

Thin Films Division Fachverband Dünne Schichten (DS)

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Overview of Invited Talks and Sessions

(Lecture rooms H 0111, H 2032, and E 020; Poster B and F)

Invited Talks

DS 13.1	Tue	9:30–10:00	E 020	Electron transport in beta-gallium oxide — •REBECCA L. PETERSON, ZUMRAD KABILOVA, CAGLIYAN KURDAK
DS 13.2	Tue	10:00–10:30	E 020	Deep level defects in bulk and epi-grown β-Ga₂O₃ — •LASSE VINES
DS 13.3	Tue	10:30–11:00	E 020	Indium Oxide and its surface electrons – a model system to study gas interaction and metal/semiconductor junctions — •MARCEL HIMMERLICH, THERESA BERTHOLD, JONAS MICHEL, SIMEON KATZER, STEFAN KRISCHOK
DS 13.4	Tue	11:00–11:30	E 020	Phonons and excitons in Ga₂O₃ polytypes — •MARKUS R. WAGNER
DS 18.1	Wed	9:30–10:00	H 0111	Infrared nanopolarimetric analysis of structure and anisotropy of thin films — •KARSTEN HINRICH, TIMUR SHAYKHUTDINOV
DS 19.1	Wed	9:30–10:00	H 2032	3D direct-write nanofabrication using an electron beam — •JASON FOWLKES, ROBERT WINKLER, EVA MUTUNGA, BRETT LEWIS, HARALD PLANK, PHILIP RACK
DS 19.2	Wed	10:00–10:30	H 2032	Nanosuperconductivity with Focused Particle Beam Induced Deposition structures — •ROSA CÓRDOBA, JAVIER SESÉ, JOSÉ MARÍA DE TERESA
DS 19.3	Wed	10:30–11:00	H 2032	Chemistry for EElectron-Induced NANofabrication — •PETRA SWIDEREK
DS 19.4	Wed	11:00–11:30	H 2032	The direct electron beam writing of plasmonic nanostructures — •KATJA HÖFLICH
DS 25.1	Wed	16:00–16:30	H 0111	Prospects of Engineering Chemistry and Electronic Character of Interfaces in Multifunctional (Bio)Organic-Inorganic Hybrids — •MARIA LOSURDO
DS 27.1	Thu	9:30–10:00	H 2032	Coupling RF-driven acoustic wave devices with nanocavity optomechanics — •KARTIK SRINIVASAN, MARCELO WU, MARCELO DAVANCO, KRISHNA BALRAM
DS 27.2	Thu	10:00–10:30	H 2032	Quantum Spin-Mechanics with Color Centers in Diamond — •HAILIN WANG
DS 27.3	Thu	10:30–11:00	H 2032	Acoustic Traps and Lattices for Electrons in Semiconductors — MARTIN SCHUETZ, •JOHANNES KNÖRZER, GÉZA GIEDKE, LIEVEN VANDERSYPEN, MIKHAIL LUKIN, IGNACIO CIRAC
DS 27.4	Thu	11:00–11:30	H 2032	Manipulating single electrons on the fly using a sound wave — •CHRISTOPHER BAUERLE
DS 37.1	Fri	9:30–10:00	H 2032	Tunable Electronic Structures, Magnetism, and Axis-Dependent Conduction Polarity in Ge and Sn-based 2D Materials — •JOSHUA GOLDBERGER

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
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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 SYVC

See SYVC for the full program of the symposium.

SYVC 1.1	Wed	15:00–15:30	H 0105	Magneto-ionic control of interfacial magnetism — ●GEOFFREY BEACH
SYVC 1.2	Wed	15:30–16:00	H 0105	Ionic Control of Materials Beyond Interfaces — ●DUSTIN GILBERT
SYVC 1.3	Wed	16:00–16:30	H 0105	Microscopic Mechanisms of Memristive Switching in Metal Oxides — ●RAINER WASER, STEPHAN MENZEL, REGINA DITTMANN
SYVC 1.4	Wed	17:00–17:30	H 0105	In-situ and operando SQUID magnetometry under electrochemical control — ●ROLAND WÜRSCHUM, MARKUS GÖSSLER, GREGOR KLINSER, EVA-MARIA STEYSKAL, HEINZ KRENN
SYVC 1.5	Wed	17:30–18:00	H 0105	Reversible chemistry as a tool for dynamic control of physical properties — ●ROBERT KRUK, SUBHO DASGUPTA, BIJOY DAS, HORST HAHN

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

Invited talks of the joint symposium SYAM

See SYAM for the full program of the symposium.

SYAM 1.1	Fri	9:30–10:00	H 0105	Bringing Dino-Birds to life – Synchrotron X-ray fluorescence and Raman imaging of ancient materials — ●UWE BERGMANN
SYAM 1.2	Fri	10:00–10:30	H 0105	Linear and Nonlinear Optical Properties of Cultural Heritage Materials — ●MARTA CASTILLEJO
SYAM 1.3	Fri	10:30–11:00	H 0105	Morphology and topology of multiscale pore networks: Imaging structural alteration and hydric invasion — ●PIERRE LEVITZ
SYAM 1.4	Fri	11:15–11:45	H 0105	Painting cracks: a way to reveal physical properties of matter — ●LUDOVIC PAUCHARD
SYAM 1.5	Fri	11:45–12:15	H 0105	Finite element analysis and biomechanical interpretation of fossil material properties — ●EMILY RAYFIELD

Sessions

DS 1.1–1.8	Mon	9:30–11:30	H 0111	Layer Properties: Electronic, Optical and Mechanical
DS 2.1–2.14	Mon	9:30–13:15	H 2032	2D Materials: Session I (joint session DS/CPP/HL)
DS 3.1–3.14	Mon	9:30–13:15	E 020	Oxide Semiconductors for Novel Devices (Focussed Session): Session I

DS 4.1–4.10	Mon	10:30–13:00	HL 001	Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials I (joint session O/MM/DS/TT/ CPP)
DS 5.1–5.6	Mon	11:45–13:15	H 0111	Layer Deposition (ALD, MBE, Sputtering, ...)
DS 6.1–6.12	Mon	15:00–18:15	H 0111	Thin Film Applications
DS 7.1–7.10	Mon	15:00–17:45	H 2032	Thin Film Properties: Structure, Morphology and Composition (XRD, TEM, XPS, SIMS, RBS, AFM, ...): Session I
DS 8.1–8.6	Mon	15:00–16:30	EW 201	2D materials (joint session HL/DS)
DS 9.1–9.9	Mon	15:00–17:15	HL 001	Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials II (joint session O/MM/DS/TT/ CPP)
DS 10.1–10.12	Mon	15:00–18:15	E 020	Oxide Semiconductors for Novel Devices (Focussed Session): Session II
DS 11.1–11.14	Tue	9:30–13:15	H 0111	Thin Film Properties: Structure, Morphology and Composition (XRD, TEM, XPS, SIMS, RBS, AFM, ...): Session II
DS 12.1–12.14	Tue	9:30–13:15	H 2032	2D Materials: Session II (joint session DS/ CPP/ HL)
DS 13.1–13.4	Tue	9:30–11:30	E 020	Oxide Semiconductors for Novel Devices (Focussed Session): Session III
DS 14.1–14.5	Tue	10:30–13:00	HL 001	Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials III (joint session O/MM/DS/TT/ CPP)
DS 15.1–15.5	Tue	11:45–13:00	E 020	Thermoelectric and Phase Change Materials
DS 16.1–16.7	Tue	14:00–15:45	A 151	2D materials: Graphene and BN (joint session HL/DS)
DS 17.1–17.81	Tue	18:15–20:15	Poster B	Poster Session I
DS 18.1–18.11	Wed	9:30–13:00	H 0111	Optical Analysis of Thin Films (Reflection, Ellipsometry, Raman, IR-DUV Spectroscopy, ...): Session I
DS 19.1–19.9	Wed	9:30–13:00	H 2032	Lithography I: Focused Electron Beam Induced Processing: 3D Nano-Printing for Material Science (Focussed Session): Morning Session (joint session DS/ KFM)
DS 20.1–20.14	Wed	9:30–13:15	A 151	2D materials: Chalcogenides I (joint session HL/DS)
DS 21.1–21.9	Wed	10:30–13:00	HL 001	Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials IV (joint session O/MM/DS/TT/ CPP)
DS 22.1–22.3	Wed	15:00–15:45	H 0111	Optical Analysis of Thin Films (Reflection, Ellipsometry, Raman, IR-DUV Spectroscopy, ...): Session II
DS 23.1–23.11	Wed	15:00–18:00	H 2032	Lithography II: Focused Electron Beam Induced Processing: 3D Nano-Printing for Material Science (Focussed Session): Afternoon Session (joint session DS/ KFM)
DS 24.1–24.10	Wed	15:00–17:45	HL 001	Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials V (joint session O/MM/DS/TT/ CPP)
DS 25.1–25.7	Wed	16:00–18:15	H 0111	Organic Thin Films, Organic-Inorganic Interfaces: Session I (joint session DS/ CPP)
DS 26	Wed	18:30–19:30	H 0111	Annual General Meeting of the Thin Films division
DS 27.1–27.10	Thu	9:30–13:15	H 2032	New Twists for Nanoquakes on a Chip - Emerging Applications of Surface Acoustic Waves in Condensed Matter Physics (Focussed Session): Session I
DS 28.1–28.14	Thu	9:30–13:15	A 151	2D materials: Chalcogenides II (joint session HL/DS)
DS 29.1–29.8	Thu	9:30–12:50	EMH 025	Lithography III: Lithography and Structuring (joint session KFM/DS)
DS 30.1–30.9	Thu	10:30–12:45	HL 001	Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials VI (joint session O/MM/DS/TT/ CPP)
DS 31.1–31.26	Thu	11:15–13:15	Poster F	Poster Session II
DS 32.1–32.1	Thu	12:30–13:00	EW 201	Invited Talk: Michael Heuken (joint session HL/DS)
DS 33.1–33.3	Thu	15:00–15:45	H 2032	New Twists for Nanoquakes on a Chip - Emerging Applications of Surface Acoustic Waves in Condensed Matter Physics (Focussed Session): Session II
DS 34.1–34.10	Thu	15:00–17:45	HL 001	Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials VII (joint session O/TT/ MM/DS/ CPP)

DS 35.1–35.8	Thu	15:00–18:10	EMH 025	Lithography IV: Lithography and Structuring (joint session KFM/DS)
DS 36.1–36.6	Fri	9:30–11:00	H 0111	Organic Thin Films, Organic-Inorganic Interfaces: Session II (joint session DS/CPP)
DS 37.1–37.10	Fri	9:30–12:30	H 2032	2D Materials: Session III (joint session DS/CPP/HL)
DS 38.1–38.9	Fri	10:30–12:45	HL 001	Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials VIII (joint session O/TT/MM/DS/CPP)

Annual General Meeting of the Thin Films Division

Wednesday 18:30–19:30 H 0111