

Surface Science Division Fachverband Oberflächenphysik (O)

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Overview of Invited Talks and Sessions

(Lecture rooms S054, S051, S052, S053, H24, H4, and H6; Poster A and E)

Overview, Invited, and Topical Talks

O 1.1	Mon	9:30–10:15	S054	From surfaces and molecules to interfaces and hybrid materials: Theoretical spectroscopy of low-dimensional systems — ●CLAUDIA DRAXL
O 2.1	Mon	10:30–11:00	S054	Hybrid plasmonic-photonic resonances for emitter control — ●FEMIUS KOENDERINK
O 3.1	Mon	10:30–11:00	S051	On growth and interaction phenomena of heteromolecular adsorbates on metal surfaces — ●CHRISTIAN KUMPF
O 3.2	Mon	11:00–11:30	S051	Surface Morphology from First-Principles: Thermodynamics and Kinetics — ●KARSTEN REUTER
O 3.3	Mon	11:30–12:00	S051	Simulations of Surfaces and Interfaces Using High-Dimensional Neural Network Potentials — ●JÖRG BEHLER
O 3.4	Mon	12:00–12:30	S051	Morphology and growth of organic molecules at structured surfaces — ●SABINE H.L. KLAPP, NICOLA KLEPPMANN
O 3.5	Mon	12:30–13:00	S051	Interaction of alcohols and water with carbonate surfaces — ●ANGELIKA KÜHNLE, CHRISTOPH MARUTSCHKE, FELIX KLING, DIRK LAUTNER, RALF BECHSTEIN, PETER SPIJKER, JOHN TRACEY, VILLE LOUKONEN, ADAM FOSTER
O 6.1	Mon	12:00–12:30	S053	The surface science of friction: How molecular films affect sliding and plowing — ●ROLAND BENNEWITZ
O 7.5	Mon	11:30–12:00	H24	Direct view on non-equilibrium carriers in graphene with time-resolved ARPES — ●ISABELLA GIERZ
O 8.3	Mon	11:00–11:30	H4	Momentum Microscopy with Time-of-Flight Analysis and Spin Filtering: Direct Imaging of k-Space Objects and Spin Textures — ●GERD SCHÖNHENSE
O 11.1	Mon	15:00–15:30	S054	Principles of plasmonic imaging — ●ANGELA DEMETRIADOU, ALEXEI KORNYSHV
O 13.1	Mon	15:00–15:30	S052	Excitations and dynamics of non-collinear magnetization states in tailored adatom arrays — ●JENS WIEBE
O 14.6	Mon	16:15–16:45	S053	In-situ Studies of the Reactivity of Pt Model Catalysts: from Flat Surfaces to Nanoparticles — ●CHRISTIAN PAPP
O 15.4	Mon	15:45–16:15	H24	Exploring chemical properties of surfaces by means of Atomic Force Microscopy — ●PAVEL JELINEK
O 27.1	Tue	9:30–10:15	S054	The Emergence of Covalent On-Surface Polymerization — ●LEONHARD GRILL
O 28.1	Tue	10:30–11:00	S054	Unravelling the structural and electronic properties of organic/metal interfaces with photoemission tomography — ●PETER PUSCHNIG
O 29.1	Tue	10:30–11:00	S051	Toward single atom qubits on a surface: Pump-probe spectroscopy and electrically-driven spin resonance — ●WILLIAM PAUL
O 30.3	Tue	11:00–11:30	S052	Taking Nanoscience to the Edge – The Different Appearances of One-Dimensional Physics — ●JÖRG SCHÄFER
O 37.1	Tue	14:00–14:30	S054	Metal Complexation of Sulfur on Coinage Metal Surfaces — ●PATRICIA THIEL, HOLLY WALLEN, YOUSOO KIM, JUNEPYO OH, HYUN JIN YANG, DAJIANG LIU
O 41.1	Tue	14:00–14:30	H24	Topological semimetals and chiral transport in inversion asymmetric systems — ●SHUICHI MURAKAMI

O 50.1	Wed	9:30–10:15	S054	Shedding light on internal interfaces — ●ULRICH HÖFER
O 51.1	Wed	10:30–11:00	S054	Energy level alignment mechanisms at hybrid inorganic/organic semiconductor interfaces — ●NORBERT KOCH
O 53.1	Wed	10:30–11:00	S052	Insights into Oxygen Evolution Electrocatalysis on Perovskites — ●THOMAS J. SCHMIDT
O 53.2	Wed	11:00–11:30	S052	Using redox agents to enhance the performance of lithium-air batteries and lithium recycling — ●NURIA GARCIA-ARAEZ
O 53.3	Wed	11:30–12:00	S052	Probing the Femtosecond Dynamics of the Hydrogen Evolution Reaction on Gold — ●R. KRAMER CAMPEN, FRANCOIS LAPOINTE, YUJIN TONG
O 53.4	Wed	12:15–12:45	S052	The Electrochemical interface - at the atomic scale — ●JAN ROSSMEISL
O 53.5	Wed	12:45–13:15	S052	CO₂ Electroreduction over Cu and Au Nanostructured Catalysts: Size, Oxidation State and Interparticle Distance Effects — HEMMA MISTRY, RULLE RESKE, FARZAD BEHAFARID, ANA SOFIA VARELA, PETER STRASSER, ●BEATRIZ ROLDAN CUENYA
O 58.5	Wed	16:00–16:30	S054	Thin Films of Metal-Organic Frameworks: Functional, photoswitchable coatings and unique model systems — ●LARS HEINKE
O 60.1	Wed	15:00–15:30	S052	First-principles photo-electrocatalysis beyond the computational hydrogen electrode — ●HARALD OBERHOFER
O 62.1	Wed	15:00–15:30	H24	Topological semimetal phases in strained HgTe-based alloys — TOMÁŠ RAUCH, STEVEN ACHILLES, ●JÜRGEN HENK, INGRID MERTIG
O 62.2	Wed	15:30–16:00	H24	Topological surface Fermi arcs and the chiral anomaly in Weyl semimetal materials — ●BINGHAI YAN
O 63.1	Wed	15:00–15:30	H4	Spin-orbit coupling, magnetic perturbations, and competing trends in topological insulators — ●MATTHIAS BODE
O 63.2	Wed	15:30–16:00	H4	Conductance and shot noise spectroscopy of single magnetic atoms and molecules — ●ALEXANDER WEISMANN
O 63.3	Wed	16:00–16:30	H4	Manipulating spins in single molecules on a superconductor — ●BENJAMIN W. HEINRICH
O 75.1	Thu	9:30–10:15	S054	Ternary oxides with the perovskite structure exhibit an intriguingly rich variety in their physical and chemical properties. — ●ULRIKE DIEBOLD
O 76.1	Thu	10:30–11:00	S054	Spin- and Pseudospin-Polarized Excited States in bulk WSe₂ — ROMAN BERTONI, CHRISTOPHER NICHOLSON, LUTZ WALDECKER, MICHELE PUPPIN, CLAUDE MONNEY, CEPHISE CACHO, HANNES HUEBENER, UMBERTO DE GIOVANNINI, ANGEL RUBIO, MARTIN WOLF, ●RALPH ERNSTORFER
O 77.1	Thu	10:30–11:00	S051	The first single atom magnet — ●FABIO DONATI, STEFANO RUSPONI, SEBASTIAN STEPANOW, CHRISTAN WÄCKERLIN, APARAJITA SINGHA, LUCA PERSICHETTI, ROMANA BALTIC, KATHARINA DILLER, EDGAR FERNANDES, FRANÇOIS PATHEY, JAN DREISER, ŽELJKO ŠLJIVANČANIN, KURT KUMMER, CORNELIU NISTOR, PIETRO GAMBARDILLA, HARALD BRUNE
O 77.2	Thu	11:00–11:30	S051	When Electron Acceptors Donate Charge: Molecular Orbitals vs Hybrid Bands at Inorganic/Organic Interfaces — ●OLIVER T. HOFMANN, PATRICK RINKE, MATTHIAS SCHEFFLER, GEORG HEIMEL
O 77.3	Thu	11:30–12:00	S051	Direct observation of H-bond dynamics using scanning tunneling microscopy — ●TAKASHI KUMAGAI
O 77.4	Thu	12:00–12:30	S051	Visualizing topological states of matter and their interaction with perturbations using local probes — ●PAOLO SESSI
O 77.5	Thu	12:30–13:00	S051	Surface Chemistry of Oxygen and Water on Anatase TiO₂ (101) — ●MARTIN SETVIN, ULRICH ASCHAUER, JAN HULVA, MICHAEL SCHMID, ANNABELLA SELLONI, ULRIKE DIEBOLD
O 80.1	Thu	10:30–11:00	H24	Transport phenomena in broken-symmetry metals: Geometry, topology, and beyond — ●IVO SOUZA
O 80.2	Thu	11:00–11:30	H24	Dirac Fermions in Antiferromagnetic Semimetal — ●PEIZHE TANG, QUAN ZHOU, GANG XU, SHOU-CHENG ZHANG
O 81.1	Thu	10:30–11:00	H4	Imaging orbitals and defects in superconducting FeSe/SrTiO₃ — ●JENNIFER HOFFMAN, DENNIS HUANG, TATIANA WEBB, SHIANG FENG, CAN-LI SONG, CUI-ZU CHANG, JAGADEESH MOODERA, EFTHIMIOS KAXIRAS
O 84.1	Thu	15:00–15:30	S054	Radio frequency STM on molecular resonators — ●STEFAN MÜLLEGGER
O 85.1	Thu	15:00–15:30	S051	Electrostatic Design of Organic Materials and Hybrid Interfaces — ●EGBERT ZOJER
O 87.3	Thu	15:30–16:00	S053	Heteroatom-doped Molecular Nanostructures on Surfaces — ●SABINE MAIER

O 89.5	Thu	16:00–16:30	H4	The growth and decay of oxide quasicrystals — ●STEFAN FÖRSTER, JAN INGO FLEGE, EVA MARIA ZOLLNER, FLORIAN SCHUMANN, KLAUS MEINEL, JENS FALTA, WOLF WIDDRA
O 93.1	Fri	9:30–10:15	S054	New Science Opportunities with X-Ray Free-Electron Lasers — ●WILFRIED WURTH
O 94.1	Fri	10:30–11:00	S054	Time-resolved electron microscopy: probing ultrafast processes at the nanoscale — ●SASCHA SCHÄFER
O 101.1	Fri	13:15–14:00	S054	Ionic liquid surface science — ●HANS-PETER STEINRÜCK

Invited talks of the joint symposium SYTI

See SYTI for the full program of the symposium.

SYTI 1.1	Wed	9:30–10:10	H1	Topological insulators and topological superconductors — ●SHOUCHENG ZHANG
SYTI 1.2	Wed	10:10–10:50	H1	Three-dimensional topological insulators and superconductors — ●YOICHI ANDO
SYTI 1.3	Wed	10:50–11:30	H1	Interplay of magnetic and electronic states in pyrochlore iridates — ●LEON BALENTS
SYTI 1.4	Wed	11:40–12:20	H1	Magnetic imaging of edge states — ●KATHRYN MOLER
SYTI 1.5	Wed	12:20–13:00	H1	Sub-nm wide edge states at the dark side of a weak topological insulator — ●MARKUS MORGENSTERN

Invited talks of the joint symposium SYQS

See SYQS for the full program of the symposium.

SYQS 1.1	Wed	15:00–15:30	H1	Magnonic macroscopic quantum states and supercurrents — ●BURKARD HILLEBRANDS, DMYTRO A. BOZHKO, ALEXANDER A. SERGA
SYQS 1.2	Wed	15:30–16:00	H1	Elementary excitations of magnetic insulators and its heterostructures with metals — ●GERRIT BAUER
SYQS 1.3	Wed	16:00–16:30	H1	Cavity Spintronics — ●CAN-MING HU
SYQS 1.4	Wed	16:45–17:15	H1	Hybrid Quantum Systems - Coupling Color Centers to Superconducting Cavities — ●JOHANNES MAJER
SYQS 1.5	Wed	17:15–17:45	H1	Quantum enhanced sensing with single spins in diamond — ●FEDOR JELEZKO

Invited talks of the joint symposium SYES

See SYES for the full program of the symposium.

SYES 1.1	Fri	9:30–10:00	H1	Intrinsic Transport Coefficients and Momentum Space Berry Curvatures — ●ALLAN H MACDONALD
SYES 1.2	Fri	10:00–10:30	H1	Berry phase linked spin-orbit torques in Ferromagnetic and Antiferromagnetic systems — ●JAIRO SINOVA
SYES 1.3	Fri	10:30–11:00	H1	Transport in Topological Insulators and Topological Superconductors: In Search of Majorana Fermions — ●EWELINA HANKIEWICZ
SYES 1.4	Fri	11:15–11:45	H1	Engineering Topological Quantum States: From 1D to 2D. — ●JELENA KLINOVAJA
SYES 1.5	Fri	11:45–12:15	H1	Skyrmions – Topological magnetization solitons for future spintronics — ●STEFAN BLÜGEL

Sessions

O 1.1–1.1	Mon	9:30–10:15	S054	Overview Talk: Claudia Draxl
O 2.1–2.10	Mon	10:30–13:15	S054	Plasmonics and Nanooptics I: Light-Matter Interaction
O 3.1–3.5	Mon	10:30–13:00	S051	Focus Session: Morphology Prediction at Interfaces
O 4.1–4.8	Mon	10:30–12:30	S052	Surface Magnetism: Atoms and Molecules
O 5.1–5.6	Mon	10:30–12:00	S053	Dynamics of Molecules on Surfaces
O 6.1–6.4	Mon	12:00–13:15	S053	Tribology

O 7.1–7.11	Mon	10:30–13:30	H24	Graphene I: Structure and Dynamics
O 8.1–8.9	Mon	10:30–13:00	H4	Surface State Spectroscopy I
O 9.1–9.9	Mon	10:30–12:45	H6	Nanostructures at Surfaces I
O 10.1–10.11	Mon	9:30–13:00	H16	Two-dimensional Materials
O 11.1–11.11	Mon	15:00–18:00	S054	Plasmonics and Nanooptics II: Microscopy
O 12.1–12.14	Mon	15:00–18:30	S051	Morphology Prediction at Interfaces
O 13.1–13.9	Mon	15:00–17:30	S052	Magnetic Surface Excitations
O 14.1–14.11	Mon	15:00–18:00	S053	Surface Chemical Dynamics
O 15.1–15.13	Mon	15:00–18:30	H24	STM/AFM: New Approaches
O 16.1–16.12	Mon	15:00–18:00	H4	Surface State Spectroscopy II
O 17.1–17.13	Mon	15:00–18:15	H6	Adsorption on Metal Surfaces
O 18.1–18.10	Mon	17:00–19:30	Poster A	Metallic Nanowires on Semiconductor Surfaces
O 19.1–19.7	Mon	17:00–19:30	Poster A	Semiconductor Substrates: Structure, Adsorption and Growth
O 20.1–20.4	Mon	17:00–19:30	Poster A	Tribology: Surfaces and Nanostructures
O 21.1–21.8	Mon	18:15–20:30	Poster E	Morphology Prediction at Interfaces: Theory meets Experiment
O 22.1–22.17	Mon	18:15–20:30	Poster E	Organic-Inorganic Hybrid Systems and Organic Films
O 23.1–23.22	Mon	18:15–20:30	Poster E	Plasmonics and Nanooptics: Light-Matter Interaction, Spectroscopy
O 24.1–24.11	Mon	18:15–20:30	Poster E	Plasmonics and Nanooptics: Fabrication, Characterization and Applications
O 25.1–25.6	Mon	18:15–20:30	Poster E	Oxide and Insulator Surfaces: Structure and Growth
O 26.1–26.6	Mon	18:15–20:30	Poster E	Oxides and Insulator Surfaces: Adsorption
O 27.1–27.1	Tue	9:30–10:15	S054	Overview Talk: Leonhard Grill
O 28.1–28.9	Tue	10:30–13:00	S054	Organic-Inorganic Systems I: PTCDA
O 29.1–29.11	Tue	10:30–13:30	S051	Topology- and Symmetry-Protected Materials
O 30.1–30.10	Tue	10:30–13:15	S052	1D Metal Wires on Semiconductors I
O 31.1–31.10	Tue	10:30–13:00	S053	Heterogeneous Catalysis: Theory
O 32.1–32.10	Tue	10:30–13:00	H24	2D Materials I: Structure and Electronic Properties
O 33.1–33.12	Tue	10:30–13:30	H4	Photonics and Nanooptics I: Infrared Spectroscopy
O 34.1–34.8	Tue	10:30–12:30	H6	Nanostructures at Surfaces II
O 35.1–35.12	Tue	9:30–13:15	H10	Ultrafast Phenomena I
O 36.1–36.4	Tue	13:30–15:30	H11	Gaede Prize Talks
O 37.1–37.7	Tue	14:00–16:00	S054	Nanostructures at Surfaces III
O 38.1–38.8	Tue	14:00–16:00	S051	Spintronics
O 39.1–39.8	Tue	14:00–16:00	S052	1D Metal Wires on Semiconductors II
O 40.1–40.8	Tue	14:00–16:00	S053	Heterogeneous Catalysis: Experiment
O 41.1–41.7	Tue	14:00–16:00	H24	Frontiers of Electronic Structure Theory: Focus on Topology and Transport I
O 42.1–42.8	Tue	14:00–16:00	H4	Plasmonics and Nanooptics III: Infrared Microscopy
O 43.1–43.8	Tue	14:00–16:00	H6	Oxides and Insulators: Adsorption I
O 44.1–44.12	Tue	18:15–20:30	Poster E	Graphene: Electronic Properties, Structure and Substrate Interaction
O 45.1–45.11	Tue	18:15–20:30	Poster E	Graphene: Adsorption, Intercalation and Doping
O 46.1–46.12	Tue	18:15–20:30	Poster E	2D Materials beyond Graphene: TMDCs, Slicene and Relatives
O 47.1–47.14	Tue	18:15–20:30	Poster E	Electronic Structure of Surfaces: Spectroscopy, Surface States
O 48.1–48.10	Tue	18:15–20:30	Poster E	Electronic Structure: Surface Magnetism and Spin Phenomena
O 49.1–49.13	Tue	18:15–20:30	Poster E	Metal Substrates: Structure, Adsorption and Growth
O 50.1–50.1	Wed	9:30–10:15	S054	Overview Talk: Ulrich Höfer
O 51.1–51.9	Wed	10:30–13:00	S054	Organic-Inorganic Systems II: Energy Level Alignment
O 52.1–52.11	Wed	10:30–13:15	S051	Photonics and Nanooptics II: Nonlinear Response
O 53.1–53.5	Wed	10:30–13:15	S052	Focus Session: Electrocatalytic Energy Harvesting and Conversion
O 54.1–54.10	Wed	10:30–13:00	S053	2D Materials II: Growth
O 55.1–55.10	Wed	10:30–13:00	H24	Frontiers of Electronic Structure Theory: Focus on Topology and Transport II
O 56.1–56.8	Wed	10:30–12:30	H4	Nanostructures: Dots, Particles and Clusters
O 57.1–57.9	Wed	9:30–13:00	H16	Focus Session: Many-body effects in two-dimensional materials

O 58.1–58.11	Wed	15:00–18:00	S054	Organic-Inorganic Systems III: Metal-Organics
O 59.1–59.13	Wed	15:00–18:15	S051	Photonics and Nanooptics III: Fabrication and Characterization
O 60.1–60.12	Wed	15:00–18:15	S052	Chemistry at Solid/Liquid Interfaces
O 61.1–61.12	Wed	15:00–18:00	S053	Graphene II: Adsorption, Intercalation and Doping
O 62.1–62.12	Wed	15:00–18:30	H24	Frontiers of Electronic Structure Theory: Focus on Topology and Transport III
O 63.1–63.5	Wed	15:00–17:00	H4	Scanning Probe Microscopy and Spin Phenomena
O 64.1–64.10	Wed	15:00–17:30	H6	Oxides and Interfaces: Adsorption II
O 65.1–65.12	Wed	14:45–18:30	H2	Organic Photovoltaics and Electronics
O 66.1–66.7	Wed	18:15–20:30	Poster A	Frontiers of Electronic Structure Theory: Focus on Topology and Transport
O 67.1–67.5	Wed	18:15–20:30	Poster A	Theory: General
O 68.1–68.14	Wed	18:15–20:30	Poster A	Nanostructures at Surfaces: 1D, 2D Structures and Networks
O 69.1–69.12	Wed	18:15–20:30	Poster A	Nanostructures at Surfaces: Dots, Particles, Clusters
O 70.1–70.8	Wed	18:15–20:30	Poster A	Nanostructures at Surfaces: Other Aspects
O 71.1–71.19	Wed	18:15–20:30	Poster A	Scanning Probe Techniques and New Experimental Methods
O 72.1–72.10	Wed	18:15–20:30	Poster A	Solid-Liquid Interfaces: Reactions and Electrochemistry
O 73.1–73.17	Wed	18:15–20:30	Poster A	Surface Dynamics: Reactions and Elementary Processes
O 74.1–74.7	Wed	18:15–20:30	Poster A	Ultrafast Electron and Spin Dynamics at Interfaces
O 75.1–75.1	Thu	9:30–10:15	S054	Overview Talk: Ulrike Diebold
O 76.1–76.11	Thu	10:30–13:30	S054	2D Materials beyond Graphene: Dynamics and Excitation
O 77.1–77.5	Thu	10:30–13:00	S051	Gerhard Ertl Young Investigator Award
O 78.1–78.10	Thu	10:30–13:00	S052	Nanostructures at Surfaces IV: Various Aspects
O 79.1–79.9	Thu	10:30–12:45	S053	Graphene III: Electronic Properties
O 80.1–80.9	Thu	10:30–13:15	H24	Frontiers of Electronic Structure Theory: Focus on Topology and Transport IV
O 81.1–81.11	Thu	10:30–13:30	H4	Oxides and Insulator Surfaces I
O 82.1–82.10	Thu	10:30–13:00	H6	Structure of Solid/Liquid Interfaces I
O 83.1–83.13	Thu	9:30–13:15	H17	Heterostructures and Interfaces
O 84.1–84.12	Thu	15:00–18:15	S054	Scanning Probe Techniques: Method Developments
O 85.1–85.11	Thu	15:00–18:00	S051	Organic-Inorganic Systems IV: Electronic Structure
O 86.1–86.12	Thu	15:00–18:00	S052	Ultrafast Surface Dynamics I
O 87.1–87.12	Thu	15:00–18:15	S053	Metal Substrates: Structure, Epitaxy and Growth
O 88.1–88.13	Thu	15:00–18:15	H24	Frontiers of Electronic Structure Theory: Focus on Topology and Transport V
O 89.1–89.13	Thu	15:00–18:30	H4	Oxides and Insulator Surfaces II
O 90.1–90.8	Thu	14:45–17:15	H10	Topological Insulators I
O 91	Thu	19:00–19:30	H1	Annual General Meeting of the Surface Science Division
O 92	Thu	19:30–20:30	H1	Post-Deadline Session
O 93.1–93.1	Fri	9:30–10:15	S054	Overview Talk: Wilfried Wurth
O 94.1–94.6	Fri	10:30–12:15	S054	Ultrafast Surface Dynamics II
O 95.1–95.10	Fri	10:30–13:00	S051	Graphene IV: Electronic Properties and Structure
O 96.1–96.10	Fri	10:30–13:00	S052	Structure of Solid/Liquid Interfaces II
O 97.1–97.8	Fri	10:30–12:30	S053	Nanostructured Surfaces and Thin Films
O 98.1–98.11	Fri	10:30–13:15	H24	Organic-Inorganic Systems V: Adsorption on Metals
O 99.1–99.5	Fri	9:30–12:15	H1	Symposium on Frontiers of Electronic Structure Theory: Focus on Topology and Transport
O 100.1–100.8	Fri	9:30–12:00	H15	Topological Insulators II
O 101.1–101.1	Fri	13:15–14:00	S054	Overview Talk: Hans-Peter Steinrück

Annual General Meeting of the Surface Science Division

Time: Thursday 19:00–19:30 Audimax (H1)

- Report of the Chairman
- Presentation of the Gerhard Ertl Young Investigator Award
- Miscellaneous

Post-Deadline Session

Time: Thursday 19:30–20:30 Audimax (H1)