

Semiconductor Physics Division Fachverband Halbleiterphysik (HL)

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Overview of Invited Talks and Sessions

(Lecture halls POT/0006, POT/0051, POT/0081, and POT/0251; Poster P1)

Invited Talks

HL 2.1	Mon	9:30–10:00	POT/0051	Intrinsically stretchable polymers and devices for biosensing applications — •ULRIKE KRAFT
HL 2.2	Mon	10:00–10:30	POT/0051	Complexity in Organic Mixed Ionic Electronic Conductors and its Application in Neuromorphic Computing — •HANS KLEEMANN
HL 2.3	Mon	10:30–11:00	POT/0051	Organic Neuromorphic Interfaces for Biohybrid Systems: Material and Structural Biomimicry of Synaptic Plasticity — •FRANCESCA SANTORO
HL 2.4	Mon	11:15–11:45	POT/0051	Fully-organic flexible detectors for real-time dose monitoring during radio/proton therapy — •BEATRICE FRABONI
HL 2.5	Mon	11:45–12:15	POT/0051	Organic LEDs and photodetectors for light-based diagnostics and therapy — •CAROLINE MURAWSKI, RABIUL ISLAM, SIDDHARTHA SAGGAR, JENS P. WEBER
HL 4.1	Mon	9:30–10:00	POT/0251	X-ray nanodiffraction studies of lead-halide perovskite supercrystals — JONAS HILLER, ROBERT THALWITZER, ATA BOZKURT, MATHEUS FERREIRA, RICHARD HODAK, FABIAN STRAUSS, ELKE NADLER, GERARD HINSLEY, BIHAN WANG, KUAN HOON NGOI, WITOLD RUDZINSKI, EKATERINA KNESCHAUREK, WOJCIECH ROSEKER, MICHAEL SPRUNG, DMITRY LAPKIN, DMITRY BARANOV, FRANK SCHREIBER, IVAN VARTANYANTS, MARCUS SCHEELE, •IVAN ZALUZHNYI
HL 11.1	Mon	15:00–15:30	POT/0251	Quantum Repeater Hardware made from Silicon Carbide — •JÖRG WRACHTRUP
HL 11.2	Mon	15:30–16:00	POT/0251	Diamond based quantum sensing for drug testing — •ROMANA SCHIRHAGL
HL 11.3	Mon	16:00–16:30	POT/0251	The oxygen-related ST1 centre in diamond: a room temperature coherently controllable electron spin — •SEBASTIEN PEZZAGNA
HL 11.4	Mon	16:45–17:15	POT/0251	Silicon quantum emitters emitting in the optical telecommunication range for scalable quantum photonic circuits — •YONDER BERENCÉN
HL 11.5	Mon	17:15–17:45	POT/0251	Advances in materials processing for quantum sensing — •ADAM GALI
HL 16.1	Tue	9:30–10:00	POT/0081	Tailoring the performance of WSe₂ quantum emitters via cavity quantum electrodynamics and coherent driving — •IVAN SOLOVEV
HL 16.2	Tue	10:00–10:30	POT/0081	Deterministic single-photon emitters in 2D materials — •URSULA WURSTBAUER
HL 16.3	Tue	10:30–11:00	POT/0081	Resolving atomic and electronic structure of point defects in MoS₂ by first-principles calculations and scanning tunneling microscopy — •HANNU-PEKKA KOMSA
HL 16.4	Tue	11:15–11:45	POT/0081	Polarization dynamics of isolated defects in hexagonal boron nitride — SERKAN PAÇAL, ÇAĞLAR SAMANER, FURKAN AĞLARCI, ÖMER S. TAPŞIN, •SERKAN ATEŞ
HL 16.5	Tue	11:45–12:15	POT/0081	Defect-driven quantum emission in 2D materials — •MAGDALENA GRZESZCZYK

HL 25.1	Wed	9:30–10:00	POT/0251	Quantum dots for single-electron current sources — ●JOHANNES C. BAYER, THOMAS GERSTER, DARIO MARADAN, NIELS UBBELOHDE, KLAUS PIERZ, HANS W. SCHUMACHER, FRANK HOHLS
HL 25.2	Wed	10:00–10:30	POT/0251	Optical readout of reconfigurable in-plane magnetic domains in CrSBr — ●ALEKSANDRA ŁOPION, PIERRE-MAURICE PIEL, MANUEL TERBECK, JAN-HENDRIK LARUSCH, JAKOB HENZ, MARIE-CHRISTIN HEISSENBÜTTTEL, THORSTEN DEILMANN, MICHAEL ROHLFING, ZDENEK SOFER, URSULA WURSTBAUER
HL 25.3	Wed	10:30–11:00	POT/0251	Ferroelectric switching in Mn-doped epitaxial BaTiO₃ films and superlattices on silicon — ●ALFREDO BLÁZQUEZ MARTÍNEZ, VALENTIN VÄINÖ HEVELKE, IBUKUN OLANIYAN, MINH-ANH LUONG, INES HÄUSLER, SVEN WIESNER, CHRISTOPH T. KOCH, DONG-JIK KIM, CATHERINE DUBOURDIEU
HL 25.4	Wed	11:15–11:45	POT/0251	Tunability of quantized Hall plateaus — ●SERKAN SIRT, VLADIMIR UMANSKY, STEFAN LUDWIG
HL 25.5	Wed	11:45–12:15	POT/0251	How to achieve high gain in organic photodetectors? — ●JOHANNES BENDUHN
HL 30.1	Wed	15:00–15:30	POT/0081	Dual proximity engineering of spin-orbit and magnetic effects in graphene heterostructures — ●CHRISTOPH KASTL
HL 42.1	Thu	11:15–11:45	POT/0006	Transition Metal Nitride Semiconductors for Photoelectrochemical Energy Conversion — ●VERENA STREIBEL, LAURA I. WAGNER, ELISE SIROTTI, DAVID A. EGGER, IAN D. SHARP
HL 46.3	Thu	15:30–16:00	POT/0051	Antisymmetric vibrations in the excited state dynamics of quadrupolar dyes — SOMAYEH SOURI, KATRIN WINTE, DANIEL LÜNE-MANN, DANIEL TIMMER, ELENA MENA-OSTERITZ, SERGEI TRETIK, CHRISTOPH LIENAU, ●ANTONIETTA DE SIO
HL 49.1	Thu	16:15–16:45	POT/0081	Phonon-mediated nonlinearity and defects in hexagonal boron nitride — ●NAHID TALEBI
HL 53.1	Fri	9:30–10:00	POT/0051	Organic semiconductors: Opening new perspectives in sustainable electronics — ●KARL LEO

Invited Talks of the joint Symposium SKM Dissertation Prize 2026 (SYSD)

See SYSD for the full program of the symposium.

SYSD 1.1	Mon	9:30–10:00	HSZ/0002	Stochastic-Calculus Approach to Non-equilibrium Statistical Physics — ●CAI DIEBALL
SYSD 1.2	Mon	10:00–10:30	HSZ/0002	Nonuniform magnetic spin textures for sensing, storage and computing applications — ●SABRI KORALTAN
SYSD 1.3	Mon	10:30–11:00	HSZ/0002	Anomalous Quantum Oscillations beyond Onsager’s Fermi Surface Paradigm — ●VALENTIN LEEB
SYSD 1.4	Mon	11:00–11:30	HSZ/0002	Coherent Control Schemes for Semiconductor Quantum Systems — ●EVA SCHÖLL
SYSD 1.5	Mon	11:30–12:00	HSZ/0002	On stochastic thermodynamics under incomplete information: Thermodynamic inference from Markovian events — ●JANN VAN DER MEER

Invited Talks of the joint Symposium Designing Quantum Materials with Light: From Floquet to Cavity Engineering (SYFC)

See SYFC for the full program of the symposium.

SYFC 1.1	Mon	9:30–10:00	HSZ/AUDI	Subcycle videography of strong-field controlled band structures — ●RUPERT HUBER, MANUEL MEIERHOFER, ULRICH HÖFER
SYFC 1.2	Mon	10:00–10:30	HSZ/AUDI	Engineering Quantum Materials through Structured Cavity Vacuum Fluctuations — ●ANGEL RUBIO
SYFC 1.3	Mon	10:30–11:00	HSZ/AUDI	Floquet engineering of quantum materials: from semiconductors to semimetals — ●SHUYUN ZHOU
SYFC 1.4	Mon	11:15–11:45	HSZ/AUDI	(Quantum) Light Control of Materials — ●DANTE KENNES

SYFC 1.5	Mon	11:45–12:15	HSZ/AUDI	Lightwave-driven electrons in a Floquet topological insulator — DANIEL LESKO, TOBIAS WEITZ, WEIZHE LI, SELINA NÖCKER, CELINA HÜTTNER, TAMARA PRÖBSTER, SIMON WITTIGSCHLAGER, CHRISTIAN HEIDE, OFER NEUFELD, ●PETER HOMMELHOFF
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Invited Talks of the joint Symposium Interacting Degrees of Freedom in Ultrathin Quantum Films (SYQF)

See SYQF for the full program of the symposium.

SYQF 1.1	Fri	9:30–10:00	HSZ/AUDI	Exciton dressing by extreme nonlinear magnons in a layered semiconductor — ●GEOFFREY M. DIEDERICH
SYQF 1.2	Fri	10:00–10:30	HSZ/AUDI	A tale of demons and decay in two-dimensional (alter)magnets — ●ALEXANDER MOOK
SYQF 1.3	Fri	10:30–11:00	HSZ/AUDI	Magnetism, light and matter - Role of excitons in two-dimensional magnets — ●FLORIAN DIRNBERGER
SYQF 1.4	Fri	11:15–11:45	HSZ/AUDI	Advantages and challenges of resonance Raman scattering with infrared excitation energy — ●LEONETTA BALDASSARRE
SYQF 1.5	Fri	11:45–12:15	HSZ/AUDI	Shining light on 2D antiferromagnets — ●DMYTRO AFANASIEV

Sessions

HL 1.1–1.12	Mon	9:30–12:45	POT/0006	Optical Properties I
HL 2.1–2.7	Mon	9:30–12:45	POT/0051	Focus Session: Biocompatible Organic Semiconductors for Artificial Intelligence
HL 3.1–3.12	Mon	9:30–12:45	POT/0081	2D Materials I – Excitonic properties
HL 4.1–4.8	Mon	9:30–12:00	POT/0251	Perovskite and Photovoltaics: Synthesis and Performance
HL 5.1–5.7	Mon	10:30–12:30	TRE/MATH	2D Materials: Electronic structure, excitations, etc. I (joint session O/HL/TT)
HL 6.1–6.7	Mon	15:00–18:15	HSZ/0003	Focus Session: Tunable Correlations in van der Waals Quantum Materials I (joint session TT/DS/HL)
HL 7.1–7.11	Mon	15:00–17:45	HSZ/0204	2D Materials beyond graphene: Growth, structure and substrate interaction (joint session O/HL/TT)
HL 8.1–8.12	Mon	15:00–18:15	POT/0006	Ultra-fast Phenomena I
HL 9.1–9.6	Mon	15:00–16:30	POT/0051	Oxide Semiconductors: Growth and Fabrication
HL 10.1–10.6	Mon	15:00–16:30	POT/0081	2D Materials II – Electronic and transport properties (joint session HL/TT)
HL 11.1–11.7	Mon	15:00–18:15	POT/0251	Focus Session: Quantum Emitters in 3D Semiconductors
HL 12.1–12.7	Mon	16:45–18:30	POT/0051	Heterostructures, Interfaces and Surfaces: Photonics
HL 13.1–13.7	Mon	16:45–18:30	POT/0081	2D Materials III – Interlayer excitons
HL 14.1–14.4	Tue	9:30–10:45	HSZ/0105	Focus Session: Tunable Correlations in van der Waals Quantum Materials II (joint session TT/DS/HL)
HL 15.1–15.9	Tue	9:30–12:00	POT/0006	Organic Semiconductors: Optics and Photonics
HL 16.1–16.7	Tue	9:30–12:45	POT/0081	Focus Session: Quantum Emitters in 2D Semiconductors
HL 17.1–17.10	Tue	9:30–12:15	POT/0251	Quantum Dots and Wires: Rings, Wires and Transport
HL 18.1–18.10	Tue	10:00–12:45	POT/0051	Nanomechanical systems (joint session HL/TT)
HL 19.1–19.7	Tue	10:30–12:30	HSZ/0201	Graphene: Growth, structure and substrate interaction (joint session O/HL)
HL 20.1–20.66	Tue	18:00–20:00	P1	Poster I
HL 21.1–21.4	Wed	9:30–10:30	HSZ/0101	Focus Session: Quantum Sensing with Solid State Spin defects II (joint session TT/HL/MA)
HL 22.1–22.6	Wed	9:30–11:00	POT/0006	Biocompatible Organic Semiconductors
HL 23.1–23.10	Wed	9:30–12:15	POT/0051	Transport Properties
HL 24.1–24.12	Wed	9:30–12:45	POT/0081	2D Materials IV – Emerging materials and properties
HL 25.1–25.5	Wed	9:30–12:15	POT/0251	Focus Session: Young Semiconductor Forum
HL 26.1–26.56	Wed	9:30–11:30	P1	Poster II
HL 27.1–27.8	Wed	10:30–12:30	TRE/MATH	2D Materials: Electronic structure, excitations, etc. II (joint session O/HL/TT)
HL 28.1–28.11	Wed	15:00–17:45	HSZ/0401	Topology and symmetry protected materials & Topological insulators (joint session O/HL/TT)

HL 29.1–29.5	Wed	15:00–16:15	POT/0006	Quantum Transport and Quantum Hall effects (joint session HL/TT)
HL 30.1–30.7	Wed	15:00–17:15	POT/0081	2D Materials V – Magnetic, spintronic, and topological properties (joint session HL/TT)
HL 31.1–31.5	Wed	15:00–16:15	POT/0251	Materials and Devices for Quantum Technology I
HL 32.1–32.9	Wed	15:00–17:30	REC/C213	2D Materials 2 (joint session DS/HL)
HL 33.1–33.5	Wed	16:30–17:45	POT/0006	Nitrides I – Growth and fabrication
HL 34.1–34.5	Wed	16:30–17:45	POT/0051	Quantum Dots and Wires: Telecom Wavelength
HL 35.1–35.9	Wed	16:30–19:00	POT/0251	Optical Properties II
HL 36.1–36.4	Wed	17:30–18:30	POT/0081	2D Materials VI – Optoelectronic properties
HL 37.1–37.6	Thu	9:30–11:00	POT/0006	Nitrides II – Designed properties and LED
HL 38.1–38.12	Thu	9:30–12:45	POT/0051	Materials and Devices for Quantum Technology II
HL 39.1–39.11	Thu	9:30–12:30	POT/0081	2D semiconductors VII – CrSBr and related heterostructures
HL 40.1–40.11	Thu	9:30–12:30	POT/0251	Oxide Semiconductors: Transport and Spectroscopy
HL 41.1–41.7	Thu	11:00–12:45	HSZ/0101	Quantum Dots and Point Contacts (joint session TT/HL)
HL 42.1–42.5	Thu	11:15–12:45	POT/0006	Nitrides III – Emerging thin films and electrochemistry
HL 43	Thu	13:30–17:00	Infineon	Excursion and Network-Event at Infineon Dresden AG (joint session FM/HL)
HL 44.1–44.11	Thu	15:00–17:45	HSZ/0204	2D Materials: Electronic structure, excitations, etc. III (joint session O/HL/TT)
HL 45.1–45.8	Thu	15:00–17:15	POT/0006	Perovskite and Photovoltaics: Spectroscopy
HL 46.1–46.7	Thu	15:00–17:15	POT/0051	Ultra-fast Phenomena II
HL 47.1–47.4	Thu	15:00–16:00	POT/0081	2D Materials VIII – Quantum emitters and defects
HL 48.1–48.8	Thu	15:00–17:15	POT/0251	Heterostructures, Interfaces and Surfaces: Fabrication and Structure
HL 49.1–49.4	Thu	16:15–17:30	POT/0081	Quantum Emitters in 2D Semiconductors
HL 50	Thu	17:45–19:15	POT/0051	Members' Assembly
HL 51.1–51.12	Fri	9:30–12:30	HSZ/0401	2D Materials: Stacking and heterostructures (joint session O/HL/TT)
HL 52.1–52.5	Fri	9:30–10:45	POT/0006	THz and MIR Physics in Semiconductors
HL 53.1–53.6	Fri	9:30–11:15	POT/0051	Organic Semiconductors: Carrier Dynamics
HL 54.1–54.12	Fri	9:30–12:45	POT/0081	2D Materials IX – Photonic properties and devices
HL 55.1–55.11	Fri	9:30–12:30	POT/0251	Quantum Dots and Wires: (Single) Photonics
HL 56.1–56.5	Fri	11:15–12:30	POT/0006	Quantum Emitters in 3D Semiconductors
HL 57.1–57.5	Fri	11:30–12:45	POT/0051	Nitrides IV – Optical properties

Members' Assembly of the Semiconductor Physics Division

Thu 17:45–19:15 POT/0051