

## Semiconductor Physics Division Fachverband Halbleiterphysik (HL)

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### Overview of Invited Talks and Sessions

(lecture rooms H3, H13, H14, H15, H16, and H17; poster D1 and D2)

#### Invited Talks

HL 28.1	Tue	14:00–14:30	H17	<b>Ga-assisted MBE grown GaAs nanowires and related quantum heterostructures</b> — ●ANNA FONTCUBERTA I MORRAL
HL 29.1	Tue	14:45–15:15	H17	<b>Quantum Dot Flash Memories: The best of two worlds</b> — ●ANDREAS MARENT, TOBIAS NOWOZIN, DIETER BIMBERG
HL 44.1	Wed	14:00–14:30	H15	<b>Surface characterisation and reactivity of clean GaN(000±1) surfaces</b> — PIERRE LORENZ, RICHARD GUTT, MARCEL HIMMERLICH, JUERGEN A. SCHAEFER, ●STEFAN KRISCHOK
HL 51.1	Thu	9:30–10:00	H17	<b>All-epitaxial inorganic/organic semiconductor hybrid heterostructures</b> — ●FRITZ HENNEBERGER
HL 53.1	Thu	12:30–13:00	H15	<b>Self-lacing nanowires on semiconductor surfaces</b> — ●HAROLD ZANDVLIET

#### Invited Talks of the Focused Session: Strong Light Matter Coupling

Organizers: Jürgen Christen (Otto-von-Guericke-Universität Magdeburg), Erich Runge (Technische Universität Ilmenau)

HL 18.1	Tue	9:30–10:00	H13	<b>Strong light-matter interaction in quantum dot micropillar cavities</b> — ●STEPHAN REIZENSTEIN, CAROLINE KISTNER, STEFFEN MÜNCH, CHRISTIAN SCHNEIDER, MICHA STRAUSS, PHILIPP FRANECK, ARASH RAHIMI-IMAN, TOBIAS HEINDEL, SVEN HÖFLING, LUKAS WORSCHKECH, ALFRED FORCHEL
HL 18.2	Tue	10:00–10:30	H13	<b>Strong light-matter coupling in GaN based semiconductors</b> — ●NICOLAS GRANDJEAN
HL 18.5	Tue	11:15–11:45	H13	<b>Spectroscopy and Thermodynamics of Ultracold Excitons in a Potential Trap</b> — ●HEINRICH STOLZ
HL 18.9	Tue	12:30–13:00	H13	<b>Novel polariton-based devices: Room temperature polariton laser and electrically controlled polariton parametric amplifier</b> — ●GABRIEL CHRISTMANN, STAVROS CHRISTOPOULOS, CHRISTOPHER COULSON, JEREMY J. BAUMBERG
HL 25.1	Tue	14:00–14:30	H13	<b>Sub-cycle switching of ultrastrong light-matter interaction</b> — A. A. ANAPARA, A. SELL, G. GÜNTER, G. BIASIOL, L. SORBA, S. DELIBERATO, C. CIUTI, A. TREDICUCCI, A. LEITENSTORFER, ●R. HUBER

#### Invited and Topical Talks of the Focused Session: Silicon Photonics

Organizer: Sangam Chatterjee (Philipps-Universität Marburg)

HL 42.1	Wed	14:00–14:30	H13	<b>Recent advances in silicon-based photonic devices</b> — ●DELPHINE MARRIS-MORINI, LAURENT VIVIEN, GILLES RASIGADE, PAPICHAYA CHAISAKUL, XAVIER LE ROUX, ERIC CASSAN, JEAN-MARC FEDELI, DANIEL CHRASTINA, GIOVANNI ISELLA
HL 42.2	Wed	14:30–15:00	H13	<b>3D silicon photonic crystals</b> — ●GEORG VON FREYMAN

HL 42.3	Wed	15:00–15:30	H13	<b>Miniband-related IR luminescence of Ge/Si quantum dot superlattices</b> — ●PETER WERNER
HL 42.4	Wed	15:30–16:00	H13	<b>Transient optical gain in Germanium quantum wells</b> — ●CHRISTOPH LANGE, NIKO KÖSTER, MARTIN SCHÄFER, MACKILLO KIRA, STEPHAN KOCH, DANNY CHRASTINA, GIOVANNI ISELLA, HANS VON KÄNEL, HANS SIGG, SANGAM CHATTERJEE
HL 42.5	Wed	16:15–16:45	H13	<b>SiGe based quantum cascade systems: 10 years after.</b> — ●HANS SIGG
HL 42.6	Wed	16:45–17:15	H13	<b>A Germanium Laser on Silicon</b> — ●JURGEN MICHEL, JIFENG LIU, LIONEL C. KIMERLING, XIAOCHEN SUN, RODOLFO CAMACHO
HL 42.7	Wed	17:15–17:45	H13	<b>Monolithic integration of lattice-matched Ga(NAsP)-based laser device structures on (001) Silicon</b> — ●KERSTIN VOLZ, WOLFGANG STOLZ

### Invited Talks of the Focussed Session: ZnO-based Semiconductors

Organizers: Axel Hoffmann (Technische Universität Berlin), Martin Eickhoff (Justus-Liebig-Universität Gießen)

HL 57.1	Thu	14:00–14:30	H17	<b>Exploring Zinc Oxide: From band structure towards devices</b> — ●BRUNO MEYER
HL 57.6	Thu	15:45–16:15	H17	<b>Interface Induced Gap States and ZnO Schottky Contacts</b> — ●STEVEN M. DURBIN, MARTIN W. ALLEN

### Invited talks of the joint symposium SYGN

See SYGN for the full program of the Symposium.

SYGN 1.1	Mon	14:00–14:35	H1	<b>Models for spin-orbit coupling in graphene</b> — ●FRANCISCO GUINEA
SYGN 1.2	Mon	14:35–15:10	H1	<b>Spin-orbit coupling and spin relaxation in carbon nanotube quantum dots</b> — ●FERDINAND KUEMMETH
SYGN 1.3	Mon	15:10–15:45	H1	<b>Spin-orbit interaction in carbon nanotubes probed in pulsed magnetic fields</b> — ●SUNGHO JHANG, MAGDALENA MARGANSKA, YURII SKOURSKI, DOMINIK PREUSCHE, BENOIT WITKAMP, MILENA GRIFONI, HERRE VAN DER ZANT, JOACHIM WOSNITZA, CHRISTOPH STRUNK
SYGN 1.4	Mon	16:00–16:35	H1	<b>Wigner molecules and spin-orbit coupling in carbon-nanotube quantum dots</b> — ●MASSIMO RONTANI
SYGN 1.5	Mon	16:35–17:10	H1	<b>Spin relaxation and decoherence in graphene quantum dots</b> — ●GUIDO BURKARD
SYGN 1.6	Mon	17:10–17:45	H1	<b>Spin transport in graphene field effect transistors</b> — ●BART VAN WEES

### Invited talks of the joint symposium SYPN

See SYPN for the full program of the Symposium.

SYPN 1.1	Thu	9:30–10:00	H1	<b>Growth and applications of N-polar (Al,Ga,In)N</b> — ●STACIA KELLER, UMESH K MISHRA
SYPN 1.2	Thu	10:00–10:30	H1	<b>Green light-emitting diodes and laser heterostructures on semi-polar GaN(11-22)/sapphire substrates</b> — ●ANDRE STRITTMATTER
SYPN 1.3	Thu	10:30–11:00	H1	<b>Pros and cons of green InGaN lasers on polar GaN substrates</b> — ●UWE STRAUSS, ADRIAN AVRAMESCU, TERESA LERMER, JENS MÜLLER, CHRISTOPH EICHLER, STEPHAN LUTGEN
SYPN 1.4	Thu	11:15–11:45	H1	<b>Molecular beam epitaxy as a method for the growth of free-standing zinc-blende GaN layers and substrates.</b> — ●SERGEI NOVIKOV, THOMAS FOXON, ANTHONY KENT
SYPN 1.5	Thu	11:45–12:15	H1	<b>Three-dimensional GaN for semipolar light emitters</b> — ●THOMAS WUNDERER, FRANK LIPSKI, STEPHAN SCHWAIGER, FERDINAND SCHOLZ, MARTIN FENEBERG, KLAUS THONKE, ANDREY CHUVILIN, UTE KAISER, SEBASTIAN METZNER, FRANK BERTRAM, JÜRGEN CHRISTEN, CLEMENS VIERHEILIG, ULRICH SCHWARZ

## Invited talks of the joint symposium SYDF

See SYDF for the full program of the Symposium.

SYDF 1.1	Thu	14:45–15:15	H1	<b>Downfolded Self-Energy of Many-Electron Systems and the Hubbard U</b> — ●FERDI ARYASETIAWAN
SYDF 1.2	Thu	15:15–15:45	H1	<b>LDA+Gutzwiller method for correlated electron systems</b> — ●ZHONG FANG
SYDF 1.3	Thu	15:45–16:15	H1	<b>Localized and itinerant states in <math>d/f</math>-electron systems unified by <math>GW@LDA+U</math></b> — ●HONG JIANG
SYDF 1.4	Thu	16:30–17:00	H1	<b>Giant polaronic effects in solids and nanstructures</b> — ●ANDREA MARINI
SYDF 1.5	Thu	17:00–17:30	H1	<b>Excitation energies with time-dependent density <i>matrix</i> functional theory</b> — ●EVERT JAN BAERENDS, KLAAS J. H. GIESBERTZ, OLEG GRITSENKO, KATARZYNA PERNAL
SYDF 1.6	Thu	17:30–18:00	H1	<b>Calculations of multipoles in magnetic metals and insulators</b> — ●LARS NORDSTRÖM

## Sessions

HL 1.1–1.5	Sun	16:00–18:30	H2	<b>Tutorial: Modern Photovoltaics - Techniques beyond Silicon Devices I</b>
HL 2.1–2.4	Mon	10:15–11:15	H13	<b>Preparation and Characterization</b>
HL 3.1–3.6	Mon	10:15–11:45	H14	<b>Photovoltaics I: mainly CIGS</b>
HL 4.1–4.9	Mon	10:15–12:45	H15	<b>Ultra-fast Phenomena</b>
HL 5.1–5.8	Mon	10:15–12:30	H17	<b>Nanophotonics - Devices I (Focused Session together with DS)</b>
HL 6.1–6.6	Mon	10:15–13:15	H2	<b>Graphene 1 (Joint Session with TT)</b>
HL 7.1–7.10	Mon	10:15–13:00	H18	<b>Organic Electronics and Photovoltaics I (Joint Session with DS/CPP/O)</b>
HL 8.1–8.9	Mon	10:15–12:30	H8	<b>SiC</b>
HL 9.1–9.5	Mon	11:30–12:45	H13	<b>Devices II</b>
HL 10.1–10.7	Mon	14:00–15:45	H13	<b>Transport</b>
HL 11.1–11.14	Mon	14:00–17:45	H14	<b>Group-III-Nitrides: Optical Properties I</b>
HL 12.1–12.6	Mon	14:00–15:30	H15	<b>Quantum Dots and Wires: Preparation and Characterization I</b>
HL 13.1–13.14	Mon	14:00–17:45	H17	<b>Nanophotonics - Devices II (Focused Session with DS)</b>
HL 14.1–14.7	Mon	14:00–17:45	H2	<b>Organic Electronics and Photovoltaics II (Joint Session with DS/CPP/O)</b>
HL 15.1–15.6	Mon	14:00–15:30	H8	<b>Diamond</b>
HL 16.1–16.6	Mon	16:00–17:30	H13	<b>Organic Semiconductors: Solar Cells I (Joint Session with DS/CPP/O)</b>
HL 17.1–17.7	Mon	16:00–17:45	H15	<b>Focused Session: Strong Light Matter Coupling I</b>
HL 18.1–18.9	Tue	9:30–13:00	H13	<b>Spin-controlled Transport I</b>
HL 19.1–19.13	Tue	9:30–13:00	H14	<b>Organic Semiconductors: Transistors and OLEDs</b>
HL 20.1–20.12	Tue	9:30–12:45	H15	<b>Quantum Dots and Wires, Optical Properties I: Nitrides</b>
HL 21.1–21.7	Tue	9:30–11:15	H17	<b>Graphene 2 (Joint Session with TT)</b>
HL 22.1–22.12	Tue	9:30–12:45	H21	<b>Plasmonics and Nanophotonics I (Joint Session with DS/O)</b>
HL 23.1–23.10	Tue	10:30–13:00	H2	<b>Quantum Dots and Wires, Optical Properties II: Single Photon Sources</b>
HL 24.1–24.5	Tue	11:30–12:45	H17	<b>Focused Session: Strong Light Matter Coupling II</b>
HL 25.1–25.6	Tue	14:00–15:45	H13	<b>Spin-controlled Transport II</b>
HL 26.1–26.8	Tue	14:00–16:15	H14	<b>GaN Preparation and Characterization</b>
HL 27.1–27.9	Tue	14:00–16:15	H15	<b>Invited Talk: A. Fontcuberta i Morral</b>
HL 28.1–28.1	Tue	14:00–14:30	H17	<b>Invited Talk: A. Marent</b>
HL 29.1–29.1	Tue	14:45–15:15	H17	<b>Plasmonics and Nanophotonics II (Joint Session with O/DS)</b>
HL 30.1–30.6	Tue	15:00–16:30	H2	<b>Poster I: Devices, Quantum Dots and Quantum Wires</b>
HL 31.1–31.47	Tue	18:30–20:30	Poster D1	<b>Poster I: Group II - Oxides</b>
HL 32.1–32.26	Tue	18:30–20:30	Poster D1	<b>Poster I: Transport, including Magnetic-Field Effects</b>
HL 33.1–33.15	Tue	18:30–20:30	Poster D1	<b>Poster I: III-V Semiconductors</b>
HL 34.1–34.39	Tue	18:30–20:30	Poster D2	<b>New Materials: Optoelectronic and Photovoltaic Applications</b>
HL 35.1–35.5	Wed	9:30–10:45	H13	<b>Ge, GeSi, and Si</b>
HL 36.1–36.13	Wed	9:30–13:00	H14	

HL 37.1–37.12	Wed	9:30–12:45	H15	<b>Quantum Dots and Wires: Optical Properties III</b>
HL 38.1–38.13	Wed	9:30–13:00	H17	<b>ZnO and Related Semiconductors</b>
HL 39.1–39.8	Wed	9:30–11:45	H3	<b>Photovoltaics II</b>
HL 40.1–40.11	Wed	10:30–13:15	H32	<b>Plasmonics and nanooptics III</b>
HL 41.1–41.7	Wed	11:00–12:45	H13	<b>Quantum Dots and Wires: Preparation and Characterization II</b>
HL 42.1–42.7	Wed	14:00–17:45	H13	<b>Focussed Session: Silicon Photonics</b>
HL 43.1–43.7	Wed	14:00–15:45	H14	<b>Electronic Structure and Atomistic Modeling</b>
HL 44.1–44.1	Wed	14:00–14:30	H15	<b>Invited talk: S. Krischok</b>
HL 45.1–45.12	Wed	14:30–17:45	H15	<b>Group-III-Nitrides: Optical Properties II</b>
HL 46.1–46.14	Wed	14:00–17:45	H17	<b>Quantum Dots and Wires: Transport</b>
HL 47.1–47.5	Wed	16:00–17:15	H14	<b>New Materials: mainly thermoelectric and nanomechanical Properties</b>
HL 48.1–48.12	Thu	9:30–12:45	H13	<b>Semiconductor Lasers</b>
HL 49.1–49.13	Thu	9:30–13:00	H14	<b>Optical Properties</b>
HL 50.1–50.10	Thu	9:30–12:15	H15	<b>Graphene and Carbon Nanotubes</b>
HL 51.1–51.1	Thu	9:30–10:00	H17	<b>Invited Talk: F. Henneberger</b>
HL 52.1–52.11	Thu	10:00–13:00	H17	<b>Heterostructures</b>
HL 53.1–53.1	Thu	12:30–13:00	H15	<b>Invited Talk: H. Zandvliet</b>
HL 54.1–54.7	Thu	14:00–15:45	H13	<b>Photonic Crystals: Theory</b>
HL 55.1–55.7	Thu	14:00–15:45	H14	<b>Quantum Dots and Wires, Optical Properties IV: Spin</b>
HL 56.1–56.14	Thu	14:00–17:45	H15	<b>Non- and Semi-polar Group-III-Nitrides</b>
HL 57.1–57.13	Thu	14:00–18:00	H17	<b>Focussed Session: ZnO-based Semiconductors</b>
HL 58.1–58.7	Thu	16:00–17:45	H13	<b>Photonic Crystals: Experiment</b>
HL 59.1–59.7	Thu	16:00–17:45	H14	<b>Quantum Dots and Wires, Optical Properties V</b>
HL 60.1–60.39	Thu	18:00–20:00	Poster D1	<b>Poster II: Optical Properties, incl. Photonic Crystals and Ultrafast Phenomena</b>
HL 61.1–61.45	Thu	18:00–20:00	Poster D1	<b>Poster II: Materials, Interfaces and Heterostructures</b>
HL 62.1–62.34	Thu	18:00–20:00	Poster D2	<b>Poster II: Photovoltaics and Organic Semiconductors</b>
HL 63.1–63.10	Fri	10:15–13:00	H13	<b>III-V Semiconductors</b>
HL 64.1–64.10	Fri	10:15–13:00	H14	<b>Quantum Dots and Wires: Optical Properties VI</b>
HL 65.1–65.9	Fri	10:15–12:45	H15	<b>GaN-based Devices</b>
HL 66.1–66.4	Fri	10:15–11:15	H17	<b>ZnO-based Devices</b>
HL 67.1–67.7	Fri	10:15–12:15	H16	<b>Organic Semiconductors: Solar Cells II (Joint Session with DS/CPP/O)</b>
HL 68.1–68.5	Fri	11:30–12:45	H17	<b>II-VI Semiconductors: mainly Optical Properties</b>

## Annual General Meeting of the Semiconductor Physics Division

Wednesday 18:00 H13

- Bericht
- Stichwortkatalog
- Verschiedenes