

## Surface Science Division Fachverband Oberflächenphysik (O)

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### Overview of Invited Talks and Sessions

(lecture rooms HE 101, H 2013, MA 005, MA 041, MA 042, MA 043, A 053, A 060; poster areas Poster B and Poster E)

#### Invited Talks

O 1.1	Mon	9:30–10:15	HE 101	<b>Spin LEGOs - Bottom-up Fabrication of Model Magnetic Systems</b> — •ALEXANDER AKO KHAJETOORIANS
O 9.1	Mon	15:00–15:45	H 2013	<b>Three dimensional dynamic force spectroscopy at room temperature</b> — •SHIGEKI KAWAI, ERNST MEYER
O 22.1	Tue	9:30–10:15	HE 101	<b>Surface science approach to supported metal catalyst preparation - from UHV to metal deposition from solution</b> — •MARTIN STERRER
O 36.1	Wed	9:30–10:15	HE 101	<b>Exploring the Physics of Graphene with Local Probes</b> — •JOSEPH A. STROSCIO
O 48.1	Wed	15:00–15:45	HE 101	<b>Extending the scanning probe toolbox in a molecular playground</b> — •RUSLAN TEMIROV
O 49.1	Wed	15:45–16:30	HE 101	<b>Analogies between surface science and electrochemistry</b> — •TIMO JACOB
O 59.1	Thu	9:30–10:15	HE 101	<b>Electronic transport, Joule-heating, and current-driven dynamics in molecular contacts - theory and simulations</b> — •MADS BRANDBYGE, JING-TAO LÜ, TUE GUNST, PER HEDEGÅRD
O 70.1	Thu	15:00–15:45	HE 101	<b>First-principles experiment on electrical conductivity of organic devices with UPS: Charge delocalization, vibration coupling and band-gap states</b> — •NOBUO UENO
O 82.1	Fri	9:30–10:15	HE 101	<b>Nanochemistry with functional molecules - a 2D perspective</b> — •WILLI AUWÄRTER
O 92.1	Fri	13:15–14:00	HE 101	<b>From surface to interface physics: Hard x-ray photoemission spectroscopy of oxide heterostructures</b> — •RALPH CLAESSEN

#### Invited Talks Focussed Session: Frontiers of electronic structure theory: Strong correlations from first principles (jointly with TT)

O 2.1	Mon	10:30–11:00	HE 101	<b>Non Uniform Polarizability and Coulomb interactions in Compounds and Interfaces</b> — •GEORGE SAWATZKY
O 2.6	Mon	12:00–12:30	HE 101	<b>Actual theoretical trends in angle resolved photoemission: correlation, disorder and temperature effects</b> — •JÁN MINÁR
O 25.1	Tue	10:30–11:00	HE 101	<b>Iron Pnictides and Chalcogenides: a New Class of Strongly Correlated Electron Systems.</b> — •GABRIEL KOTLIAR
O 63.1	Thu	10:30–11:00	HE 101	<b>Random phase approximation and <i>GW</i> for correlated systems</b> — •PATRICK RINKE
O 73.1	Thu	16:00–16:30	HE 101	<b>Symmetry Breaking and Restoration in Electronic Structure Theory</b> — •GUSTAVO SCUSERIA
O 84.1	Fri	10:30–11:00	HE 101	<b>Dynamically screened Coulomb interaction and <i>GW</i> self-energy in transition metal compounds</b> — •TAKASHI MIYAKE
O 84.8	Fri	12:30–13:00	HE 101	<b>Density-functional theory - time to move on?</b> — •NICOLA MARZARI

**Invited Talks Focussed Session: Functional molecules at surfaces**

O 30.2	Tue	10:45–11:15	A 053	<b>Surface-supported molecular assemblies: insight from scanning tunneling microscopy and photoemission experiments</b> — ●MEIKE STÖHR
O 30.3	Tue	11:15–11:45	A 053	<b>How metal surfaces control adsorbate functionality: cooperativity, adatoms, and substrate interactions</b> — ●FELIX HANKE
O 44.1	Wed	10:30–11:00	A 053	<b>Scanning Tunneling Spectroscopy and Atomic Force Microscopy of Functional Molecules on Thin Insulating Films</b> — ●JASCHA REPP
O 44.2	Wed	11:00–11:30	A 053	<b>Conductance switching and quantum interference in molecular junctions</b> — ●SENSE JAN VAN DER MOLEN
O 68.1	Thu	10:30–11:00	A 053	<b>Frontier Nanoscience: Molecular Superconductors to Molecular Machines</b> — ●SAW WAI HLA
O 68.2	Thu	11:00–11:30	A 053	<b>Directional motion of a four-wheeled molecule on a metal surface</b> — ●MANFRED PARSCHAU
O 68.3	Thu	11:30–12:00	A 053	<b>Charge transfer dynamics in assemblies of functional molecules</b> — ●MICHAEL ZHARNIKOV

**Invited Talks Focussed Session: Coherence and coherent control in nanophotonics and plasmonics**

O 40.1	Wed	10:30–11:00	MA 005	<b>Active control of light propagation in nanophotonic structures</b> — ●KOBUS KUIPERS
O 40.2	Wed	11:00–11:30	MA 005	<b>Coherent exciton-plasmon coupling in metal-dye hybrid nanostructures</b> — ●ERICH RUNGE
O 40.3	Wed	11:30–12:00	MA 005	<b>Control and spectroscopy of plasmonic systems using ultrafast pulse shaping</b> — ●TOBIAS BRIXNER, MARTIN AESCHLIMANN, WALTER PFEIFFER
O 52.1	Wed	16:45–17:15	MA 005	<b>Spatio-temporal focusing of ultrashort pulses through scattering media</b> — ●YARON SILBERBERG
O 52.2	Wed	17:15–17:45	MA 005	<b>Attosecond control of electrons laser-emitted from a nanoscale metal tip</b> — ●PETER HOMMELHOFF, MICHAEL KRÜGER, MARKUS SCHENK, MICHAEL FÖRSTER, GEORG WACHTER, CHRISTOPH LEMELL, JOACHIM BURGDÖRFER
O 52.3	Wed	17:45–18:15	MA 005	<b>Theory of quantum control of semiconductor quantum dots in complex environments</b> — ANDREAS KNORR, ●JULIA KABUSS, ALEXANDER CARMELE, SVERRE THEUERHOLZ, MARTEN RICHTER

**Gaede Prize Talk**

O 33.1	Tue	13:30–14:00	HE 101	<b>Material Design by Atomic Layer Deposition</b> — ●MATO KNEZ
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**Invited talks of the joint symposium SYTI**

See SYTI for the full program of the symposium.

SYTI 1.1	Tue	9:30–10:00	H 0105	<b>Search for Majorana fermions in topological insulators</b> — ●CARLO BEENAKKER
SYTI 1.2	Tue	10:00–10:30	H 0105	<b>Cooper Pairs in Topological Insulator Bi<sub>2</sub>Se<sub>3</sub> Thin Films Induced by Proximity Effect</b> — ●JINFENG JIA
SYTI 1.3	Tue	10:30–11:00	H 0105	<b>Gate tunable normal and superconducting transport through a 3D topological insulator</b> — ●ALBERTO MORPURGO
SYTI 1.4	Tue	11:00–11:30	H 0105	<b>Weyl Metal States and Surface Fermi Arcs in Iridates</b> — ●SERGEY SAVRASOV
SYTI 1.5	Tue	11:30–12:00	H 0105	<b>Engineering a Room-Temperature Quantum Spin Hall State in Graphene via Adatom Deposition</b> — ●MARCEL FRANZ

## Sessions

O 1.1–1.1	Mon	9:30–10:15	HE 101	Invited talk (Alexander Ako Khajetoorians)
O 2.1–2.9	Mon	10:30–13:15	HE 101	Focussed session: Frontiers of electronic structure theory: Strong correlations from first principles I (jointly with TT)
O 3.1–3.10	Mon	10:30–13:00	MA 005	Plasmonics and nanooptics I
O 4.1–4.10	Mon	10:30–13:00	MA 041	Graphene I
O 5.1–5.11	Mon	10:30–13:15	MA 042	Adsorption on semiconductors, oxides and insulators I
O 6.1–6.10	Mon	10:30–13:00	MA 043	Scanning probe methods I
O 7.1–7.10	Mon	10:30–13:00	A 053	Metal substrates: Adsorption of organic / bio molecules I
O 8.1–8.10	Mon	10:30–13:00	A 060	Electron and spin dynamics
O 9.1–9.1	Mon	15:00–15:45	H 2013	Invited talk (Shigeki Kawai)
O 10.1–10.5	Mon	15:00–17:00	H 0111	[DS] Focused electron beam induced processing for the fabrication of nanostructures I (focused session, jointly with O – Organizers: Huth, Marbach)
O 11.1–11.4	Mon	15:00–16:15	H 2032	[DS] Organic electronics and photovoltaics I (jointly with CPP, HL, O)
O 12.1–12.13	Mon	16:00–19:15	H 2013	Surface dynamics
O 13.1–13.11	Mon	16:00–18:45	MA 005	Polymeric biomolecular films
O 14.1–14.12	Mon	16:00–19:00	MA 041	Adsorption on semiconductors, oxides and insulators II
O 15.1–15.12	Mon	16:00–19:00	MA 042	Heterogeneous catalysis I
O 16.1–16.10	Mon	16:00–18:30	MA 043	Scanning probe methods II
O 17.1–17.5	Mon	16:00–17:15	A 053	Nanotribology
O 18.1–18.6	Mon	16:00–17:30	A 060	Spin-orbit interaction
O 19.1–19.6	Mon	17:30–19:00	A 053	Clean surfaces I
O 20.1–20.5	Mon	17:45–19:00	A 060	Theoretical methods I
O 21.1–21.6	Mon	17:45–19:15	H 1012	[MA] Joint Session "Topological Insulators I" (jointly with DS, HL, O, TT)
O 22.1–22.1	Tue	9:30–10:15	HE 101	Invited talk (Martin Sterrer)
O 23.1–23.5	Tue	9:30–11:30	H 0111	[DS] Focused electron beam induced processing for the fabrication of nanostructures II (focused session, jointly with O – Organizers: Huth, Marbach)
O 24.1–24.7	Tue	9:30–11:15	H 2032	[DS] Organic electronics and photovoltaics: simulations and optics I (jointly with CPP, HL, O)
O 25.1–25.9	Tue	10:30–13:00	HE 101	Focussed session: Frontiers of electronic structure theory: Strong correlations from first principles II (jointly with TT)
O 26.1–26.10	Tue	10:30–13:00	MA 005	Plasmonics and nanooptics II
O 27.1–27.10	Tue	10:30–13:00	MA 041	Graphene II
O 28.1–28.11	Tue	10:30–13:15	MA 042	Heterogeneous catalysis II
O 29.1–29.10	Tue	10:30–13:00	MA 043	Metal substrates: Adsorption of organic / bio molecules II
O 30.1–30.9	Tue	10:30–13:15	A 053	Focussed session: Functional molecules at surfaces I
O 31.1–31.10	Tue	10:30–13:00	A 060	Clean surfaces II
O 32.1–32.6	Tue	11:30–13:00	H 2032	[DS] Organic electronics and photovoltaics: simulations and optics II (jointly with CPP, HL, O)
O 33.1–33.1	Tue	13:30–14:00	HE 101	Gaede Prize talk (Mato Knez)
O 34.1–34.60	Tue	18:15–21:45	Poster E	Poster Session I (Graphene; Plasmonics and nanooptics; Coherence and coherent control in nanophotonics and plasmonics)
O 35.1–35.148	Tue	18:15–21:45	Poster B	Poster Session II (Polymeric biomolecular films; Nanostructures; Electronic structure; Spin-orbit interaction; Phase transitions; Surface chemical reactions; Heterogeneous catalysis; Particles and clusters; Surface magnetism; Electron and spin dynamics; Surface dynamics; Methods; Electronic structure theory; Functional molecules)
O 36.1–36.1	Wed	9:30–10:15	HE 101	Invited talk (Joseph A. Stroscio)
O 37.1–37.13	Wed	9:30–13:00	EB 301	[MA] Joint Session "Topological Insulators II" (jointly with DS, HL, O, TT)
O 38.1–38.7	Wed	9:30–11:15	H 2032	[DS] Organic electronics and photovoltaics: electronic properties I (jointly with CPP, HL, O)
O 39.1–39.11	Wed	10:30–13:15	HE 101	Focussed session: Frontiers of electronic structure theory: Strong correlations from first principles III (jointly with TT)

O 40.1–40.6	Wed	10:30–12:45	MA 005	<b>Focussed session: Coherence and coherent control in nanophotonics and plasmonics I</b>
O 41.1–41.10	Wed	10:30–13:00	MA 041	<b>Graphene III</b>
O 42.1–42.10	Wed	10:30–13:00	MA 042	<b>Nanostructures at surfaces I</b>
O 43.1–43.10	Wed	10:30–13:00	MA 043	<b>Clean surfaces III</b>
O 44.1–44.10	Wed	10:30–13:30	A 053	<b>Focussed session: Functional molecules at surfaces II</b>
O 45.1–45.8	Wed	10:30–12:30	A 060	<b>Solid / liquid interfaces I</b>
O 46.1–46.6	Wed	11:30–13:00	H 2032	<b>[DS] Organic electronics and photovoltaics: electronic properties II (jointly with CPP, HL, O)</b>
O 47.1–47.8	Wed	11:45–13:45	H 0111	<b>[DS] Micro- and nanopatterning (jointly with O)</b>
O 48.1–48.1	Wed	15:00–15:45	HE 101	<b>Invited talk (Ruslan Temirov)</b>
O 49.1–49.1	Wed	15:45–16:30	HE 101	<b>Invited talk (Timo Jacob)</b>
O 50.1–50.11	Wed	16:00–19:00	BH 243	<b>[MA] Joint Session "Surface Magnetism I" (jointly with O)</b>
O 51.1–51.10	Wed	16:45–19:15	HE 101	<b>Oxides and insulators: Epitaxy and growth</b>
O 52.1–52.7	Wed	16:45–19:15	MA 005	<b>Focussed session: Coherence and coherent control in nanophotonics and plasmonics II</b>
O 53.1–53.7	Wed	16:45–18:30	MA 041	<b>Graphene IV</b>
O 54.1–54.10	Wed	16:45–19:15	MA 042	<b>Nanostructures at surfaces II</b>
O 55.1–55.10	Wed	16:45–19:15	MA 043	<b>Theoretical methods II</b>
O 56.1–56.10	Wed	16:45–19:15	A 053	<b>Metal substrates: Adsorption of organic / bio molecules III</b>
O 57.1–57.8	Wed	16:45–18:45	A 060	<b>Solid / liquid interfaces II</b>
O 58.1–58.60	Wed	18:15–21:45	Poster B	<b>Poster Session III (Solid/liquid interfaces; Metals; Semiconductors; Oxides and insulators)</b>
O 59.1–59.1	Thu	9:30–10:15	HE 101	<b>Invited talk (Mads Brandbyge)</b>
O 60.1–60.13	Thu	9:30–13:00	EB 301	<b>[MA] Joint Session "Surface Magnetism II" (jointly with O)</b>
O 61.1–61.5	Thu	9:30–13:00	H 0104	<b>[TT] Focused Session: Charge and Spin Transport through Junctions at the Nanometre Scale</b>
O 62.1–62.13	Thu	9:30–13:00	BH 334	<b>[TT] Transport: Graphene 1 (jointly with MA, HL, DY, DS, O)</b>
O 63.1–63.10	Thu	10:30–13:15	HE 101	<b>Focussed session: Frontiers of electronic structure theory: Strong correlations from first principles IV (jointly with TT)</b>
O 64.1–64.10	Thu	10:30–13:00	MA 005	<b>Plasmonics and nanooptics III</b>
O 65.1–65.10	Thu	10:30–13:00	MA 041	<b>Graphene V</b>
O 66.1–66.10	Thu	10:30–13:00	MA 042	<b>Nanostructures at surfaces III</b>
O 67.1–67.9	Thu	10:30–12:45	MA 043	<b>Metal surfaces: Adsorption of H/O and inorganic molecules</b>
O 68.1–68.7	Thu	10:30–13:00	A 053	<b>Focussed session: Functional molecules at surfaces III</b>
O 69.1–69.5	Thu	10:30–13:00	A 060	<b>Competition for Gerhard Ertl Young Investigator Award</b>
O 70.1–70.1	Thu	15:00–15:45	HE 101	<b>Invited talk (Nobuo Ueno)</b>
O 71.1–71.4	Thu	15:00–16:45	H 1012	<b>[MA] Joint Session "Graphen: Spin Transport" (jointly with DS, DY, HL, O, TT)</b>
O 72.1–72.15	Thu	15:15–19:15	BH 243	<b>[MA] Joint Session "Surface Magnetism III" (jointly with O)</b>
O 73.1–73.11	Thu	16:00–19:00	HE 101	<b>Focussed session: Frontiers of electronic structure theory: Strong correlations from first principles V (jointly with TT)</b>
O 74.1–74.10	Thu	16:00–18:30	MA 005	<b>Plasmonics and nanooptics IV</b>
O 75.1–75.7	Thu	16:00–17:45	MA 041	<b>Particles and clusters</b>
O 76.1–76.6	Thu	16:00–17:30	MA 042	<b>Nanostructures at surfaces IV</b>
O 77.1–77.6	Thu	16:00–17:30	MA 043	<b>Electronic structure I</b>
O 78.1–78.7	Thu	16:00–17:45	A 053	<b>Metal substrates: Adsorption of organic / bio molecules IV</b>
O 79.1–79.7	Thu	16:00–17:45	A 060	<b>Experimental methods</b>
O 80	Thu	19:30–20:00	HE 101	<b>General meeting of the Surface Science Division</b>
O 81	Thu	20:00–21:00	HE 101	<b>Post deadline session</b>
O 82.1–82.1	Fri	9:30–10:15	HE 101	<b>Invited talk (Willi Auwärter)</b>
O 83.1–83.12	Fri	9:30–12:45	BH 334	<b>[TT] Transport: Graphene 2 (jointly with MA, HL, DY, DS, O)</b>
O 84.1–84.8	Fri	10:30–13:00	HE 101	<b>Focussed session: Frontiers of electronic structure theory: Strong correlations from first principles VI (jointly with TT)</b>
O 85.1–85.10	Fri	10:30–13:00	MA 005	<b>Plasmonics and nanooptics V</b>
O 86.1–86.10	Fri	10:30–13:00	MA 041	<b>Graphene VI</b>
O 87.1–87.9	Fri	10:30–12:45	MA 042	<b>Surface chemical reactions</b>
O 88.1–88.10	Fri	10:30–13:00	MA 043	<b>Electronic structure II</b>
O 89.1–89.10	Fri	10:30–13:00	A 053	<b>Metal substrates: Adsorption of organic / bio molecules V</b>

O 90.1–90.8	Fri	10:30–12:30	A 060	<b>Metals and semiconductors: Epitaxy and growth</b>
O 91.1–91.67	Fri	11:00–14:00	Poster A	<b>[MA] Poster II</b>
O 92.1–92.1	Fri	13:15–14:00	HE 101	<b>Invited talk (Ralph Claessen)</b>

## Annual General Meeting of the Surface Science Division

Thursday 19:30–20:00 HE 101

- Report of the chairman
- Election of the vice chairperson
- Presentation of the Gerhard Ertl Young Investigator Award
- Miscellaneous

## Post Deadline Session

Post deadline session on Thursday 20:00–21:00 in HE 101, followed by the Surface Science get-together.