Thin Films Division
Fachverband Dünne Schichten (DS)

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Overview of Invited Talks and Sessions

(Lecture halls H32 and H39; Poster E)

Invited Talks

DS 1.1	Mon	9:30–10:00	H32	**Charge and ion exchange at electrochemical interfaces: atomistic insights by means of in-situ ellipsometry** — •Christoph Cobet
DS 11.1	Tue	9:30–10:00	H32	**Photoluminescence Analysis of Thin Films: What can it tell us about (Perovskite) Solar Cells?** — •Thomas Unold
DS 11.3	Tue	10:15–10:45	H32	**Defect activity in lead halide perovskite semiconductors** — •Silvia Motti
DS 11.5	Tue	11:15–11:45	H32	**Beyond traditional use of photoluminescence: Assessing halide perovskites quantitatively and qualitatively** — •Carolin Sutter-Fella
DS 11.7	Tue	12:00–12:30	H32	**Photophysics of Sn-based hybrid perovskites** — •Maria Antonietta Loi
DS 15.1	Wed	9:30–10:00	H32	**3D-Nanoprinting with Focused Electron Beams. Advances and Applications** — •Robert Winkler, Jason D Fowlkes, Jürgen Sattelkow, Philip D Rack, Harald Plank
DS 15.7	Wed	11:30–12:00	H32	**Resist-free fabrication of graphene devices using focused ion beam patterning and direct-write ALD** — •Ageeth Bol
DS 19.1	Wed	15:00–15:30	H32	**Fabrication of functional nanostructures by electron and ion beams** — •Milos Toth
DS 19.6	Wed	16:45–17:15	H32	**Fundamentals of low-energy electron induced dissociation of focused electron beam induced deposition precursors** — •Oddur Ingólfsson
DS 21.1	Thu	9:30–10:00	H32	**Epitaxial graphene on SiC(0001) studied by electron spectroscopy and microscopy** — •Florian Speck
DS 21.6	Thu	11:15–11:45	H32	**Patternable non-polar epigraphene for nanoelectronics and Dirac point physics** — Vladimir Prudkovskiy, Yiran Hu, Hue Hu, Lei Ma, Claire Berger, •Walt de Heer
DS 21.9	Thu	12:15–12:45	H32	**Intrinsic stacking domains in graphene on silicon carbide: A pathway for intercalation** — Tobias A de Jong, Eugene E Krasovskii, Christian Ott, Rudolf M Tromp, Sense Jan van der Molen, •Johannes Jobst
DS 23.1	Thu	15:00–15:30	H32	**Artificial nano-granular heterostructures: fundamentals and applications** — •Oleg Udalov, Igor Beloborodov
DS 23.5	Thu	16:30–17:00	H32	**3D nanomagnetism and superconductivity: Current status and potential for future work** — •Oleksandr Dobrovolskiy, Michael Huth

Invited talks of the joint Symposium SKM Dissertation-Prize 2019

See SYSD for the full program of the symposium.

SYSD 1.1	Mon	9:30– 9:50	H2	**Synchronization and Waves in Confined Complex Active Media** — •Jan Frederik Totz
SYSD 1.2	Mon	9:50–10:10	H2	**Spin scattering of topologically protected electrons at defects** — •Philipp Rüssmann
SYSD 1.3	Mon	10:10–10:30	H2	**Beyond the molecular movie: Revealing the microscopic processes behind photo-induced phase transitions** — •Chris W. Nicholson
SYSD 1.4	Mon	10:30–10:50	H2	**Thermodynamic bounds on current fluctuations** — •Patrick Pietzonka
SYSD 1.5	Mon	10:50–11:10	H2	**Lightwave-driven quasiparticle acceleration** — •Fabian Langer

SYSD 1.6	Mon	11:10–11:30	H2	**Ultrafast plasmon-driven point-projection electron microscopy** — •Jan Vogelsang
SYSD 1.7	Mon	11:30–11:50	H2	**Helimagnets, sand patterns and fingerprints linked by topology** — •Peggy Schönherr

Invited talks of the joint Symposium Mechanically Controlled Electrical Conductivity of Oxides

See SYCO for the full program of the symposium.

SYCO 1.1	Mon	9:30–10:00	H1	**Dislocation Dynamics and Their Conductivities in Oxides** — •Yuichi Ikuhara
SYCO 1.2	Mon	10:00–10:30	H1	**Strain effects in ionic conductivity and electrode processes** — •Jürgen Janek
SYCO 1.3	Mon	10:30–11:00	H1	**Elastic dipoles of point defects in materials** — •Celine Varvenne
SYCO 1.4	Mon	11:30–12:00	H1	**Mapping strain/pressure with ZnO nanowire arrays by piezo-phototronic effect** — •Caofeng Pan
SYCO 1.5	Mon	12:00–12:30	H1	**Bulk and Flexo-photovoltaic effect** — •Marin Alexe

Invited talks of the joint Symposium Patterns in Nature: Origins, Universality, Functions

See SYPN for the full program of the symposium.

SYPN 1.1	Mon	15:00–15:30	H1	**Engineering spatial-temporal organization of bacterial suspensions** — •Igor Aronson
SYPN 1.2	Mon	15:30–16:00	H1	**Collective behaviour and pattern formation in phoretic active matter** — •Ramin Golestanian
SYPN 1.3	Mon	16:00–16:30	H1	**Control and selection of spatio-temporal patterns in complex systems** — •Svetlana Gurevich
SYPN 1.4	Mon	16:45–17:15	H1	**Self-organization of Active Surfaces** — •Frank Jülicher
SYPN 1.5	Mon	17:15–17:45	H1	**Front instabilities can reverse desertification** — •Ehud Meron

Invited talks of the joint Symposium Geometry, Topology, and Condensed Matter

See SYGT for the full program of the symposium.

SYGT 1.1	Tue	9:30–10:00	H1	**Thermal Properties of Vortices on Curved Surfaces** — •José Lorenzana
SYGT 1.2	Tue	10:00–10:30	H1	**Curvature–induced effects in manomagnets** — •Denis Sheka
SYGT 1.3	Tue	10:30–11:00	H1	**Magnetization configurations and reversal of individual ferromagnetic nanotubes** — •Martino Poggio
SYGT 1.4	Tue	11:15–11:45	H1	**An experimental perspective on topology and nanoelectronics in graphene and related 2D materials.** — •Ivan J. Vera-Marun
SYGT 1.5	Tue	11:45–12:15	H1	**Roles of the curvature in two-dimensional nematic films** — •Gaetano Napoli

Invited talks of the joint Symposium Interaction Effects and Correlations in twodimensional Systems - New Challenges for Theory

See SYTS for the full program of the symposium.

SYTS 1.1	Wed	15:00–15:30	H1	**Spectra of layered semiconductors from many-body perturbation theory** — •Michael Rohlfing
SYTS 1.2	Wed	15:30–16:00	H1	**Dark exciton dynamics in 2D materials** — •Ermin Malic
SYTS 1.3	Wed	16:00–16:30	H1	**Excitons versus electron-hole plasma in monolayer transition metal dichalcogenide semiconductors** — •Alexander Steinhoff
SYTS 1.4	Wed	16:45–17:15	H1	**Theory of near K-point optical properties of TMDC multilayers** — •Tineke Stroucken
SYTS 1.5	Wed	17:15–17:45	H1	**High-throughput modeling and discovery of novel 2D materials** — •Kristian Thygesen

Invited talks of the joint Symposium Czech Republic as Guest of Honor

See SYCZ for the full program of the symposium.

SYCZ 1.1	Thu	9:30–10:00	H4	**Crystal symmetries and transport phenomena in antiferromagnets** — •Tomas Jungwirth
SYCZ 1.2	Thu	10:00–10:30	H4	**Terahertz subcycle charge and spin control** — •Rupert Huber
SYCZ 1.3	Thu	10:30–11:00	H4	**1D molecular system on surfaces** — •Pavel Jelinek
SYCZ 1.4	Thu	11:15–11:45	H4	**Tunneling microscopy on insulators provides access to out-of-equilibrium charge states** — •Jascha Repp
SYCZ 1.5	Thu	11:45–12:15	H4	**Occam's razor and complex networks from brain to climate** — •Jaroslav Hlinka
SYCZ 1.6	Thu	12:15–12:45	H4	**Long range temporal correlations in complex systems** — •Holger Kantz

Invited talks of the joint Symposium Identifying Optimal Physical Implementations for beyond von Neumann Computing Concepts

See SYCC for the full program of the symposium.

SYCC 1.1	Fri	9:30–10:00	H1	**On the Link Between Energy and Information for the Design of Neuromorphic Systems** — •Narayan Srinivasa
SYCC 1.2	Fri	10:00–10:30	H1	**Encoding neural and synaptic functionalities in electron spin: A pathway to efficient neuromorphic computing** — •Kaushik Roy
SYCC 1.3	Fri	10:30–11:00	H1	**Neuromorphic computing with spintronic nano-oscillators** — •Philippe Talatchian
SYCC 1.4	Fri	11:15–11:45	H1	**Artifcial Intelligence and beyond von Neumann architectures, a mutual opportunity** — •Mirko Prezioso
SYCC 1.5	Fri	11:45–12:15	H1	**Brain-inspired approaches in ultrafast magnetism** — •Johan H. Mentink

Sessions

DS 1.1–1.7	Mon	9:30–11:45	H32	**Optical Analysis of Thin Films I (Reflection, Ellipsometry, Raman, IR-DUV Spectroscopy, ...**
DS 2.1–2.6	Mon	9:30–12:45	H34	**Focus Session: Oxide Semiconductors for Novel Devices (joint session HL/DS)**
DS 3.1–3.12	Mon	9:30–12:45	H39	**Layer Properties: Electronic, Optical and Mechanical Properties**
DS 4.1–4.9	Mon	10:30–13:00	H9	**Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge I (joint session O/TT/CPP/DS)**
DS 5.1–5.1	Mon	12:30–13:00	H32	**Prize talk Selina Olthof (joint session PRV/DS/VA)**
DS 6.1–6.10	Mon	15:00–17:30	H9	**Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge II (joint session O/TT/DS/CPP)**
DS 7.1–7.5	Mon	15:00–16:15	H32	**Optical Analysis of Thin Films II (Reflection, Ellipsometry, Raman, IR-DUV Spectroscopy, ...**
DS 8.1–8.4	Mon	15:00–16:30	PHY 5.0.21	**Instrumentation Micro-/Nano-Analysis and Lithography/Structuring (joint session KFM/DS/O)**
DS 9.1–9.6	Mon	15:00–16:30	H39	**Layer Deposition (ALD, MBE, Sputtering, ...)**
DS 10.1–10.5	Mon	16:45–18:00	H39	**Thermoelectric and Phase Change Materials**
DS 11.1–11.9	Tue	9:30–13:15	H32	**PhD-Symposium: Photoluminescence of halide perovskites: What does it tell us and what not? (joint session DS/AKjDPG/HL)**
DS 12.1–12.9	Tue	10:30–13:00	H9	**Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge III (joint session O/CPP/DS/TT)**
DS 13.1–13.10	Tue	14:00–16:45	H9	**Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge IV (joint session O/CPP/DS/TT)**
DS 14.1–14.60	Tue	17:00–20:00	Poster E	**Poster**
DS 15.1–15.9	Wed	9:30–12:30	H32	**Focus Session: Direct-Write Nanofabrication and Applications I (Electron Beam Induced Processing) (joint session DS/TT)**
DS 16.1–16.11	Wed	9:30–12:30	H39	**Organic Thin Films, Organic-Inorganic Interfaces**

DS 17.1–17.9	Wed	10:30–13:15	H9	**Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge V (joint session O/CPP/DS/TT)**
DS 18.1–18.11	Wed	15:00–17:45	H9	**Frontiers of Electronic-Structure Theory: Focus on the Interface Challenge VI (joint session O/DS/CPP/TT)**
DS 19.1–19.9	Wed	15:00–18:00	H32	**Focus Session: Direct-Write Nanofabrication and Applications II (Electron Beam Induced Processing) (joint session DS/TT)**
DS 20	Wed	18:30–19:30	H39	**Annual General Meeting of the Thin Films Division**
DS 21.1–21.9	Thu	9:30–12:45	H32	**Focus Session: Growth, Properties and Application of Epitaxial Graphene (joint session DS/O/HL)**
DS 22.1–22.10	Thu	9:30–12:15	H39	**Thin Film Applications**
DS 23.1–23.8	Thu	15:00–17:45	H32	**Direct-Write Nanofabrication and Applications III (Electron Beam Induced Processing) (joint session DS/TT)**
DS 24.1–24.12	Thu	15:00–18:15	H39	**Thin Film Properties: Structure, Morphology and Composition (XRD, TEM, XPS, SIMS, RBS, AFM, ...) Part I**
DS 25.1–25.12	Fri	9:30–12:45	H32	**Thin Film Properties: Structure, Morphology and Composition (XRD, TEM, XPS, SIMS, RBS, AFM, ...) Part II**

Annual General Meeting of the Thin Films Division

Wednesday 18:30–19:30 H39