Thin Films Division
Fachverband Dünne Schichten (DS)

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Overview of Invited Talks and Sessions

(Lecture rooms CHE 89 and CHE 91; Posters P2-EG and P1C)

Gaede Prize Talk

O 43.1	Tue	15:30–16:00	WIL C307	**STM-induced light emission: from molecular LED to sub-nanometric optical microscopy.** — •Guillaume Schull

Invited Talks

DS 2.1	Mon	9:30–10:00	CHE 89	**Inhomogeneities in chalcopyrites and kesterites** — •Claudia S. Schnohr
DS 2.2	Mon	10:00–10:30	CHE 89	**Impact of growth condition on defect generation in Cu(In,Ga)Se2** — •Takeaki Sakurai, Muhammad Islam, Akira Uedono, Shogo Ishizuka, Hajime Shibata, Shigeru Niki, Katsuhiro Akimoto
DS 2.4	Mon	11:00–11:30	CHE 89	**Inhomogeneities in chalcopyrites for solar cells** — •Daniel Abou-Ras
DS 2.5	Mon	11:30–12:00	CHE 89	**Understanding the defects in Cu(In,Ga)Se2 solar cell: a correlative microscopy approach** — •Oana Cojocaru-Mirédin, Torsten Schwarz, Roland Mainz, Daniel Abou-Ras
DS 12.1	Mon	15:00–15:30	CHE 89	**Defects in Chalcopyrites** — •Susanne Siebentritt
DS 20.1	Tue	9:30–10:00	CHE 89	**Driving nanophotonics to the atomic scale** — •Javier Aizpurua
DS 20.2	Tue	10:00–10:30	CHE 89	**Transverse and Longitudinal Resonances in Plasmonic Gold Tapers** — Surong Guo, Nahid Talebi, Wilfried Sigle, Ralf Vogelgesang, Gunther Richter, Martin Esmann, Simon F. Becker, Christoph Lienau, •Peter A. van Aken
DS 20.3	Tue	10:30–11:00	CHE 89	**Nanoimaging and control of polaritons in 2D materials** — •Rainer Hillenbrand
DS 20.4	Tue	11:15–11:45	CHE 89	**Switchable infrared nanophotonic elements enabled by phase-change materials** — •Thomas Taubner
DS 20.5	Tue	11:45–12:15	CHE 89	**Nonlocal response in plasmonic nanoparticles: How much quantum?** — •N. Asger Mortensen
DS 20.6	Tue	12:15–12:45	CHE 89	**Short-range plasmonics** — •Harald Giessen
DS 28.1	Wed	9:30–10:00	CHE 89	**Self-consistent hybrid functional calculations: Electronic and optical properties of oxide semiconductors** — •Daniel Fritsch, Benjamin Morgan, Aron Walsh
DS 28.6	Wed	11:15–11:45	CHE 89	**Exceptional Points in Oxide Bulk and Metamaterials** — •Marius Grundmann
DS 28.8	Wed	12:00–12:30	CHE 89	**Kinetics and thermodynamcis of binary and ternary oxides during molecular beam epitaxy** — •Patrick Vogt, Oliver Bierwagen
DS 32.1	Wed	14:45–15:15	CHE 89	**Defect induced magnetic or optical properties in gallium-based oxides** — •Laurent Binet, Didier Gourier
DS 32.3	Wed	15:30–16:00	CHE 89	**Vacancy defects and electrical compensation in gallium oxide** — •Filip Tuomisto
DS 32.5	Wed	16:30–17:00	CHE 89	**Integration of Oxide Semiconductors with Traditional Semiconductors - A New Twist** — •Scott Chambers

DS 38.1	Thu	9:30–10:00	CHE 89	**Memristive devices for neuromorphic systems** — •Martin Ziegler
DS 38.2	Thu	10:00–10:30	CHE 89	**Learning in Silico: neuromorphic models of long-term plasticity** — •Elisabetta Chicca
DS 38.6	Thu	11:30–12:00	CHE 89	**Design and CMOS Co-Integration of ReRAM Devices and Crossbar Arrays for Neuromorphic Applications** — •Yusuf Leblebici
DS 38.7	Thu	12:00–12:30	CHE 89	**Neuromorphic Memristive Systems** — •Bernabe Linares-Barranco
DS 40.1	Thu	15:00–15:30	CHE 89	**Brain-inspired neurocomputing with memristive synapses** — •Daniele Ielmini
DS 40.2	Thu	15:30–16:00	CHE 89	**Exploring evolutionary biology and neuromorphic computing with quantum materials** — •Shriram Ramanathan

Invited talks of the joint symposium SYCE

See SYCE for the full program of the symposium.

SYCE 1.1	Mon	15:00–15:30	HSZ 02	**Ferroelectric domain walls: from conductors to insulators and back again** — •Petro Maksymovych
SYCE 1.2	Mon	15:30–16:00	HSZ 02	**Zoology of skyrmions and the role of magnetic anisotropy in the stability of skyrmions** — •Istvan Kezsmarki, Sandor Bordacs, Jonathan White, Vladimir Tsurkan, Alois Loidl, Peter Milde, Hiroyuki Nakamura, Andrey Leonov
SYCE 1.3	Mon	16:00–16:30	HSZ 02	**Magnetic imaging of topological phenomena in ferroic materials** — •Weida Wu
SYCE 1.4	Mon	17:00–17:30	HSZ 02	**Topological skyrmion textures in chiral magnets** — •Markus Garst
SYCE 1.5	Mon	17:30–18:00	HSZ 02	**Learning through ferroelectric domain dynamics in solidstate synapses** — Sören Boyn, Gwendal Lecerf, Stéphane Fusil, Sylvain Saïghi, Agnès Barthélémy, Julie Grollier, Vincent Garcia, •Manuel Bibes

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

DS 1.1–1.13	Mon	9:30–13:00	HSZ 204	**Transport: Topological Insulators (jointly with DS, MA, HL, O)**
DS 2.1–2.6	Mon	9:30–12:15	CHE 89	**Focused Session: Inhomogeneous Materials for Solar Cells I**
DS 3.1–3.13	Mon	9:30–13:00	CHE 91	**Thin Film Characterisation: Structure Analysis and Composition I**
DS 4.1–4.9	Mon	9:30–12:45	POT 81	**Focus Session: Two-dimensional materials I (jointly with HL/TT)**
DS 5.1–5.9	Mon	10:15–13:00	ZEU 222	**Fundamentals of Perovskite Photovoltaics I (jointly with CPP)**
DS 6.1–6.10	Mon	10:30–13:00	REC/PHY C213	**2D Materials Beyond Graphene I (jointly with O)**
DS 7.1–7.3	Mon	12:30–13:15	CHE 89	**Atomic Layer Deposition**
DS 8.1–8.10	Mon	14:45–18:15	POT 81	**Focus Session: Two-dimensional materials II (jointly with HL/TT)**
DS 9.1–9.12	Mon	15:00–18:15	HSZ 204	**Transport: Graphene and Carbon Nanostructures (jointly with HL/MA/TT)**
DS 10.1–10.11	Mon	15:00–18:00	HSZ 304	**Transport: Topological Phases (jointly with DS/MA/TT)**
DS 11.1–11.9	Mon	15:00–18:15	ZEU 222	**Fundamentals of Perovskite Photovoltaics II (jointly with CPP/DS/HL)**
DS 12.1–12.3	Mon	15:00–16:15	CHE 89	**Focused Session: Inhomogeneous Materials for Solar Cells II**
DS 13.1–13.7	Mon	15:00–16:45	CHE 91	**Phase Change/Resistive Switching**
DS 14.1–14.10	Mon	16:00–18:30	REC/PHY C213	**2D Materials Beyond Graphene II (jointly with CPP)**
DS 15.1–15.3	Mon	16:30–17:15	CHE 89	**Focussed Session: Frontiers in Exploring and Applying Plasmonic Systems I (Joint Session of CPP, DS, HL, MM, and O, organized by DS)**
DS 16.1–16.6	Mon	17:00–18:30	CHE 91	**Layer Properties: Electrical, Optical, and Mechanical Properties I**
DS 17.1–17.5	Mon	17:45–19:00	CHE 89	**Thermoelectric Materials**
DS 18.1–18.8	Tue	9:30–11:45	HSZ 201	**Transport: Topological Semimetals 1 (jointly with MA/TT)**

DS 19.1–19.10	Tue	9:30–12:30	ZEU 222	**Fundamentals of Perovskite Photovoltaics III (jointly with CPP/HL)**
DS 20.1–20.6	Tue	9:30–12:45	CHE 89	**Focussed Session: Frontiers in Exploring and Applying Plasmonic Systems II (Joint Session of CPP, DS, HL, MM, and O, organized by DS)**
DS 21.1–21.13	Tue	9:30–13:00	CHE 91	**Thin Film Characterisation: Structure Analysis and Composition II**
DS 22.1–22.12	Tue	9:30–13:15	POT 51	**Two-dimensional materials III (jointly with HL/TT)**
DS 23.1–23.13	Tue	9:30–13:15	POT 251	**Organic Semiconductors (jointly with CPP/HL)**
DS 24.1–24.7	Tue	14:00–16:00	ZEU 222	**Fundamentals of Perovskite Photovoltaics IV (jointly with CPP/HL)**
DS 25.1–25.1	Tue	15:30–16:00	WIL C307	**Gaede Prize Talk (jointly with O)**
DS 26.1–26.5	Tue	18:30–20:30	P1C	**Metallic Nanowires on Semiconductor Surfaces (jointly with O)**
DS 27.1–27.20	Tue	18:30–20:30	P2-EG	**2D Materials beyond Graphene (jointly with O)**
DS 28.1–28.10	Wed	9:30–13:00	CHE 89	**Focussed Session: Oxide Semiconductors for Novel Devices I**
DS 29.1–29.14	Wed	9:30–13:15	CHE 91	**Organic Thin Films I**
DS 30.1–30.13	Wed	9:30–13:15	POT 51	**Two-dimensional materials IV (jointly with HL/TT)**
DS 31.1–31.10	Wed	10:30–13:00	WIL A317	**2D Materials Beyond Graphene III (jointly with O)**
DS 32.1–32.8	Wed	14:45–17:45	CHE 89	**Focussed Session: Oxide Semiconductors for Novel Devices II**
DS 33.1–33.10	Wed	15:00–17:45	HSZ 204	**Transport: Topological Semimetals 2 (jointly with MA/TT)**
DS 34.1–34.8	Wed	15:00–17:00	CHE 91	**Organic Thin Films II**
DS 35.1–35.10	Wed	15:00–17:45	WIL A317	**2D Materials Beyond Graphene IV (jointly with O)**
DS 36.1–36.54	Wed	17:00–19:00	P2-EG	**Postersession I**
DS 37.1–37.8	Thu	9:30–13:00	HSZ 03	**Focus Session on 2D Materials: Ballistic Quantum Transport in Graphene (jointly with HL, MA, TT)**
DS 38.1–38.10	Thu	9:30–13:15	CHE 89	**Focussed Session: Memristive Devices for Neuronal Systems I**
DS 39.1–39.14	Thu	9:30–13:15	CHE 91	**Thin Film Applications**
DS 40.1–40.5	Thu	15:00–16:45	CHE 89	**Focussed Session: Memristive Devices for Neuronal Systems II**
DS 41.1–41.7	Thu	15:00–16:45	CHE 91	**Layer Properties: Electrical, Optical, and Mechanical Properties II**
DS 42.1–42.11	Thu	15:00–17:45	WIL C107	**Metallic Nanowires on Semiconductor Surfaces (jointly with O)**
DS 43.1–43.2	Thu	17:00–17:30	CHE 91	**Quantum Optics at the Nanoscale: From Fundamental Physics to Quantum Technologies (Joint Session HL, DS, O, and TT, organized by DS)**
DS 44.1–44.54	Thu	17:00–19:00	P1C	**Postersession II**
DS 45.1–45.8	Fri	9:30–11:30	HSZ 03	**Transport: Spintronics, Spincalorics and Magnetotransport (jointly with HL, MA)**
DS 46.1–46.6	Fri	9:30–11:00	CHE 89	**Ion and Electron Beam Induced Processes**
DS 47.1–47.8	Fri	9:30–11:45	CHE 91	**Organic-Inorganic Hybride Interfaces**
DS 48.1–48.10	Fri	9:30–12:45	POT 51	**Oxide Semiconductors (jointly with HL)**
DS 49.1–49.5	Fri	10:30–13:00	HSZ 02	**Frontiers of Electronic-Structure Theory: New Concepts and Developments in Density Functional Theory and Beyond (SYES)**
DS 50.1–50.4	Fri	11:15–12:15	CHE 89	**Optics and Light-Matter Interaction with Excitons in 2D Materials (Joint Session HL, DS, O, and TT, organized by DS)**

Annual Meeting of the Thin Films Division

Wednesday 19:00–20:00 CHE 89

- Annual Report