

Thin Films Division Fachverband Dünne Schichten (DS)

Sprecher des Fachverbandes
Jürgen Faßbender
Helmholtz-Zentrum Dresden-Rossendorf e.V.
Institute of Ion Beam Physics and Materials
Research
PO Box 51 01 19
01314 Dresden
j.fassbender@hzdr.de

Stellvertretender Sprecher
Dietrich R. T. Zahn
Chemnitz University of Technology
Semiconductor Physics
Reichenhainer Str. 70
09126 Chemnitz
zahn@physik.tu-chemnitz.de

Overview of Invited Talks and Sessions

(Lecture Rooms H3, H8, and H32; Poster B1 and B2)

Plenary, Keynote and Prize Talks related to Division DS

DS 22.1	Wed	13:15–13:55	H15	Complex magnetic order on the atomic scale — ●KIRSTEN VON BERGMANN
DS 33.1	Fri	8:30– 9:15	H1	Templated Self-assembly of Block Copolymer Films — ●CAROLINE ROSS

Tutorial Integration and Modelling of Nanoelectronic Components

DS 1.1	Sun	16:00–16:30	H3	Current transport through nanoscale electronic components — ●ARTUR ERBE
DS 1.2	Sun	16:35–17:05	H3	Theory of electronic transport in single-molecule junctions — ●JUAN CARLOS CUEVAS
DS 1.3	Sun	17:10–17:40	H3	DNA-programmed assembly of dendrimers and conjugated polymers — ●KURT GOTHELF
DS 1.4	Sun	17:45–18:15	H3	Silicon Nanowires: A Versatile Technology Platform for Nanoelectronic Research — ●THOMAS MIKOLAJICK, ANDRE HEINZIG, JENS TROMMER, DOMINIK MARTIN, MATTHIAS GRUBE, ANDREAS KRAUSE, WALTER WEBER

Invited and Topical Talks

DS 2.1	Mon	9:30–10:00	H32	Mechanisms of ion beam induced surface pattern formation — ●THOMAS MICHELY
DS 2.2	Mon	10:00–10:30	H32	Mechanisms of surface pattern formation under irradiation with heavy ions — ●KARL-HEINZ HEINIG, BARTOSZ LIEDKE, HERBERT URBASSEK, CHRISTIAN ANDERS, LOTHAR BISCHOFF, ROMAN BÖTTGER
DS 2.3	Mon	10:30–11:00	H32	Interaction of energetic ultraheavy ions with surfaces — ●LOTHAR BISCHOFF, ROMAN BÖTTGER, KARL-HEINZ HEINIG
DS 2.4	Mon	11:15–11:45	H32	Quantitative analysis of nanoripple patterns by GISAXS 3D mapping — ●DAVID BABONNEAU, ELLIOT VANDENHECKE, MATHIEU GAREL, SOPHIE CAMELIO, SOPHIE ROUSSELET
DS 2.5	Mon	11:45–12:15	H32	Movement of a ripple pattern by ion beam irradiation — ●PAUL ALKEMADE
DS 2.6	Mon	12:15–12:45	H32	Redeposition during ion-beam erosion — NILS ANSPACH, CHRISTIAN DIDENS, MARC OSTHUES, ●STEFAN LINZ
DS 14.1	Tue	9:30–10:00	H8	Nanowire photovoltaics with absorption beyond the ray optics limit. — ●MAGNUS T BORGSTRÖM
DS 14.2	Tue	10:00–10:30	H8	Crystal structure control in nanowires — ●ERIK BAKKERS
DS 14.3	Tue	10:30–11:00	H8	Spectral and spatial overlap of oxide quantum wells and whispering gallery modes — ●MARIUS GRUNDMANN

DS 14.4	Tue	11:15–11:45	H8	Semiconducting Nanowire Heterostructures on Silicon - From Growth to Devices — HEINZ SCHMID, KIRSTEN MOSELUND, CEDRIC BESSIRE, PRATYUSH DAS KANUNGO, PHILIPP MENSCH, SIEGFRIED KARG, MATTIAS BORG, VOLKER SCHMIDT, ●HEIKE RIEL
DS 14.5	Tue	11:45–12:15	H8	III-nitride nanowires: From growth phenomena to light-emitting diodes — ●RAFFAELLA CALARCO
DS 14.6	Tue	12:15–12:45	H8	3D GaN nanorods: fabrication, properties, applications — ●ANDREAS WAAG, JOHANNES LEDIG, XUE WANG, MILENA ERENBURG, JANA HARTMANN, LORENZO CACCAMO, MATIN MOHAJERANI, MANAL ALI DEEB, JIANDONG WEI, MARTIN HOFFMANN, HAO SHEN, HERGO-HEINRICH WEHMANN
DS 17.1	Wed	9:30–10:00	H32	Meso-Superstructured Perovskite Solar Cells — ●HENRY J. SNAITH
DS 17.2	Wed	10:00–10:30	H32	Thermoelectric perovskite-type oxides and Heusler phases — ●ANKE WEIDENKAFF, SASCHA POPULOH, LEYRE SAGARNA, GESINE SAUCKE, ANDREY SHKABKO, NINA VOGEL
DS 17.3	Wed	10:30–11:00	H32	Photoelectrochemical Water Splitting with Complex Metal Oxides: the Role of Defects — ●ROEL VAN DE KROL
DS 17.4	Wed	11:15–11:45	H32	Intrinsic point defects in CuInSe₂ and CuGaSe₂ studied by screened-exchange hybrid density functional theory — ●KARSTEN ALBE, JOHAN POHL
DS 17.5	Wed	11:45–12:15	H32	Energy Band Alignment in Thin Film Solar Cells — ●ANDREAS KLEIN
DS 17.6	Wed	12:15–12:45	H32	Nanowire device concepts for thin film photovoltaics — ●SILKE CHRISTIANSEN
DS 29.1	Thu	9:30–10:00	H32	Organic Magnetoresistance: The effect of excitons on charge transport in organic semiconductors — ●WILLIAM GILLIN
DS 29.2	Thu	10:00–10:30	H32	Metal-phthalocyanines: Materials for molecular spintronics — ●JENS KORTUS, RICO FRIEDRICH, TORSTEN HAHN, CLAUDIA LOOSE, MARTIN KNUPFER
DS 29.3	Thu	10:30–11:00	H32	Magneto-optical Kerr Effect Spectroscopy of Selected Phthalocyanines and Porphyrines — ●GEORGETA SALVAN, PETER ROBASCHICK, FRANK LUNGWITZ, MICHAEL FRONK, CAROLA MENDE, HEINRICH LANG, RICO FRIEDRICH, JENS KORTUS, DIETRICH R.T. ZAHN
DS 29.4	Thu	11:00–11:30	H32	Molecular Quantum Spintronics — ●MARIO RUBEN
DS 29.5	Thu	11:45–12:15	H32	Nanomembrane based electrodes for contacting ultra-thin organic layers — ●CARLOS CESAR BOF BUFON, CELINE VERVACKE, MARIA ESPERANÇA NAVARRO FUENTE, DOMINIC J. THURMER, CHRISTIAN MÜLLER, MICHAEL FRONK, GEORGETA SALVAN, DIETRICH R. T. ZAHN, OLIVER G. SCHMIDT
DS 29.6	Thu	12:15–12:45	H32	Spinterfaces as microscopic spin traps — ●MIRKO CINCHETTI

Invited talks of the joint symposium SYCT

See SYCT for the full program of the symposium.

SYCT 1.1	Mon	9:30–10:00	H1	A coarse grained QM/MM approach for the description of charge transfer in complex systems — ●MARCUS ELSTNER
SYCT 1.2	Mon	10:00–10:30	H1	Identifying and resolving charge separation in organic solar cells — ●EBERHARD RIEDLE
SYCT 1.3	Mon	10:30–11:00	H1	Quantifying the energy of charge transfer states: From molecular crystals to donor-acceptor blends — ●REINHARD SCHOLZ
SYCT 1.4	Mon	11:00–11:30	H1	Efficient Exciton Generation and Collection in Organic Solar Cells — ●MARK THOMPSON, CONG TRINH, STEVE FORREST, JERAMY ZIMMERMAN
SYCT 1.5	Mon	11:30–12:00	H1	Electron transport in organic single-crystal transistors and Schottky-gated heterostructures — ●ALBERTO MORPURGO

Invited talks of the joint symposium SYTS

See SYTS for the full program of the symposium.

SYTS 1.1	Wed	9:30–10:00	H1	Transport in Old and New Thermoelectric Materials — ●DAVID SINGH
SYTS 1.2	Wed	10:00–10:30	H1	Binary oxide structures as model systems for thermoelectric transport — ●PETER J. KLAR, CHRISTIAN HEILIGER
SYTS 1.3	Wed	10:30–11:00	H1	Functional oxides films: from single crystals to polycrystalline substrates — ●WILFRID PRELLIER

SYTS 1.4	Wed	11:00–11:30	H1	The Planar Nernst Effect and the Search for Thermal Spin Currents in Ferromagnetic Metals — ●BARRY ZINK
SYTS 1.5	Wed	11:30–12:00	H1	Tunneling magneto thermopower in magnetic tunnel junction nanopillars — NIKLAS LIEBING, SANTIAGO SERRANO-GUISAN, PATRYK KRZYSTECZKO, KARSTEN ROTT, GÜNTER REISS, JÜRGEN LANGER, BERTHOLD OCKER, ●HANS WERNER SCHUMACHER

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	Molecular dynamics simulation of nucleation and growth of crystals from solution — ●MICHELE PARRINELLO
SYES 1.2	Fri	10:00–10:30	H1	Describing, understanding, and discovering hybrid materials from first principles — ●CLAUDIA DRAXL
SYES 1.3	Fri	10:30–11:00	H1	Mapping the Electronic Structure Landscape for Materials Discovery — ●KRISHNA RAJAN
SYES 1.4	Fri	11:00–11:30	H1	New ferroelectrics and antiferroelectrics by design — ●KARIN RABE
SYES 1.5	Fri	11:30–12:00	H1	The Materials Project: The design of materials using high-throughput ab initio computations — ●GERBRAND CEDER

Sessions

DS 1.1–1.4	Sun	16:00–18:15	H3	Tutorial: Integration and Modelling of Nanoelectronic Components
DS 2.1–2.6	Mon	9:30–12:45	H32	Focus Session: Ion Beam Induced Surface Patterns I
DS 3.1–3.10	Mon	9:30–12:00	H3	Multiferroics 1 (jointly with DF, KR, MA, TT)
DS 4.1–4.3	Mon	12:15–13:00	H8	Atomic Layer Deposition
DS 5.1–5.5	Mon	12:15–13:30	H1	Charge Transfer Effects in Molecular Materials I (jointly with BP, CPP, HL)
DS 6.1–6.5	Mon	14:45–16:00	H8	Focus Session: Ion Beam Induced Surface Patterns II
DS 7.1–7.13	Mon	15:00–18:30	H3	Multiferroics 2 (jointly with DF, KR, MA, TT)
DS 8.1–8.7	Mon	15:00–17:30	H40	Charge Transfer Effects in Molecular Materials II (jointly with BP, CPP, HL)
DS 9.1–9.4	Mon	16:15–17:15	H8	Ion and Electron Beam Induced Processes
DS 10.1–10.6	Mon	17:15–18:45	H32	Organic Electronics and Photovoltaics I (jointly with CPP, HL, O)
DS 11.1–11.23	Mon	17:00–20:00	Poster B1	Poster Session I: Application of thin films; Ion beam induced surface patterns; Ion and electron beam induced processes; Micro- and nanopatterning (jointly with O)
DS 12.1–12.24	Mon	17:00–20:00	Poster B1	Poster Session II: Functionalized semiconductor nanowires (jointly with HL); Resistive switching (jointly with DF, KR, HL); Thermoelectric materials
DS 13.1–13.22	Mon	17:00–20:00	Poster B1	Poster Session III: Layer properties: electrical, optical and mechanical properties; Thin film characterization: structure analysis and composition (XRD, TEM; XPS, SIMS, RBS..)
DS 14.1–14.6	Tue	9:30–12:45	H8	Focus Session: Functionalized Semiconductor Nanowires I (jointly with HL)
DS 15.1–15.12	Tue	9:30–12:45	H32	Organic Electronics and Photovoltaics II (jointly with CPP, HL, O)
DS 16.1–16.6	Tue	14:45–16:15	H32	Organic Thin Films I
DS 17.1–17.6	Wed	9:30–12:45	H32	Focus Session: Thin Film Photovoltaic Materials and Solar Cells I
DS 18.1–18.8	Wed	9:30–11:30	H8	Micro- and Nanopatterning (jointly with O)
DS 19.1–19.10	Wed	9:30–12:15	H23	Spin Effects in Molecules at Surfaces (jointly with MA, O)
DS 20.1–20.3	Wed	9:30–10:30	H11	High- and Low-k-Dielektrics (jointly with DF)
DS 21.1–21.4	Wed	11:45–12:45	H8	Focus Session: Functionalized Semiconductor Nanowires II (jointly with HL)
DS 22.1–22.1	Wed	13:15–13:55	H15	Gaede Prize Talk - Kirsten von Bergmann
DS 23.1–23.13	Wed	14:45–18:15	H8	Focus Session: Thin Film Photovoltaic Materials and Solar Cells II

DS 24.1–24.9	Wed	14:45–17:00	H32	Thermoelectric Materials	
DS 25.1–25.5	Wed	15:00–17:30	H10		
DS 26.1–26.12	Wed	16:00–19:00	H33		
DS 27.1–27.10	Wed	17:15–19:45	H32		
DS 28.1–28.13	Thu	9:30–13:00	H8		
DS 29.1–29.9	Thu	9:30–13:30	H32		
DS 30.1–30.10	Thu	14:45–17:15	H32		
DS 31.1–31.9	Thu	14:45–17:00	H8		
DS 32.1–32.62	Thu	17:00–20:00	Poster B2		
DS 33.1–33.1	Fri	8:30– 9:15	H1		
DS 34.1–34.12	Fri	9:30–12:45	H32		
DS 35.1–35.10	Fri	9:30–12:00	H8		
					Focus Session: Magnetic Damping Phenomena in Thin Films and Nanostructures (jointly with MA)
					Organic Electronics and Photovoltaics (jointly with CPP, HL, O)
					Thin Film Characterization: Structure Analysis and Composition (XRD, TEM, XPS, SIMS, RBS,...) I
					Layer Properties: Electrical, Optical, and Mechanical Properties
					Focus Session: Organic Materials for Spintronics: From Spininterface to Devices (jointly with HL, MA, O)
					Thin Film Characterization: Structure Analysis and Composition (XRD, TEM, XPS, SIMS, RBS,...) II
					Organic thin films II
					Poster Session IV: Atomic layer deposition; Organic thin films; Organic Electronics and Photovoltaics; Organic Materials for Spintronics - from spininterface to devices; Thin film photovoltaic materials and solar cells
					Plenary Talk - Caroline Ross
					Resistive Switching (jointly with DF, KR, HL)
					Application of Thin Films

Annual General Meeting of the Thin Films Division

Monday 19:00–20:00 Room H32

Mitgliederversammlung der Deutschen Vakuumgesellschaft e.V. (DVG)

Monday 18:15–19:00 M 102