

Thin Films Division Fachverband Dünne Schichten (DS)

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Overview of Invited Talks and Sessions

(lecture rooms H 0111 and H 2032; Poster E)

Gaede Prize

DS 18.1 Tue 13:30–14:00 HE 101 **Material Design by Atomic Layer Deposition** — ●MATO KNEZ

Invited Talks

DS 3.1	Mon	15:00–15:30	H 0111	Focused electron beam lithography in the 1-10 nanometer range. — ●CORNELIS WOUTER HAGEN
DS 4.1	Mon	9:30–10:00	H 2032	The role of defects in thin film solar cells — ●THOMAS UNOLD
DS 7.1	Mon	15:00–15:30	H 2032	Three-dimensional hybrid organic/inorganic heterojunctions based on rolled-up nanomembranes — ●CARLOS CESAR BOF BUFON, DOMINIC J. THURMER, CHRISTOPH DENEKE, OLIVER G. SCHMIDT
DS 13.1	Tue	9:30–10:00	H 0111	Free electrons for building nanodevices — ●IVO UTKE
DS 22.1	Wed	15:00–15:30	H 0111	Trends in Atomic Layer Deposition — ●HELMUT BAUMGART
DS 23.1	Wed	17:30–18:00	H 0111	Functional complex oxide materials by atomic layer deposition — ●MAARIT KARPPINEN
DS 32.1	Thu	9:30–10:00	H 2032	Tuning thermoelectric properties of oxides by the interplay between spin/charge/lattice — ●SYLVIE HEBERT
DS 32.2	Thu	10:00–10:30	H 2032	Oxide materials for high-temperature thermoelectrics — ●MICHITAKA OHTAKI

Topical Talks

DS 3.2	Mon	15:30–16:00	H 0111	Fabrication of 1 nm thick Carbon Nanomembranes using FEBIP — ●ARMIN GÖLZHÄUSER
DS 3.3	Mon	16:00–16:30	H 0111	Towards a microscopic understanding of the electron beam induced deposition of tungsten — ●HARALD JESCHKE, KALIAPPAN MUTHUKUMAR, INGO OPAHLE, JUAN SHEN, ROSER VALENTÍ
DS 13.2	Tue	10:00–10:30	H 0111	From electronic correlations to strain sensing: Nanongranular metals and their applications — ●CHRISTIAN SCHWALB, MARCEL WINHOLD, FABRIZIO PORRATI, ROLAND SACHSER, MICHAEL HUTH
DS 13.3	Tue	10:30–11:00	H 0111	Tailored cobalt nanostructures by FEBID — ●JOSÉ M. DE TERESA, ROSA CÓRDOBA, LUIS SERRANO-RAMÓN, AMALIO FERNÁNDEZ-PACHECO, RICARDO IBARRA
DS 22.2	Wed	15:30–16:00	H 0111	Energy conversion devices made using ALD — ●JULIEN BACHMANN
DS 22.3	Wed	16:00–16:30	H 0111	Role of substrate chemistry in ALD revealed by in-situ techniques — ●MASSIMO TALLARIDA, MARCEL MICHLING, CHITTARANJAN DAS, DANIEL FRIEDRICH, MATTHIAS STÄDTER, DIETER SCHMEISSER

DS 23.2	Wed	18:00–18:30	H 0111	Uniform ZnMnO and ZnCoO films grown by Atomic Layer Deposition — ●MAREK GODLEWSKI, MAŁGORZATA ŁUKASIEWICZ, ALEKSANDRA WÓJCIK-GŁODOWSKA, ELZBIETA GUZIEWICZ, BARTŁOMIEJ WITKOWSKI
DS 23.3	Wed	18:30–19:00	H 0111	Atomic layer deposition of oxide thin films for non-volatile memory applications — ●SUSANNE HOFFMANN-EIFERT
DS 32.3	Thu	10:30–11:00	H 2032	Investigations of the thermal conductivity of thermoelectric thin films and nanostructures — ●FRIEDEMANN VOELKLEIN, HEIKO REITH, MATTHIAS SCHMITT, DANIEL HUZEL
DS 33.1	Thu	11:15–11:45	H 2032	Calculation of thermoelectric properties of nanostructured semiconductors — ●PETER KRATZER, GREGOR FIEDLER
DS 42.1	Fri	11:30–12:00	H 2032	Employing laterally nanostructured ZnO-based thin-films as model systems for studying interface effects in themoelectrics — ●PETER J. KLAR
DS 43.1	Fri	13:30–14:00	H 2032	Potential Seebeck Microprobe: Considerations on Accuracy and Spatial Resolution — ●PAWEŁ ZIOLKOWSKI, GREGOR OPPITZ, GABRIELE KARPINSKI, ECKHARD MÜLLER

Invited talks of the joint symposium SYTM

See SYTM for the full program of the symposium.

SYTM 1.1	Mon	9:30–10:00	H 0105	Thermally Assisted Magnetic Recording at 620 Gb/in² using Granular L1₀ FeCuPtAg-X Media — ●D. WELLER, O. MOSENDZ, S. PISANA, T. SANTOS, G. PARKER, J. REINER, B. C. STIPE
SYTM 1.2	Mon	10:00–10:30	H 0105	Large-area hard magnetic L1₀-FePt and composite L1₀-FePt based nanopatterns — ●DAGMAR GOLL, THOMAS BUBLAT
SYTM 1.3	Mon	10:30–11:00	H 0105	Electric field control of magnetic exchange coupling in FePt / Fe-O thin films — ●KARIN LEISTNER
SYTM 1.4	Mon	11:00–11:30	H 0105	FePt-based exchange coupled composite media — ●MANFRED ALBRECHT
SYTM 1.5	Mon	11:30–12:00	H 0105	Optimization of FePt films for recording applications by micromagnetic modeling — ●JOSEF FIDLER, JEHYUN LEE, BARBARA DYMERSKA, DIETER SUESS

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	Search for Majorana fermions in topological insulators — ●CARLO BEENAKKER
SYTI 1.2	Tue	10:00–10:30	H 0105	Cooper Pairs in Topological Insulator Bi₂Se₃ Thin Films Induced by Proximity Effect — ●JINFENG JIA
SYTI 1.3	Tue	10:30–11:00	H 0105	Gate tunable normal and superconducting transport through a 3D topological insulator — ●ALBERTO MORPURGO
SYTI 1.4	Tue	11:00–11:30	H 0105	Weyl Metal States and Surface Fermi Arcs in Iridates — ●SERGEY SAVRASOV
SYTI 1.5	Tue	11:30–12:00	H 0105	Engineering a Room-Temperature Quantum Spin Hall State in Graphene via Adatom Deposition — ●MARCEL FRANZ

Invited talks of the joint symposium SYRS

See SYRS for the full program of the symposium.

SYRS 1.1	Thu	15:00–15:30	H 0105	Redox-based resistive memories - recent progress — ●RAINER WASER
SYRS 1.2	Thu	15:30–16:00	H 0105	Electric Formation of Metal/SrTiO₃ Junctions and its Correlation to Multi-Dimensional Defects — ●DIRK C. MEYER, HARTMUT STÖCKER, JULIANE HANZIG, FLORIAN HANZIG, MATTHIAS ZSCHORNAK, BARBARA ABENDROTH, SIBYLLE GEMMING
SYRS 1.3	Thu	16:00–16:30	H 0105	The Connecting between the Properties of Memristive Material Systems and Application Requirements — ●THOMAS MIKOLAJICK, STEFAN SLESAZECK, HANNES MEHNE

SYRS 1.4	Thu	16:30–17:00	H 0105	Mechanism of resistive switching in bipolar transition metal oxides — •MARCELO ROZENBERG
SYRS 1.5	Thu	17:00–17:30	H 0105	Resistive switching memories: Mechanisms, modeling and scaling — •DANIELE IELMINI

Sessions

DS 1.1–1.11	Mon	9:30–12:15	H 0111	Layer properties: electrical, optical, and mechanical properties
DS 2.1–2.4	Mon	12:30–13:30	H 0111	Nanoengineered thin films
DS 3.1–3.5	Mon	15:00–17:00	H 0111	Focused electron beam induced processing for the fabrication of nanostructures I (focused session, jointly with O – Organizers: Huth, Marbach)
DS 4.1–4.1	Mon	9:30–10:00	H 2032	Thin film photovoltaics
DS 5.1–5.4	Mon	10:00–11:00	H 2032	Thin film photovoltaics: CIGSe + CdTe
DS 6.1–6.6	Mon	11:15–12:45	H 2032	Thin film photovoltaics: CIGSe + processing
DS 7.1–7.4	Mon	15:00–16:15	H 2032	Organic electronics and photovoltaics I (jointly with CPP, HL, O)
DS 8.1–8.6	Mon	16:30–18:00	H 2032	Thin film photovoltaics: oxides and nanostructures
DS 9.1–9.11	Mon	9:30–12:45	EB 301	Multiferroics I: Junctions and thin films / Magnetoelectric coupling (jointly with MA, DF, KR, TT)
DS 10.1–10.12	Mon	15:00–18:30	EB 301	Multiferroics II: Hexagonal manganites / Incommensurate multiferroics (jointly with MA, DF, KR, TT)
DS 11.1–11.4	Mon	16:45–18:00	H 3005	Multiferroics: Matter at low temperature (jointly with MA, DF, TT, KR)
DS 12.1–12.5	Mon	15:00–17:45	EB 202	FePt Nanoparticles (jointly with MA, MM – Organizer: Farle)
DS 13.1–13.5	Tue	9:30–11:30	H 0111	Focused electron beam induced processing for the fabrication of nanostructures II (focused session, jointly with O – Organizers: Huth, Marbach)
DS 14.1–14.4	Tue	11:45–12:45	H 0111	Ion irradiation effects
DS 15.1–15.7	Tue	9:30–11:15	H 2032	Organic electronics and photovoltaics: simulations and optics I (jointly with CPP, HL, O)
DS 16.1–16.6	Tue	11:30–13:00	H 2032	Organic electronics and photovoltaics: simulations and optics II (jointly with CPP, HL, O)
DS 17.1–17.12	Tue	9:30–12:45	EB 301	Multiferroics III: Strain / New routes towards multiferroicity (jointly with MA, DF, KR, TT)
DS 18.1–18.1	Tue	13:30–14:00	HE 101	Gaede Prize talk (Mato Knez)
DS 19.1–19.90	Tue	12:15–15:15	Poster A	Poster I: Multiferroics (jointly with MA, DF, KR, TT), Spins in organic materials (jointly with MA), FePt Nanoparticles (jointly with MA, MM)
DS 20.1–20.8	Wed	9:30–11:30	H 0111	Application of thin films
DS 21.1–21.8	Wed	11:45–13:45	H 0111	Micro- and nanopatterning (jointly with O)
DS 22.1–22.6	Wed	15:00–17:15	H 0111	Trends in atomic layer deposition I (Focused session – Organizer: Nielsch)
DS 23.1–23.6	Wed	17:30–19:45	H 0111	Trends in atomic layer deposition II (Focused session – Organizer: Nielsch)
DS 24.1–24.7	Wed	9:30–11:15	H 2032	Organic electronics and photovoltaics: electronic properties I (jointly with CPP, HL, O)
DS 25.1–25.6	Wed	11:30–13:00	H 2032	Organic electronics and photovoltaics: electronic properties II (jointly with CPP, HL, O)
DS 26.1–26.6	Wed	15:00–16:30	H 2032	Thin film characterization: structure analysis and composition (Ion assisted methods and analysis)
DS 27.1–27.4	Wed	16:30–17:30	H 2032	Thin film characterization: structure analysis and composition (post growth analysis XRD, etc.)
DS 28.1–28.8	Wed	17:45–19:45	H 2032	Thin film characterization: structure analysis and composition (Spectroscopy)
DS 29.1–29.6	Wed	9:30–11:30	EB 407	High-k and low-k dielectrics (joint session with DF)
DS 30.1–30.6	Thu	9:30–11:00	H 0111	Thin film characterization: structure analysis and composition (TEM, LEED, PAS)
DS 31.1–31.7	Thu	11:15–13:00	H 0111	Organic thin films I
DS 32.1–32.3	Thu	9:30–11:00	H 2032	Thermoelectric materials I (Focused session – Organizers: Meyer, Heiliger)

DS 33.1–33.5	Thu	11:15–12:45	H 2032	Thermoelectric materials II: Reduced dimensionality (Focused session – Organizers: Meyer, Heiliger)
DS 34.1–34.10	Thu	15:00–17:30	H 2032	Organic thin films II: Interface spectroscopy
DS 35.1–35.7	Thu	17:45–19:30	H 2032	Organic thin films III: Monolayers and crystals
DS 36.1–36.9	Thu	16:45–19:00	H 1012	Spins in Organic Materials (jointly with MA)
DS 37.1–37.47	Thu	15:00–17:00	Poster E	Poster II: Focused electron beam induced processing for the fabrication of nanostructures (focused session, jointly with O); Nanoengineered thin films; Layer properties: electrical, optical, and mechanical properties; Thin film characterization: structure analysis and composition (XRD, TEM, XPS, SIMS, RBS,...); Application of thin films
DS 38.1–38.49	Thu	17:30–19:00	Poster E	Poster III: Resistive switching (jointly with DF, KR, HL); Thermoelectric materials (Focused session); Micro- and nanopatterning (jointly with O); Ion irradiation effects
DS 39.1–39.5	Fri	9:30–10:45	H 0111	Resistive switching I (jointly with DF, KR, HL)
DS 40.1–40.6	Fri	11:00–12:30	H 0111	Resistive switching II (jointly with DF, KR, HL)
DS 41.1–41.7	Fri	9:30–11:15	H 2032	Thermoelectric materials III: Heterostructures (Focused session – Organizers: Meyer, Heiliger)
DS 42.1–42.5	Fri	11:30–13:00	H 2032	Thermoelectric materials IV: Glass, sintered materials (Focused session – Organizers: Meyer, Heiliger)
DS 43.1–43.9	Fri	13:30–16:00	H 2032	Thermoelectric materials V: Bulk materials (Focused session – Organizers: Meyer, Heiliger)
DS 44.1–44.60	Fri	9:30–12:00	Poster E	Poster IV: Thin film photovoltaics; Organic electronics and photovoltaics (jointly with CPP, HL, O); Organic thin films; Trends in atomic layer deposition (Focused session)

Annual General Meeting of the Thin Films Division

Thursday 19:00–20:00 Raum MA 144

Annual General Meeting of the German Vacuum Society (DVG)

Monday 17:25–18:00 Raum H 0111