

Surface Science Division Fachverband Oberflächenphysik (O)

Wolf Widdra
Martin-Luther-Universität Halle-Wittenberg
von-Danckelmann-Platz 3
06120 Halle
wolf.widdra@physik.uni-halle.de

Overview of Invited Talks and Sessions

(Lecture halls HSZ/AUDI, HSZ/0201, HSZ/0204, HSZ/0401, HSZ/0403, TRE/PHYS, TRE/MATH, and WILL/A317;
Poster P2)

Invited Talks

O 2.3	Mon	11:00–11:30	HSZ/0201	Superconducting Fermi arcs. — ●ANDRII KUIBAROV, SUSMITA CHANGDAR, OLEKSANDR SUVOROV, LUMINITA HARNAGEA, BERND BÜCHNER, SERGEY BORISENKO
O 5.1	Mon	10:30–11:00	HSZ/0403	Can the mineral-water interface save the world? Mineral carbonation, enhanced weathering and negative emissions — ●PHILIP POGGE VON STRANDMANN
O 5.4	Mon	11:30–12:00	HSZ/0403	Machine learning exploration of water binding and ice nucleation at silicate and carbon surfaces — ●MIE ANDERSEN
O 7.1	Mon	10:30–11:00	TRE/MATH	Magnetic Order in 2D Materials Beyond Bulk Constraints — ●JEISON FISCHER
O 8.3	Mon	11:00–11:30	WILL/A317	Controlling nanostructures on surfaces via intermolecular interactions — ●YUNJUN CAO
O 14.1	Mon	15:00–15:30	TRE/MATH	Spin and time-resolved ARPES and the orbital angular momentum of light — PIERRE NONNON, ROMAIN GÉNEAUX, KAROL HRI-COVINI, CHRISTINE RICHTER, DAVID BRESTEAU, ●MAURO FANCIULLI
O 15.1	Mon	15:00–15:30	WILL/A317	Tuning Spin-1/2 Interactions in Graphene: From Long-Range Coupling to Altermagnetic Order — ●BEATRIZ VIÑA-BAUSÁ, MANUEL A. GARCÍA-BLÁZQUEZ, ANTONIO T. COSTA, JOAO C. G. HENRIQUES, ROBERTO CARRASCO, EVA CORTÉS-DEL RÍO, DIEGO EXPÓSITO, PIERRE MALLET, JEAN-YVES VEUILLLEN, JOAQUÍN FERNANDEZ-ROSSIER, JUAN J. PALACIOS, IVÁN BRIHUEGA
O 33.1	Tue	10:30–11:00	HSZ/0201	During-synthesis functionalization of graphene layers — ●CRISTINA AFRICH
O 36.1	Tue	10:30–11:00	HSZ/0403	Acidity in nanoconfinement from ab initio and NNPs simulations — ANTHONY BALDO, MUHAMMAD SALEH, KEVIN LEUNG, ●MARIALORE SULPIZI
O 36.4	Tue	11:30–12:00	HSZ/0403	Living Interfaces: Dissolution and Precipitation Processes at Mineral-Brine Interfaces Revealed by AFM — ●IGOR SIRETANU, VINCENZO ALAGIA, SARAVANA KUMAR, SHILPA MOHANAKUMAR, MAX NEDERSTIGT, CHINMAY SHUKLA, MICHEL DUTS, FRIEDER MUGELE
O 37.1	Tue	10:30–11:00	TRE/PHYS	Calculations of excited electronic states by converging on saddle points on the electronic energy surface — ●HANNES JONSSON
O 37.4	Tue	11:30–12:00	TRE/PHYS	Many-Body Theory meets Electrochemistry: Electronic Structure of Cathode Materials — ●SILKE BIERMANN
O 39.3	Tue	11:00–11:30	WILL/A317	Electric double layer of platinum electrodes — ●MARC KOPER
O 39.6	Tue	12:00–12:30	WILL/A317	First-principles modelling of electrochemical interfaces — ●AXEL GROSS
O 51.1	Tue	14:30–15:00	TRE/MATH	Ultrafast aqueous electric double-layer dynamics — ●MISCHA BONN
O 51.3	Tue	15:15–15:45	TRE/MATH	Interface-specific nonlinear THz spectroscopy — ●CHUANSHAN TIAN

O 52.1	Tue	14:30–15:00	WILL/A317	Dynamics of catalytically active, atomically precise clusters on reducible oxide supports under the (fast) scanning tunneling microscope — ●FRIEDRICH ESCH
O 55.3	Wed	11:00–11:30	HSZ/0204	Cationic Mixing in Ultrathin Oxide Films: How substrate and oxygen conditions control nanoalloying. — ●JACEK GONIAKOWSKI
O 57.1	Wed	10:30–11:00	HSZ/0403	From Plasmonic Near-Fields to Electron Dynamics - A Photoemission Perspective — ●PASCAL DREHER
O 60.1	Wed	10:30–11:00	WILL/A317	Disentangling the origins of spin polarization in (inverse) photoemission from solid surfaces — ●JÜRGEN HENK
O 64.1	Wed	15:00–15:30	HSZ/0403	Cantilever based Scanning Force Microscopy: Ultimate Sensitivity and Quantitative Imaging of Nanoscale Spin Textures — ●HANS J. HUG
O 64.6	Wed	16:30–17:00	HSZ/0403	Single-spin sensing: A molecule-on-tip approach — ●LAURENT LIMOT
O 66.1	Wed	15:00–15:30	TRE/MATH	Ultrafast exciton dynamics in 2D semiconductors and electric field gated devices — ●JAN PHILIPP BANGE
O 67.1	Wed	15:00–15:30	WILL/A317	New frontiers of one step model of photoemission for quantum materials — ●JAN MINAR
O 78.1	Thu	10:30–11:00	HSZ/0401	The Wendelstein 7-X plasma vessel vacuum system from a scientific perspective — ●GEORG SCHLISIO, TORSTEN BRÄUER, STYLIANOS VAROUTIS, PAUL MCNEELY, DIRK HARTMANN, CHANDRA PRAKASH DHARD, DIRK NAUJOKS, VICTORIA HAK, THE W7-X TEAM
O 82.1	Thu	10:30–11:00	WILL/A317	Low-energy inverse photoelectron spectroscopy (LEIPS): probing unoccupied states and conduction band structure in functional materials — ●HIROYUKI YOSHIDA
O 82.2	Thu	11:00–11:30	WILL/A317	Enhanced Sensitivity in Low-Energy Inverse Photoemission Spectroscopy with an Off-Axis Parabolic Mirror for Efficient Light Collection — ●YONGSUP PARK, JONG-AM HONG, KYU-MYUNG LEE, MIN-JAE MAENG
O 85.1	Thu	15:00–15:30	HSZ/0401	From light to pressure: Laser-based quantum technologies for the realization of high-precision pressure and vacuum standards — ●TOM RUBIN
O 86.1	Thu	15:00–15:30	HSZ/0403	Ultrafast Dynamics at Surfaces with Machine Learning Surrogates — ●REINHARD MAURER
O 94.1	Fri	9:30–10:00	HSZ/0204	Surface Chemistry on Copper Oxides — ●DARIO STACCHIOLA
O 97.1	Fri	9:30–10:00	TRE/PHYS	Questions of Selectivity in Electrocatalysis — ●VANESSA J. BUKAS
O 98.1	Fri	9:30–10:00	TRE/MATH	Electron-phonon interactions in the time domain: from non-equilibrium phonon dynamics to theoretical spectroscopy — ●FABIO CARUSO

Invited Talks of the joint Symposium SKM Dissertation Prize 2026 (SYSD)

See SYSD for the full program of the symposium.

SYSD 1.1	Mon	9:30–10:00	HSZ/0002	Stochastic-Calculus Approach to Non-equilibrium Statistical Physics — ●CAI DIEBALL
SYSD 1.2	Mon	10:00–10:30	HSZ/0002	Nonuniform magnetic spin textures for sensing, storage and computing applications — ●SABRI KORALTAN
SYSD 1.3	Mon	10:30–11:00	HSZ/0002	Anomalous Quantum Oscillations beyond Onsager’s Fermi Surface Paradigm — ●VALENTIN LEEB
SYSD 1.4	Mon	11:00–11:30	HSZ/0002	Coherent Control Schemes for Semiconductor Quantum Systems — ●EVA SCHÖLL
SYSD 1.5	Mon	11:30–12:00	HSZ/0002	On stochastic thermodynamics under incomplete information: Thermodynamic inference from Markovian events — ●JANN VAN DER MEER

Invited Talks of the joint Symposium Designing Quantum Materials with Light: From Floquet to Cavity Engineering (SYFC)

See SYFC for the full program of the symposium.

SYFC 1.1	Mon	9:30–10:00	HSZ/AUDI	Subcycle videography of strong-field controlled band structures — ●RUPERT HUBER, MANUEL MEIERHOFER, ULRICH HÖFER
SYFC 1.2	Mon	10:00–10:30	HSZ/AUDI	Engineering Quantum Materials through Structured Cavity Vacuum Fluctuations — ●ÁNGEL RUBIO
SYFC 1.3	Mon	10:30–11:00	HSZ/AUDI	Floquet engineering of quantum materials: from semiconductors to semimetals — ●SHUYUN ZHOU
SYFC 1.4	Mon	11:15–11:45	HSZ/AUDI	(Quantum) Light Control of Materials — ●DANTE KENNES
SYFC 1.5	Mon	11:45–12:15	HSZ/AUDI	Lightwave-driven electrons in a Floquet topological insulator — DANIEL LESKO, TOBIAS WEITZ, WEIZHE LI, SELINA NÖCKER, CELINA HÜTTNER, TAMARA PRÖBSTER, SIMON WITTIGSCHLAGER, CHRISTIAN HEIDE, OFER NEUFELD, ●PETER HOMMELHOFF

Invited Talks of the joint Symposium AI and Data Challenges behind Emerging Self-Driving Laboratories (SYAI)

See SYAI for the full program of the symposium.

SYAI 1.1	Thu	9:30–10:00	HSZ/AUDI	Data and Experimental Foundations for Reliable Self-Driving Laboratories — ●DR. MARCUS TZE-KIAT NG
SYAI 1.2	Thu	10:00–10:30	HSZ/AUDI	Digital Catalysis - AI for Experiment Planning and Control — ●CHRISTOPH SCHEURER
SYAI 1.3	Thu	10:30–11:00	HSZ/AUDI	Autonomous, Data-Driven Workflows for Materials Acceleration Platforms with pyiron — ●JAN JANSSEN, JOERG NEUGEBAUER
SYAI 1.4	Thu	11:15–11:45	HSZ/AUDI	Machine Learning for Autonomous Optimization and Discovery of Materials — ●PASCAL FRIEDERICH
SYAI 1.5	Thu	11:45–12:15	HSZ/AUDI	Transforming Our View on Transformers in the Sciences — ●KEVIN MAIK JABLONKA

Sessions

O 1.1–1.1	Mon	9:30–10:15	TRE/PHYS	Topical Talk Wulfhekel (joint session O/TT)
O 2.1–2.7	Mon	10:30–12:30	HSZ/0201	Electronic structure of surfaces: Spectroscopy, surface states I
O 3.1–3.7	Mon	10:30–12:15	HSZ/0204	Scanning probe techniques: Method development I
O 4.1–4.7	Mon	10:30–12:15	HSZ/0401	Metal & Semiconductor substrates: Adsorption and reaction of small molecules I
O 5.1–5.6	Mon	10:30–12:30	HSZ/0403	Focus Session: Mineral-water interfaces I
O 6.1–6.8	Mon	10:30–12:30	TRE/PHYS	Organic molecules on inorganic substrates: Adsorption and growth I
O 7.1–7.7	Mon	10:30–12:30	TRE/MATH	2D Materials: Electronic structure, excitations, etc. I (joint session O/HL/TT)
O 8.1–8.7	Mon	10:30–12:30	WILL/A317	Nanostructures at surfaces: 1D, 2D, networks I
O 9.1–9.12	Mon	15:00–18:00	HSZ/0201	Organic molecules on inorganic substrates: electronic, optical and other properties I
O 10.1–10.11	Mon	15:00–17:45	HSZ/0204	2D Materials beyond graphene: Growth, structure and substrate interaction (joint session O/HL/TT)
O 11.1–11.8	Mon	15:00–17:00	HSZ/0401	Metal & Semiconductor substrates: Adsorption and reaction of small molecules II
O 12.1–12.11	Mon	15:00–17:45	HSZ/0403	Scanning probe microscopy: light matter interaction at atomic scales
O 13.1–13.12	Mon	15:00–18:00	TRE/PHYS	Solid-liquid interfaces: Reactions and electrochemistry I
O 14.1–14.11	Mon	15:00–18:00	TRE/MATH	Ultrafast electron dynamics at surface and interfaces I
O 15.1–15.11	Mon	15:00–18:00	WILL/A317	Spins on surfaces at the atomic scale I
O 16.1–16.2	Mon	18:00–20:00	P2	Focus Session: Structure and Dynamics of Solvent at Electrochemical Interfaces – Poster
O 17.1–17.12	Mon	18:00–20:00	P2	Spins on surfaces at the atomic scale – Poster

O 18.1–18.6	Mon	18:00–20:00	P2	New methods: Theory – Poster
O 19.1–19.10	Mon	18:00–20:00	P2	Vacuum Science & Technology: Theory and Applications – Poster
O 20.1–20.1	Mon	18:00–20:00	P2	Electronic structure theory – Poster
O 21.1–21.2	Mon	18:00–20:00	P2	Surface magnetism – Poster
O 22.1–22.6	Mon	18:00–20:00	P2	Surface dynamics – Poster
O 23.1–23.10	Mon	18:00–20:00	P2	Catalysis and surface reactions – Poster
O 24.1–24.7	Mon	18:00–20:00	P2	Solid-liquid interfaces: Reactions and electrochemistry – Poster
O 25.1–25.2	Mon	18:00–20:00	P2	Solid-liquid interfaces: Structure, spectroscopy – Poster
O 26.1–26.5	Mon	18:00–20:00	P2	Plasmonics and nanooptics: Fabrication, characterization and applications – Poster
O 27.1–27.7	Mon	18:00–20:00	P2	Plasmonics and nanooptics: Light-matter interaction, spectroscopy – Poster
O 28.1–28.8	Mon	18:00–20:00	P2	Oxide and insulator surfaces: Structure, epitaxy and growth – Poster
O 29.1–29.3	Mon	18:00–20:00	P2	Oxides and insulators: Adsorption and reaction of small molecules – Poster
O 30.1–30.4	Mon	18:00–20:00	P2	Metal & Semiconductor substrates: Structure, epitaxy and growth – Poster
O 31.1–31.6	Mon	18:00–20:00	P2	Metal & Semiconductor substrates: Adsorption and reaction of small molecules – Poster
O 32.1–32.1	Tue	9:30–10:15	TRE/PHYS	Topical Talk Witte
O 33.1–33.7	Tue	10:30–12:30	HSZ/0201	Graphene: Growth, structure and substrate interaction (joint session O/HL)
O 34.1–34.8	Tue	10:30–12:30	HSZ/0204	Catalysis and surface reactions I
O 35.1–35.7	Tue	10:30–12:15	HSZ/0401	Organic molecules on inorganic substrates: Adsorption and growth II
O 36.1–36.6	Tue	10:30–12:30	HSZ/0403	Focus Session: Mineral-water interfaces II
O 37.1–37.6	Tue	10:30–12:30	TRE/PHYS	Electronic structure theory I
O 38.1–38.8	Tue	10:30–12:30	TRE/MATH	Ultrafast electron dynamics at surface and interfaces II
O 39.1–39.6	Tue	10:30–12:30	WILL/A317	Focus Session: Structure and Dynamics of Solvent at Electrochemical Interfaces I
O 40.1–40.21	Tue	14:00–16:00	P2	Ultrafast electron dynamics at surface and interfaces – Poster (joint session O/TT)
O 41.1–41.4	Tue	14:00–16:00	P2	Topology and symmetry protected materials & Topological insulators – Poster (joint session O/TT)
O 42.1–42.9	Tue	14:00–16:00	P2	Electronic structure of surfaces: Spectroscopy, surface states – Poster
O 43.1–43.17	Tue	14:00–16:00	P2	Scanning probe microscopy: light matter interaction at atomic scales – Poster
O 44.1–44.17	Tue	14:00–16:00	P2	Scanning probe techniques: Method development – Poster
O 45.1–45.11	Tue	14:00–16:00	P2	Organic molecules on inorganic substrates: Adsorption and growth – Poster
O 46.1–46.11	Tue	14:00–16:00	P2	Organic molecules on inorganic substrates: electronic, optical and other properties – Poster
O 47.1–47.4	Tue	14:30–15:30	HSZ/0201	New methods: Theory
O 48.1–48.6	Tue	14:30–16:00	HSZ/0204	Metal & Semiconductor substrates: Structure, epitaxy and growth
O 49.1–49.5	Tue	14:30–15:45	HSZ/0403	Plasmonics and nanooptics: Light-matter interaction, spectroscopy I
O 50.1–50.7	Tue	14:30–16:15	TRE/PHYS	Electronic structure theory II
O 51.1–51.3	Tue	14:30–15:45	TRE/MATH	Focus Session: Structure and Dynamics of Solvent at Electrochemical Interfaces II
O 52.1–52.5	Tue	14:30–16:00	WILL/A317	Oxide and insulator surfaces: Structure, epitaxy and growth I
O 53.1–53.1	Wed	9:30–10:15	TRE/PHYS	Topical Talk Parkinson
O 54.1–54.8	Wed	10:30–12:30	HSZ/0201	Nanostructured surfaces and thin films
O 55.1–55.7	Wed	10:30–12:30	HSZ/0204	Oxide and insulator surfaces: Structure, epitaxy and growth II
O 56.1–56.7	Wed	10:30–12:15	HSZ/0401	Scanning probe techniques: Method development II

O 57.1–57.7	Wed	10:30–12:30	HSZ/0403	Plasmonics and nanooptics: Light-matter interaction, spectroscopy II
O 58.1–58.8	Wed	10:30–12:30	TRE/PHYS	Organic molecules on inorganic substrates: Adsorption and growth III
O 59.1–59.8	Wed	10:30–12:30	TRE/MATH	2D Materials: Electronic structure, excitations, etc. II (joint session O/HL/TT)
O 60.1–60.7	Wed	10:30–12:30	WILL/A317	Focus Session: Unoccupied States by Inverse Photoemission I
O 61.1–61.11	Wed	15:00–17:45	HSZ/0201	Organic molecules on inorganic substrates: electronic, optical and other properties II
O 62.1–62.11	Wed	15:00–17:45	HSZ/0204	Graphene: Electronic structure, excitations, etc. (joint session O/TT)
O 63.1–63.11	Wed	15:00–17:45	HSZ/0401	Topology and symmetry protected materials & Topological insulators (joint session O/HL/TT)
O 64.1–64.9	Wed	15:00–17:45	HSZ/0403	Surface Magnetism
O 65.1–65.12	Wed	15:00–18:00	TRE/PHYS	Solid-liquid interfaces: Reactions and electrochemistry II
O 66.1–66.10	Wed	15:00–17:45	TRE/MATH	Ultrafast electron dynamics at surface and interfaces III
O 67.1–67.11	Wed	15:00–18:00	WILL/A317	Focus Session: Unoccupied States by Inverse Photoemission II
O 68.1–68.6	Wed	18:00–20:00	P2	Nanostructured surfaces and thin films – Poster
O 69.1–69.13	Wed	18:00–20:00	P2	Nanostructures at surfaces:1D, 2D, networks – Poster
O 70.1–70.7	Wed	18:00–20:00	P2	2D materials: Stacking and heterostructures – Poster (joint session O/TT)
O 71.1–71.23	Wed	18:00–20:00	P2	2D Materials: Electronic structure, excitations, etc. – Poster (joint session O/TT)
O 72.1–72.6	Wed	18:00–20:00	P2	2D Materials beyond graphene: Growth, structure and substrate interaction – Poster (joint session O/TT)
O 73.1–73.6	Wed	18:00–20:00	P2	Graphene: Growth, structure and substrate interaction – Poster
O 74.1–74.9	Wed	18:00–20:00	P2	Graphene: Electronic structure, excitations, etc. – Poster (joint session O/TT)
O 75.1–75.1	Thu	9:30–10:15	TRE/PHYS	Topical Talk Bibes (joint session O/TT)
O 76.1–76.7	Thu	10:30–12:15	HSZ/0201	Electronic structure of surfaces: Spectroscopy, surface states II
O 77.1–77.7	Thu	10:30–12:15	HSZ/0204	Nanostructures at surfaces:1D, 2D, networks II
O 78.1–78.6	Thu	10:30–12:15	HSZ/0401	Vacuum Science & Technology: Theory and Applications I
O 79.1–79.7	Thu	10:30–12:15	HSZ/0403	Plasmonics and nanooptics: Light-matter interaction, spectroscopy III
O 80.1–80.5	Thu	10:30–13:00	TRE/PHYS	Gerhard Ertl Young Investigator Award Competition
O 81.1–81.7	Thu	10:30–12:15	TRE/MATH	Catalysis and surface reactions II
O 82.1–82.6	Thu	10:30–12:30	WILL/A317	Focus Session: Unoccupied States by Inverse Photoemission III
O 83.1–83.10	Thu	15:00–17:30	HSZ/0201	Organic molecules on inorganic substrates: electronic, optical and other properties III
O 84.1–84.11	Thu	15:00–17:45	HSZ/0204	2D Materials: Electronic structure, excitations, etc. III (joint session O/HL/TT)
O 85.1–85.7	Thu	15:00–17:00	HSZ/0401	Vacuum Science & Technology: Theory and Applications II
O 86.1–86.10	Thu	15:00–17:45	HSZ/0403	Surface dynamics
O 87.1–87.9	Thu	15:00–17:15	TRE/PHYS	Solid-liquid interfaces: Structure, spectroscopy
O 88.1–88.11	Thu	15:00–17:45	TRE/MATH	Catalysis and surface reactions III
O 89.1–89.12	Thu	15:00–18:00	WILL/A317	Spins on surfaces at the atomic scale II
O 90	Thu	17:15–18:15	HSZ/0401	Members' Assembly of the Vacuum Science and Technology Division (VA)
O 91	Thu	19:00–19:30	HSZ/AUDI	Members' Assembly
O 92	Thu	19:30–20:30	HSZ/AUDI	Post-Deadline Session
O 93.1–93.10	Fri	9:30–12:00	HSZ/0201	Electronic structure of surfaces: Spectroscopy, surface states III
O 94.1–94.11	Fri	9:30–12:30	HSZ/0204	Oxides and insulators: Adsorption and reaction of small molecules

O 95.1–95.12	Fri	9:30–12:30	HSZ/0401	2D Materials: Stacking and heterostructures (joint session O/HL/TT)
O 96.1–96.12	Fri	9:30–12:30	HSZ/0403	Plasmonics and nanooptics: Fabrication, characterization and applications
O 97.1–97.11	Fri	9:30–12:30	TRE/PHYS	Solid-liquid interfaces: Reactions and electrochemistry III
O 98.1–98.10	Fri	9:30–12:15	TRE/MATH	Ultrafast electron dynamics at surface and interfaces IV
O 99.1–99.12	Fri	9:30–12:30	WILL/A317	Spins on surfaces at the atomic scale III
O 100.1–100.1	Fri	13:15–14:00	TRE/PHYS	Closing Talk Steinrück

Members' Assembly of the Vacuum Science and Technology Divison (VA)

Thursday 17:15–18:15 HSZ/0401

Members' Assembly of the Surface Science Division

Thursday 18:00–19:00 HSZ/AUDI