN LE ROUX, KIHYUN CHOI, SATOSHI KAKO, MUNETAKA ARITA, YASUHIKO ARAKAWA
HL 16.1	Tue	9:30–10:00	EW 201	Exploring the limits of position measurement with optomechanics — SERGEY A. FEDOROV, VIVISHEK SUDHIR, NILS J. ENGELSEN, RYAN SCHILLING, HENDRIK SCHÜTZ, AMIR H. GHADIMI, MOHAMMAD J. BEREYHI, DALZIEL J. WILSON, ●TOBIAS J. KIPPENBERG
HL 16.2	Tue	10:00–10:30	EW 201	On-chip integration of superconducting single photon detectors — ●WOLFRAM PERNICE
HL 16.5	Tue	11:15–11:45	EW 201	Integrated III-V nonlinear quantum optical devices — ●GREGOR WEIHS
HL 16.12	Tue	14:00–14:30	EW 201	Hybrid waveguide platforms for quantum optics — ●MICHAL BAJCSY
HL 17.1	Tue	9:30–10:00	EW 202	Quantitative Electron Microscopy for III/V on Silicon integration — ●KERSTIN VOLZ
HL 17.2	Tue	10:00–10:30	EW 202	Total Tomography of Nonplanar Heterostructures: Doping and Confinement Potentials — ●LINCOLN LAUHON
HL 17.6	Tue	11:30–12:00	EW 202	Modulating electron beams in space and time to probe for genuine structures and function at the atomic scale — ●CHRISTIAN KISIELOWSKI
HL 17.7	Tue	12:00–12:30	EW 202	Advanced Nano-scale Characterization of Nitrides using Helium Temperature Scanning Transmission Electron Microscopy Cathodoluminescence — ●GORDON SCHMIDT
HL 17.8	Tue	12:30–13:00	EW 202	Tip-enhanced Raman spectroscopy in semiconductor nanostructures and graphene — EMANUELE POLIANI, ●JANINA MAULTZSCH
HL 25.1	Wed	9:30–10:00	EW 201	The quantum knitting machine: a quantum dot as device for deterministic production of cluster states of many entangled photons — ●DAVID GERSHONI
HL 25.7	Wed	11:30–12:00	EW 201	Exploiting the Bright and the Dark Side of Deterministic Solid-State Quantum-Light Sources — ●TOBIAS HEINDEL
HL 29.1	Wed	15:00–15:30	EW 201	Device Applications of Metafilms and Metasurfaces — ●MARK BRONGERSMA

HL 29.2	Wed	15:30–16:00	EW 201	Harmonic generation and photon management at the nanoscale in AlGaAs nanoantennas — ●COSTANTINO DE ANGELIS, DRAGOMIR NESHEV, LUCA CARLETTI, LAVINIA GHIRARDINI, DAVIDE ROCCO, VALERIO GILI, GIOVANNI PELLEGRINI, MARCO FINAZZI, ANDREA LOCATELLI, IVAN FAVERO, GIUSEPPE MARINO, MICHELE CELEBRANO, GIUSEPPE LEO
HL 29.5	Wed	17:00–17:30	EW 201	Meta-optics and functional metasurfaces driven by Mie resonances — ●YURI KIVSHAR
HL 29.6	Wed	17:30–18:00	EW 201	Nonlinear Metasurface Holography — ●THOMAS ZENTGRAF
HL 36.1	Thu	9:30–10:00	EW 202	Semiconductor laser diodes: applications, trends and their technological challenges — ●WERNER BERGBAUER, ANDRE SOMERS, TERESA WURM, MATTHIAS PETER, CHRISTOPH EICHLER, SVEN GERHARD, GEORG BRUEDERL, SOENKE TAUTZ, BERNHARD STOJETZ, ANDREAS LOEFFLER, MARTIN MUELLER, HARALD KOENIG, UWE STRAUSS
HL 36.2	Thu	10:00–10:30	EW 202	Recent progress on VCSELs for the near- to mid-infrared spectral region — ●MARKUS AMANN
HL 36.6	Thu	11:30–12:00	EW 202	Simplicity VCSELs — ●JAMES A. LOTT, NASIBEH HAGHIGHI, GUNTER LARISCH, RICARDO ROSALES, MARTIN ZORN
HL 41.1	Thu	12:30–13:00	EW 201	Industrial Aspects of 2D Nanomaterials — ●MICHAEL HEUKEN, ANNIKA GRUNDMANN, MATTHIAS MARX, HOLGER KALISCH, ANDREI VESCAN
HL 44.1	Thu	15:00–15:30	EW 202	Development of AlGaN based UV Laser Diodes — ●RONNY KIRSTE, BIPLAB SARKAR, SEIJI MITA, WILL MECOUCH, JAMES TWEEDIE, QIANG GUO, ANDREW KLUMP, RAMON COLLAZO, ZLATKO SITAR
HL 44.2	Thu	15:30–16:00	EW 202	Semiconductor Nanolasers Based on 2D Monolayer of Transition Metal Dichalcogenides — ●CUN-ZHENG NING

Invited talks of the joint symposium SYID

See SYID for the full program of the symposium.

SYID 1.1	Mon	9:30–10:00	H 0105	Data driven R&D for Materials: Cognitive Discovery — ●ALESSANDRO CURIONI
SYID 1.2	Mon	10:00–10:30	H 0105	Rational design and synthesis of Pt-based catalysts for fuel cell applications — ●YOUNAN XIA
SYID 1.3	Mon	10:30–11:00	H 0105	2D, or not 2D? Materials discovery, data provenance, and workflow reproducibility. — ●NICOLA MARZARI
SYID 1.4	Mon	11:00–11:30	H 0105	Generating and assessing data from combinatorial and high-throughput experiments for the design of new materials — ●ALFRED LUDWIG
SYID 1.5	Mon	11:30–12:00	H 0105	Novel materials discovery: big-data-analytics methods and infrastructure for building maps of materials — ●LUCA GHIRINGHELLI

Invited talks of the joint symposium SYTO

See SYTO for the full program of the symposium.

SYTO 1.1	Wed	9:30–10:00	H 0105	Beyond Topologically Ordered States: Insights from Entanglement — ●B. ANDREI BERNEVIG
SYTO 1.2	Wed	10:00–10:30	H 0105	Topological Magnon Materials — ALEXANDER MOOK, JÜRGEN HENK, ●INGRID MERTIG
SYTO 1.3	Wed	10:30–11:00	H 0105	Topological Order of Interacting Polymers on a Substrate — ●VINCENZO VITELLI
SYTO 1.4	Wed	11:15–11:45	H 0105	Quantization of Heat Flow in Fractional Quantum Hall States — ●MOTY HEIBLUM
SYTO 1.5	Wed	11:45–12:15	H 0105	Currents and Phases in Quantum Rings — ●KATHRYN MOLER

Invited talks of the joint symposium SYTH

See SYTH for the full program of the symposium.

SYTH 1.1	Thu	9:30–10:00	H 0105	Extracting the electrical properties of metal halide perovskite semiconductors using transient terahertz spectroscopy — ●MICHAEL B. JOHNSTON
SYTH 1.2	Thu	10:00–10:30	H 0105	THz nanophotonics with 2D materials — ●MIRIAM SERENA VITIELLO
SYTH 1.3	Thu	10:30–11:00	H 0105	Nonlinear responses and 2D spectroscopy using THz electric and magnetic fields — ●KEITH A NELSON
SYTH 1.4	Thu	11:15–11:45	H 0105	Low energy electrodynamics of correlated spin systems. — ●N. PETER ARMITAGE
SYTH 1.5	Thu	11:45–12:15	H 0105	Lightwave scanning tunneling microscopy of single molecules — DOMINIK PELLER, TYLER L. COCKER, PING YU, RUPERT HUBER, ●JASCHA REPP

Invited talks of the joint symposium SYDM

See SYDM for the full program of the symposium.

SYDM 1.1	Thu	15:00–15:30	H 0105	Bending, pulling, and cutting wrinkled two-dimensional materials — ●KIRILL BOLOTIN
SYDM 1.2	Thu	15:30–16:00	H 0105	Ultrafast valley and spin dynamics in single-layer transition metal dichalcogenides — ●ALEJANDRO MOLINA-SANCHEZ
SYDM 1.3	Thu	16:00–16:30	H 0105	Interlayer excitons in layered semiconductor transition metal dichalcogenides — ●STEFFEN MICHAELIS DE VASCONCELLOS
SYDM 1.4	Thu	16:45–17:15	H 0105	Exploring exciton physics in liquid-exfoliated 2D materials — ●CLAUDIA BACKES
SYDM 1.5	Thu	17:15–17:45	H 0105	A Progress Report on Electron Transport in MXenes; A New Family of 2D Materials — ●MICHEL BARSOUM

Sessions

HL 1.1–1.4	Sun	16:00–18:25	H 0105	Quantum Technologies (joint session HL/TT/TUT)
HL 2.1–2.3	Sun	16:00–18:25	H 1058	Semiconductor Optics (joint session HL/TUT)
HL 3.1–3.14	Mon	9:30–13:15	H 2032	2D Materials: Session I (joint session DS/ CPP/HL)
HL 4.1–4.13	Mon	9:30–13:00	EW 201	Quantum dots and wires: Optical properties I
HL 5.1–5.11	Mon	9:30–12:30	EW 202	Semiconductor Lasers
HL 6.1–6.13	Mon	9:30–13:00	EW 203	Photovoltaics I
HL 7.1–7.13	Mon	9:30–13:00	A 151	Topological insulators I (joint session HL/TT)
HL 8.1–8.6	Mon	15:00–16:30	EW 201	2D materials (joint session HL/DS)
HL 9.1–9.9	Mon	15:00–17:30	EW 202	III-V semiconductors (other than nitrides)
HL 10.1–10.9	Mon	15:00–17:30	EW 203	Nitrides: Devices
HL 11.1–11.9	Mon	15:00–17:30	A 151	Topological insulators II (joint session HL/TT)
HL 12.1–12.1	Mon	16:45–17:15	EW 201	Invited Talk: Mark Holmes
HL 13.1–13.87	Mon	17:30–19:30	Poster B	Poster Session I
HL 14.1–14.14	Tue	9:30–13:15	H 2032	2D Materials: Session II (joint session DS/ CPP/HL)
HL 15.1–15.12	Tue	9:30–13:15	EW 015	Focussed Session: Geometry- and Topology-Controlled Nanoarchitectures I
HL 16.1–16.17	Tue	9:30–15:45	EW 201	Focussed Session: Quantum Nanophotonics in Solid State Systems: Status, Challenges and Perspectives I (joint session HL/TT)
HL 17.1–17.8	Tue	9:30–13:00	EW 202	Focussed Session: Atomic Scale Characterization
HL 18.1–18.12	Tue	9:30–12:45	EW 203	Perovskite and Hybrid Photovoltaics
HL 19.1–19.14	Tue	9:30–13:15	A 151	Quantum dots and wires: Transport properties
HL 20.1–20.6	Tue	14:00–15:45	EW 015	Focussed Session: Geometry- and Topology-Controlled Nanoarchitectures II
HL 21.1–21.5	Tue	14:00–15:15	EW 202	Photo-voltaics II
HL 22.1–22.6	Tue	14:00–15:30	EW 203	Nitrides: Preparation and characterization I
HL 23.1–23.7	Tue	14:00–15:45	A 151	2D materials: Graphene and BN (joint session HL/DS)
HL 24.1–24.38	Tue	18:30–20:30	Poster F	Poster Session II
HL 25.1–25.12	Wed	9:30–13:15	EW 201	Focussed Session: Quantum Nanophotonics in Solid State Systems: Status, Challenges and Perspectives II (joint session HL/TT)

HL 26.1–26.13	Wed	9:30–13:00	EW 202	Ultra-fast phenomena
HL 27.1–27.13	Wed	9:30–13:00	EW 203	Nitrides: Preparation and characterization II
HL 28.1–28.14	Wed	9:30–13:15	A 151	2D materials: Chalcogenides I (joint session HL/DS)
HL 29.1–29.8	Wed	15:00–18:30	EW 201	Focussed Session: Metasurfaces I
HL 30.1–30.9	Wed	15:00–17:30	EW 202	Heterostructures, interfaces, and surfaces
HL 31.1–31.9	Wed	15:00–17:30	EW 203	Quantum information systems (joint session HL/TT)
HL 32.1–32.9	Wed	15:00–17:30	A 151	Quantum dots and wires: Optical properties II
HL 33.1–33.38	Wed	17:30–19:30	Poster F	Poster Session III
HL 34.1–34.4	Thu	9:30–10:30	EW 015	Carbon: Diamond, nanotubes, Buckyballs
HL 35.1–35.5	Thu	9:30–10:45	EW 201	Focussed Session: Metasurfaces II
HL 36.1–36.10	Thu	9:30–13:00	EW 202	Focussed Session: Frontiers in Laser Diode Physics I
HL 37.1–37.13	Thu	9:30–13:00	EW 203	Oxide Semiconductors
HL 38.1–38.14	Thu	9:30–13:15	A 151	2D materials: Chalcogenides II (joint session HL/DS)
HL 39.1–39.8	Thu	11:00–13:00	EW 015	Group IV (other than C): Si/Ge/SiC
HL 40.1–40.5	Thu	11:00–12:15	EW 201	II-VI semiconductors
HL 41.1–41.1	Thu	12:30–13:00	EW 201	Invited Talk: Michael Heuken (joint session HL/DS)
HL 42.1–42.7	Thu	15:00–16:45	EW 015	Transport
HL 43.1–43.9	Thu	15:00–17:30	EW 201	Spintronics (joint session HL/TT)
HL 44.1–44.2	Thu	15:00–16:00	EW 202	Focussed Session: Frontiers in Laser Diode Physics II
HL 45.1–45.10	Thu	15:00–17:45	EW 203	Organic photovoltaics and electronics
HL 46.1–46.10	Thu	15:00–17:45	A 151	Quantum dots and wires: Optical properties III
HL 47.1–47.5	Thu	16:15–17:30	EW 202	Theory of electronic structure
HL 48.1–48.4	Thu	17:00–18:00	EW 015	Thermoelectricity
HL 49	Thu	18:00–19:00	EW 201	Annual General Meeting of the Semiconductor Physics division
HL 50.1–50.57	Thu	19:00–21:00	Poster B	HL Poster IV
HL 51.1–51.10	Fri	9:30–12:30	H 2032	2D Materials: Session III (joint session DS/ CPP/HL)
HL 52.1–52.12	Fri	9:30–12:45	EW 201	Optical properties & Photonic crystals
HL 53.1–53.6	Fri	9:30–11:00	EW 202	Energy materials (other than photovoltaics)
HL 54.1–54.10	Fri	9:30–12:15	EW 203	Organic semiconductors
HL 55.1–55.12	Fri	9:30–12:45	A 151	Quantum dots and wires: Preparation and characterization
HL 56.1–56.5	Fri	11:15–12:30	EW 202	New materials and concepts

Annual General Meeting of the Semiconductor Physics Division

Donnerstag, 18:00–19:00 Uhr, Raum EW201

- Bericht
- Verschiedenes