

## Thin Films Division Fachverband Dünne Schichten (DS)

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### Overview of Invited Talks and Sessions

(Lecture halls CHE 89 and CHE 91; Poster P1A)

#### Invited Talks

DS 2.1	Mon	9:30–10:00	CHE 89	<b>In situ fabrication of (Bi,Sb)-based topological insulator - superconductor hybrid devices</b> — ●PETER SCHÜFFELGEN
DS 2.2	Mon	10:00–10:30	CHE 89	<b>Atomic monolayers as two-dimensional topological insulators</b> — ●RALPH CLAESSEN
DS 2.3	Mon	10:30–11:00	CHE 89	<b>Exceptional Topology of Non-Hermitian Systems</b> — ●JAN CARL BUDICH
DS 7.1	Mon	11:15–11:45	CHE 89	<b>Atom-by-atom engineering of topological states of matter</b> — ●CRISTIANE MORAIS SMITH
DS 7.2	Mon	11:45–12:15	CHE 89	<b>Topological Insulator Lasers</b> — ●MORDECHAI MOTI SEGEV
DS 20.1	Wed	9:30–10:00	CHE 89	<b>Progress and challenges of organic and hybrid based thermoelectrics</b> — ●MARIANO CAMPOY-QUILES
DS 20.3	Wed	10:15–10:45	CHE 89	<b>Thermoelectric microdevices - challenges and perspectives</b> — ●GABI SCHIERNING
DS 25.1	Wed	11:15–11:45	CHE 89	<b>Organic thermoelectrics: fundamentals, challenges and recent results</b> — ●MARTIJN KEMERINK
DS 25.3	Wed	12:00–12:30	CHE 89	<b>Tuning the Thermoelectric Performance of Hybrid Polymer/Nanoparticle Composites via Stoichiometric Control</b> — ●KATHERINE A. MAZZIO, DANNY KOJDA, BRITTA RYLL, JENS NIEDERHAUSEN, RODRIGO RUBIO-GOVEA, KLAUS HABICHT, SIMONE RAOUX

#### Invited talks of the joint symposium SYNC

See SYNC for the full program of the symposium.

SYNC 1.1	Mon	9:30–10:00	HSZ 01	<b>Photonic Reservoir Computing and its Application to Optical Communication</b> — ●INGO FISCHER, APOSTOLOS ARGYRIS
SYNC 1.2	Mon	10:00–10:30	HSZ 01	<b>Metal-oxide resistance switching memory devices as artificial synapses for brain-inspired computing</b> — ●SABINA SPIGA
SYNC 1.3	Mon	10:30–11:00	HSZ 01	<b>Towards brain-inspired photonic computing</b> — ●WOLFRAM PERNICE
SYNC 1.4	Mon	11:15–11:45	HSZ 01	<b>Photonic Recurrent Ising Sampler</b> — ●CHARLES ROQUES-CARMES, YICHEN SHEN, CRISTIAN ZANOCI, MIHIKA PRABHU, FADI ATIEH, LI JING, TENA DUBČEK, CHENKAI MAO, MILES JOHNSON, VLADIMIR ČEPERÍČ, JOHN JOANNOPOULOS, DIRK ENGLUND, MARIN SOLJAČIĆ
SYNC 1.5	Mon	11:45–12:15	HSZ 01	<b>Beyond von Neumann systems: Computational memory for efficient AI</b> — ●IREM BOYBAT

#### Invited talks of the joint symposium SYSD

See SYSD for the full program of the symposium.

SYSD 1.1	Mon	9:30– 9:55	HSZ 02	<b>Disentangling transport in topological insulator thin films down to the nanoscale</b> — ●FELIX LÜPKE
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SYSD 1.2	Mon	9:55–10:20	HSZ 02	<b>Spintronics with Terahertz Radiation: Probing and driving spins at highest frequencies</b> — ●TOM SEBASTIAN SEIFERT, TOBIAS KAMPFRATH
SYSD 1.3	Mon	10:20–10:45	HSZ 02	<b>Non-radiative voltage losses in organic solar cells</b> — ●JOHANNES BENDUHN
SYSD 1.4	Mon	10:45–11:10	HSZ 02	<b>Multivalent ions for tuning the phase behaviour of protein solutions</b> — ●OLGA MATSARSKAIA
SYSD 1.5	Mon	11:10–11:35	HSZ 02	<b>Network Dynamics under Constraints</b> — ●MALTE SCHRÖDER
SYSD 1.6	Mon	11:35–12:00	HSZ 02	<b>Exciton spectroscopy of van der Waals heterostructures</b> — ●PHILIPP NAGLER

### Invited talks of the joint symposium SYAS

See SYAS for the full program of the symposium.

SYAS 1.1	Mon	15:00–15:30	HSZ 02	<b>Ultrafast Coherent Spin-Lattice Interactions in Ferromagnets</b> — ●STEVEN L. JOHNSON
SYAS 1.2	Mon	15:30–16:00	HSZ 02	<b>Ab-initio treatment of ultrafast spin-dynamics</b> — ●SANGEETA SHARMA, J. K. DEWHURST
SYAS 1.3	Mon	16:00–16:30	HSZ 02	<b>Light-wave driven Spin Dynamics</b> — ●MARTIN SCHULTZE, SANGEETA SHARMA, MARKUS MÜNZENBERG
SYAS 1.4	Mon	16:45–17:15	HSZ 02	<b>All-coherent subcycle switching of spins by THz near fields</b> — ●CHRISTOPH LANGE
SYAS 1.5	Mon	17:15–17:45	HSZ 02	<b>Ultrafast optically-induced spin transfer in ferromagnetic alloys</b> — ●STEFAN MATHIAS

### Invited talks of the joint symposium SYWH

See SYWH for the full program of the symposium.

SYWH 1.1	Wed	15:00–15:30	HSZ 02	<b>Engineering 2D materials with a twist</b> — ●CORY DEAN
SYWH 1.2	Wed	15:30–16:00	HSZ 02	<b>Flat Bands and Correlated Electronic States in Two Dimensional Atomic Crystals</b> — ●EVA Y. ANDREI
SYWH 1.3	Wed	16:00–16:30	HSZ 02	<b>Lightwave electronics and valleytronics in van der Waals layered materials</b> — ●RUPERT HUBER
SYWH 1.4	Wed	16:30–17:00	HSZ 02	<b>Interaction and Topological Effects in Atomically Thin Two-dimensional Materials</b> — ●STEVEN G. LOUIE
SYWH 1.5	Wed	17:00–17:30	HSZ 02	<b>Excitons in 2D Semiconductors and Heterostructures</b> — ●ALEXANDER HÖGELE

### Invited talks of the joint symposium SYED

See SYED for the full program of the symposium.

SYED 1.1	Thu	9:30–10:00	HSZ 01	<b>Ultrafast electron dynamics at laser-irradiated surfaces</b> — ●BAERBEL RETHFELD
SYED 1.2	Thu	10:00–10:30	HSZ 01	<b>Unraveling Momentum-Dependent Electron-Phonon Coupling and its Role in the Origin of Charge Density Wave Phases</b> — ●BRADLEY SIWICK, MARTIN OTTO, JAN-HENDRIK POHLS, LAURENT RENE DE COTRET, MARK SUTTON
SYED 1.3	Thu	10:30–11:00	HSZ 01	<b>Light MATTERS!!!</b> — ●HRVOJE PETEK, ANDI LI, ZEHUA WANG, MARCEL REUTZEL
SYED 1.4	Thu	11:15–11:45	HSZ 01	<b>Quantum localization and delocalization of charge carriers in molecular organic crystals</b> — ●JOCHEN BLUMBERGER
SYED 1.5	Thu	11:45–12:15	HSZ 01	<b>Single-Atom Catalysis (SAC): How Structure Influences Reactivity</b> — ●GARETH PARKINSON

### Invited talks of the joint symposium SYES

See SYES for the full program of the symposium.

SYES 1.1	Thu	9:30–10:00	HSZ 02	<b>Understanding the physical variables driving mechanosensing</b> — ●PERE ROCA-CUSACHS
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SYES 1.2	Thu	10:00–10:30	HSZ 02	<b>Mechanics of life: Cellular forces and mechanics far from thermodynamic equilibrium</b> — ●TIMO BETZ
SYES 1.3	Thu	10:30–11:00	HSZ 02	<b>A hydrodynamic approach to collective cell migration in epithelial tissues</b> — ●JAUME CASADEMUNT
SYES 1.4	Thu	11:15–11:45	HSZ 02	<b>The spindle is a composite of two permeating polar gels</b> — DAVID ORIOLA, BENJAMIN DALTON, FRANZISKA DECKER, FRANK JULICHER, ●JAN BRUGUES
SYES 1.5	Thu	11:45–12:15	HSZ 02	<b>Adding magnetic properties to epitaxial graphene</b> — ●RODOLFO MIRANDA
SYES 2.1	Thu	15:00–15:30	HSZ 01	<b>Interactions in assemblies of surface-mounted magnetic molecules</b> — ●WOLFGANG KUCH
SYES 2.2	Thu	15:30–16:00	HSZ 01	<b>Towards phononic circuits based on optomechanics</b> — ●CLIVIA M. SOTOMAYOR-TORRES
SYES 2.3	Thu	16:00–16:30	HSZ 01	<b>Optical properties of 2D materials and heterostructures</b> — ●JANINA MAULTZSCH
SYES 2.4	Thu	16:45–17:15	HSZ 01	<b>Bringing nanophotonics to the atomic scale</b> — ●JAVIER AIZPURUA
SYES 2.5	Thu	17:15–17:45	HSZ 01	<b>Infrared signatures of the coupling between vibrational and plasmonic excitations</b> — ●ANNEMARIE PUCCI

### Invited talks of the joint symposium SYCL

See SYCL for the full program of the symposium.

SYCL 1.1	Fri	9:30–10:00	HSZ 02	<b>Topology and transport in nanostructures with curved geometries</b> — ●CARMINE ORTIX
SYCL 1.2	Fri	10:00–10:30	HSZ 02	<b>Properties of domain walls and skyrmions in curved ferromagnets.</b> — ●VOLODYMYR KRAVCHUK
SYCL 1.3	Fri	10:30–11:00	HSZ 02	<b>3D Mesoscopic Magnetic Architectures: Fabrication, Actuation &amp; Imaging</b> — ●LAURA HEYDERMAN
SYCL 1.4	Fri	11:15–11:45	HSZ 02	<b>3D nanostructures for superconductivity and magnetism</b> — ●OLEKSANDR DOBROVOLSKIY
SYCL 1.5	Fri	11:45–12:15	HSZ 02	<b>Effect of Curvature on Topological Defects in Chiral Condensed and Soft Matter</b> — ●AVADH SAXENA

### Sessions

DS 1.1–1.4	Mon	9:30–11:40	HSZ 105	<b>Focus: Diamond Technology and Electronics (joint session KFM/DS/HL)</b>
DS 2.1–2.3	Mon	9:30–11:00	CHE 89	<b>Focus Session: Topological Phenomena in Synthetic Matter I (joint session DS/O)</b>
DS 3.1–3.4	Mon	9:30–10:30	CHE 91	<b>Thin Film Applications I</b>
DS 4.1–4.12	Mon	9:30–13:00	POT 81	<b>2D semiconductors and van der Waals heterostructures I (joint session HL/DS/O)</b>
DS 5.1–5.8	Mon	10:30–12:45	GER 38	<b>Frontiers in Electronic-Structure Theory - Focus on Electron-Phonon Interactions I (joint session O/HL/PPP/DS)</b>
DS 6.1–6.5	Mon	10:45–12:00	CHE 91	<b>Thin Film Applications II</b>
DS 7.1–7.2	Mon	11:15–12:15	CHE 89	<b>Focus Session: Topological Phenomena in Synthetic Matter II (joint session DS/O)</b>
DS 8.1–8.6	Mon	15:00–16:30	CHE 89	<b>Layer Deposition I: Inorganic Thin Films</b>
DS 9.1–9.5	Mon	15:00–16:15	CHE 91	<b>Optical Analysis of Thin Films</b>
DS 10.1–10.10	Mon	15:00–17:30	GER 38	<b>Frontiers in Electronic-Structure Theory - Focus on Electron-Phonon Interactions II (joint session O/HL/PPP/DS)</b>
DS 11.1–11.11	Mon	15:00–18:30	POT 81	<b>2D semiconductors and van der Waals heterostructures II (joint session HL/DS)</b>
DS 12.1–12.5	Mon	16:30–17:45	CHE 91	<b>Thermoelectric and Phase Change Materials</b>
DS 13.1–13.5	Mon	16:45–18:00	CHE 89	<b>Layer Deposition II: Deposition Methods</b>
DS 14.1–14.8	Tue	9:30–11:30	CHE 89	<b>2D Materials and their Heterostructures I (joint session DS/O/HL)</b>
DS 15.1–15.6	Tue	9:30–11:00	CHE 91	<b>Organic Thin Films, Organic-Inorganic Interfaces I (joint session DS/PPP)</b>

DS 16.1–16.11	Tue	9:30–13:00	POT 81	<b>2D semiconductors and van der Waals heterostructures III (joint session HL/DS)</b>
DS 17.1–17.6	Tue	11:15–12:45	CHE 91	<b>Organic Thin Films, Organic-Inorganic Interfaces II (joint session DS/CPP)</b>
DS 18.1–18.5	Tue	11:45–13:00	CHE 89	<b>Transport Properties</b>
DS 19.1–19.8	Tue	14:00–16:00	POT 81	<b>2D semiconductors and van der Waals heterostructures IV (joint session HL/DS/O)</b>
DS 20.1–20.4	Wed	9:30–11:00	CHE 89	<b>Focus Session: Organic-based Hybrid Thermoelectrics I</b>
DS 21.1–21.5	Wed	9:30–10:45	CHE 91	<b>Layer Properties I: Electronic Properties</b>
DS 22.1–22.12	Wed	9:30–13:00	POT 81	<b>2D semiconductors and van der Waals heterostructures V (joint session HL/DS/O)</b>
DS 23.1–23.11	Wed	10:30–13:30	GER 38	<b>Frontiers in Electronic-Structure Theory - Focus on Electron-Phonon Interactions III (joint session O/HL/CPP/DS)</b>
DS 24.1–24.5	Wed	11:00–12:15	CHE 91	<b>Layer Properties II: Optical Properties</b>
DS 25.1–25.4	Wed	11:15–12:45	CHE 89	<b>Focus Session: Organic-based Hybrid Thermoelectrics II</b>
DS 26.1–26.9	Wed	15:00–17:30	GER 38	<b>Frontiers in Electronic-Structure Theory - Focus on Electron-Phonon Interactions IV (joint session O/CPP/DS/HL)</b>
DS 27.1–27.8	Wed	15:00–18:15	POT 81	<b>Focus Session: Functional Metal Oxides for Novel Applications and Devices I (joint session HL/DS)</b>
DS 28.1–28.18	Wed	15:00–18:00	P1A	<b>Poster: Thin Film Properties: Structure, Morphology and Composition</b>
DS 29.1–29.10	Wed	15:00–18:00	P1A	<b>Poster: 2D Materials and their Heterostructures</b>
DS 30.1–30.14	Wed	15:00–18:00	P1A	<b>Poster: Organic Thin Films and Thin Oxides</b>
DS 31.1–31.9	Wed	15:00–18:00	P1A	<b>Poster: Layer Deposition and Layer Properties</b>
DS 32.1–32.9	Wed	15:00–18:00	P1A	<b>Poster: Optical Analysis of Thin Films</b>
DS 33.1–33.8	Wed	15:00–18:00	P1A	<b>Poster: Thin Films: Applications, Transport and Phase Change Materials</b>
DS 34	Wed	18:15–19:15	CHE 91	<b>Annual General Meeting of the Thin Films Division</b>
DS 35.1–35.5	Thu	9:30–10:45	CHE 89	<b>2D Materials and their Heterostructures II (joint session DS/O/HL)</b>
DS 36.1–36.5	Thu	9:30–10:45	CHE 91	<b>Thin Oxides and Oxide Layers I (joint session DS/HL/O)</b>
DS 37.1–37.10	Thu	9:30–13:00	POT 81	<b>Focus Session: Functional Metal Oxides for Novel Applications and Devices II (joint session HL/DS)</b>
DS 38.1–38.6	Thu	11:00–12:30	CHE 89	<b>2D Materials and their Heterostructures III (joint session DS/HL)</b>
DS 39.1–39.5	Thu	11:00–12:15	CHE 91	<b>Thin Oxides and Oxide Layers II (joint session DS/HL)</b>
DS 40.1–40.6	Thu	15:00–16:30	CHE 89	<b>Thin Film Properties: Structure, Morphology and Composition I</b>
DS 41.1–41.9	Thu	15:00–17:30	GER 38	<b>Frontiers in Electronic-Structure Theory - Focus on Electron-Phonon Interactions V (joint session O/HL/DS/CPP)</b>
DS 42.1–42.6	Thu	15:00–16:30	POT 81	<b>Focus Session: Functional Metal Oxides for Novel Applications and Devices III (joint session HL/DS)</b>
DS 43.1–43.6	Thu	16:45–18:15	CHE 89	<b>Thin Film Properties: Structure, Morphology and Composition II</b>
DS 44.1–44.13	Fri	9:30–13:00	HSZ 04	<b>Magnetic Coupling and Anisotropy in Thin Films (joint session MA/DS)</b>
DS 45.1–45.6	Fri	9:30–11:00	CHE 89	<b>Thin Film Properties: Structure, Morphology and Composition III</b>
DS 46.1–46.6	Fri	11:15–12:45	CHE 89	<b>Thin Film Properties: Structure, Morphology and Composition IV</b>
DS 47.1–47.1	Fri	14:00–14:45	HSZ 02	<b>Overview Talk: Wiesendanger (joint session O/CPP/DS)</b>

## Annual General Meeting of the Thin Films Division

Wednesday 18:15–19:15 CHE 91