Deutsche Physikalische Gesellschaft DPG

Joint Meeting of the DPG and EPS Condensed Matter Divisions

together with the
Statistical and Nonlinear Physics Division of the EPS
and the Working Groups
Equal Opportunities
Industry and Business
Young DPG
Philosophy of Physics (all DPG)
EPS Young Minds
EPS History of Physics Group

Short Programme

Technische Universität Berlin

11 – 16 March 2018

Impressum:

Deutsche Physikalische Gesellschaft e. V.
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53604 Bad Honnef
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www.dpg-physik.de
Gerichtsstand: Königswinter

Eingetragen in das Vereinsregister (VR 90474) des Amtsgerichtes Siegburg. Die DPG fördert wissenschaftliche Zwecke. Sie ist nach § 5 Abs. 1 Nr. 9 KStG von der Körperschaftsteuer befreit, weil sie ausschließlich und unmittelbar steuerbegünstigten gemeinnützigen Zwecken i. S. der §§ 51 ff. AO dient.

Verantwortlich für den Inhalt:
Dr. Bernhard Nunner (Hauptgeschäftsführer)

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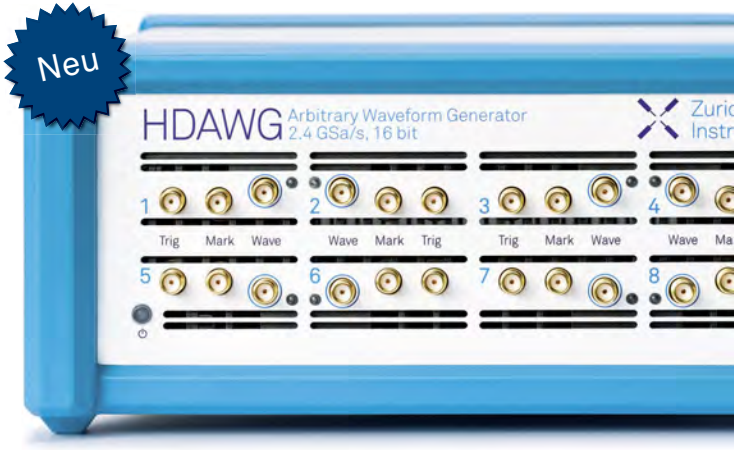
Und wie viele AWG Kanäle benötigt Ihre Anwendung?

Der neue Zurich Instruments HDAWG: der Multi-Kanal AWG mit der höchsten Kanaldichte und der niedrigsten Trigger-Latenzzeit



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Greeting

Welcome to this DPG Spring Meeting (DPG-Frühjahrstagung), a joint meeting of the DPG Condensed Matter Section (SKM), with its divisions and working groups, and the EPS Condensed Matter Divisions (CMD 27). I am delighted that we once again have the privilege to be a guest of the Technische Universität Berlin, TUB. For years, this traditional DPG conference venue has guaranteed the success of even the largest DPG Spring Meetings, which are among the largest physics conferences in Europe. The DPG Spring Meetings, with industrial and publishers' exhibitions, are attended by thousands of physicists, from students to postdocs, professors and Nobel laureates. This mix is of the utmost importance for scientific networking, particularly for the students who are presenting their diploma theses for the first time. Such a comprehensive integration of young talents is also a unique feature of our Spring Meetings on an international scale.

As DPG President, my pleasure in reaching so many physicists through our Spring Meetings, especially the younger generation, comes with a great responsibility: we as DPG have to use the public visibility these meetings provide to highlight the value of science to society, and to be role models for young academics. Physics as a profession must dare to make its voice heard. We must make it clear in language understandable to politicians and to the public where scientific results are needed and lacking, identifying which perceived dangers are real for society and which are not. Many of the challenges facing society today are based on a scientific analysis of probability and statistics, but just because something is likely does not mean it will happen, and just because something is improbable does not mean it will not occur. It is natural that this concept is often difficult for people not embedded in science to grasp, yet it is vital that society as a whole is able to act on the information provided by such analyses. To underline publicly the great value of science for society, the participation of many DPG members in last year's March for Science was so important. The DPG is also supporting this year's March for Science taking place in April. I encourage all physicists to participate – and to wear with pride the DPG buttons carrying the motto, "Physik ist weltoffen" (Physics is cosmopolitan). We must not cease to advocate for the value of science and a cosmopolitan, tolerant society – not only in Germany, but also at the European and international level. This includes providing policy advice, which means that we have to approach politicians providing fact-based advice and warning

of risks when necessary. For this, our DPG Spring Meetings are important, but at the same time we must be wary of politicising science. This is fundamental for society's confidence in the scientific endeavour on which it depends.

Great commitment and support are prerequisites for the successful implementation of a conference such as this. First of all I would like to thank the Wilhelm and Else Heraeus Foundation for its generous support of all DPG Spring Meetings and the participating section, divisions and working groups for an outstanding and exciting program. I particularly want to thank the Local Organising Committee, Prof. Eckehard Schöll, of the TUB's Institute of Theoretical Physics and his entire team as well as the staff of the DPG office for the support they provide to all DPG Spring Meetings.

Finally, I would like to take this opportunity to call on all DPG members to participate in the activities of the DPG. The DPG promotes the exchange of knowledge within the scientific community with a special focus on the promotion of young scientists and equal opportunities. As the largest learned physical society in the world, the DPG thrives on the contributions of its committed members. This spirit of community is essential. Our work relies on volunteers, but even if you are unable to donate your time, you can still support our volunteer work. You will find a donation button with information on how your contribution will be used on our homepage.

I wish you an exciting conference with many new insights!

Prof. Dr. Rolf-Dieter Heuer
President of the
Deutsche Physikalische Gesellschaft

Organisation

Organiser

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Local Organiser

Prof. Dr. Dr. h. c. Eckehard Schöll
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Technische Universität Berlin
Hardenbergstraße 36, 10623 Berlin
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Scientific Organisation

Chairs of the Condensed Matter Sections

DPG

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EPS

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Laboratoire des Solides Irradiés
Ecole Polytechnique
CNRS UMR 7642 & CEA - DRF - IRAMIS
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Email: kees.vanderbeek@polytechnique.edu

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Entdecken Sie die vielfältigen Einsatzmöglichkeiten und Vorteile von trockenlaufenden Vakuumpumpen und besprechen Sie mit unseren Experten Ihre Anwendungen hier vor Ort.

Was gibt es noch?

- **Demonstration Tipseal-Wechsel** an einer nXDS Scrollpumpe (**täglich um 11 und 15 Uhr)**
- **Edwards-Kaffeetasse** solange der Vorrat reicht

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STAND 7

im Foyer des Hauptgebäudes

Participating Divisions of the Condensed Matter Sections

DPG	EPS
Biological Physics (BP) Prof. Dr. Sarah Köster sarah.koester@phys.uni-goettingen.de	**Soft Condensed Matter and Biophysics** Dr. Timon Idema t.idema@tudelft.nl
Chemical and Polymer Physics (CPP) Prof. Dr. Andreas Fery fery@ipfdd.de	**Soft Condensed matter and Biophys** Prof. Dr. Günter Reiter guenter.reiter@physik.uni-freiburg.de
Thin Films (DS) Prof. Dr. Norbert Esser norbert.esser@isas.de	**EPS Condensed Matter Board** Dr. Jose Maria de Teresa deteresa@unizar.es
Dynamics and Statistical Physics (DY) Prof. Dr. Walter Zimmermann walter.zimmermann@uni-bayreuth.de	**Statistical and Nonlinear Physics** Prof. Dr. Christian Beck c.beck@qmul.ac.uk **Liquid Physics** Prof. Dr. Igor Musevic igor.musevic@ijs.si
Semiconductor Physics (HL) Prof. Dr. Jürgen Christen juergen.christen@physik.uni-magdeburg.de	**Semiconductors and Insulators** Dr. Massimo Rontani massimo.rontani@nano.cnr.it
Crystalline Solids and their Microstructure (KFM) Prof. Dr. Theo Scherer theo.scherer@kit.edu	**Structural and Dynamical Properties of Solids** Prof. Dr. Annette Bussmann-Holder a.bussmann-holder@fkf.mpg.de
Magnetism (MA) Prof. Dr. Manfred Fiebig manfred.fiebig@mat.ethz.ch	**Magnetism / European Magnetism Association** Prof. Dr. Dino Fiorani dino.fiorani@ism.cnr.it
Metal and Material Physics (MM) Prof. Dr. Jörg Neugebauer neugebauer@mpie.de	**EPS Condensed Matter Board** Dr. Katalin Kamaras kamaras.katalin@wigner.mta.hu

Surface Science (O) Prof. Dr. Christof Wöll christof.woell@kit.edu	**Surfaces and Interfaces** Prof. Dr. Petra Rudolf p.rudolf@rug.nl
Physics of Socio-Economic Systems (SOE) Priv.-Doz. Dr. Jens Christian Claussen j.claussen@jacobs-university.de	**Statistical and Nonlinear Physics Division** Prof. Dr. Guido Caldarelli guido.caldarelli@imtlucca.it
Low Temperature Physics (TT) Prof. Dr. Reinhold Kleiner reinhold.kleiner@uni-tuebingen.de	**Low Temperature Physics** Prof. Dr. Christian Enss christian.enss@kip.uni-heidelberg.de
Vacuum Science and Technology (VA) Dr.-Ing. Thomas Giegerich thomas.giegerich@kit.edu	

Participating Working Groups

Equal Opportunities (AKC) Dr. Susanne Kränkl Susanne.kraenkl@googlemail.com	
Industry and Business (AIW) Dr. Rolf Loschek rolf.loschek@t-online.de	
Young DPG (jDPG) Matthias Dahlmanns dahlmanns@jdpg.de	**EPS Young Minds** Eva Salvador Balaguer contact@epsyoungminds.org
Philosophy of Physics (AGPhil) PD Dr. Meinard Kuhlmann mkuhlmann@uni-mainz.de	

Symposia

SYAM – Physics of Ancient Materials

SYBS – Physics of Biological and Synthetic Active Matter

SYDM – 2D Materials

SYID – Information Driven Materials Research

SYMS – Data-driven Methods in Molecular Simulations of Soft Matter Systems

SYSD – SKM Dissertation Prize

SYTH – Terahertz Physics: Toward Probing and Controlling of Materials on the Nanoscale

SYTO – Topology in Condensed Matter Physics

SYVC – Voltage Control of Functional Interfaces: Magneto-ionic Meet Memristive Systems

Organisation of the Exhibition of Physical Equipment and Literature

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Homepage www.dpg-gmbh.de

Programme

The scientific programme consists of 5.685 contributions:

12	Plenary talks
3	Evening talks
5	Prize talks
8	Lunch talks
47	Topical talks
13	Tutorials
1	Discussion
305	Invited talks
3582	Contributed talks
1709	Posters

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Information for Participants

The conference will be held March 11–16, 2018.

Conference Information

Conference Venue

Campus of the Technische Universität Berlin

Straße des 17. Juni 135

10623 Berlin

The central activities will take place in the Main Building (H) of the Technische Universität Berlin (Straße des 17. Juni 135). For a detailed map of the campus and the buildings please see end of this book. The position of the lecture rooms on the Campus can be found at the DPG-App.

Conference Office – Information Desk

The conference office and the information desk are located in the Building A (Architekturgebäude). An additional information desk is placed in the ground floor of the Main Building. The opening hours are the following:

		Registration	Information Desk
Sunday	March 11, 2018	15:00 – 19:00	15:00 – 19:00
Monday	March 12, 2018	08:00 – 19:00	07:30 – 19:00
Tuesday	March 13, 2018	08:00 – 16:00	08:00 – 16:00
Wednesday	March 14, 2018	08:00 – 16:00	08:00 – 16:00
Thursday	March 15, 2018	08:00 – 16:00	08:00 – 16:00
Friday	March 16, 2018	08:00 – 12:00	08:00 – 12:00

Beside this programme you have received your name tag, a receipt for your conference fee, a conference ticket and the Login-Password for using WiFi. The name tag must be worn visibly during the entire conference.

The organizers, staff of the conference desk, and the student assistants will be identifiable by coloured name tags and Φ-T-shirts. Please contact them if you have any questions.

Do not hesitate to inquire about all necessary information concerning the conference, orientation in Berlin, accommodation, restaurants, going out, and cultural events at the information desk located in the conference office (Building A) and in the Main Building (H).

Lecture Rooms

The lecture rooms will be signposted by abbreviations for the respective buildings and the room number.

Building	Room	Division
Main Building	H 0104	TT, Plenary
(Hauptgebäude)	H 0105	Plenary, Symposia
	Cafeteria near Audimax H0105	Discussions after Plenary Talks
	H 0106	MM
	H 0107	MM
	H 0110	TT, MA
	H 0111	DS
	H 0112	MA
	H 1012	MA
	H 1028	BP
	H 1035	Job Market
	H 1036	Speakers' Ready Room
	H 1058	BP
	H 2013	BP
	H 2032	DS
	H 2033	AGPhil
	H 2035	DPG Press Office
	H 2053	TT
	H 3003A	Laptop Working Area
	H 3005	TT
	H 3010	TT
	H 3012	Preparation and discussion
	H 3013	Preparation and discussion
Main Annex	EB 107	DY
(Erweiterungsbau)	EB 202	MA
	EB 301	MA
	EB 407	MA

Ernst Ruska	ER	Cloakroom below ER 270
(Physik Altbau)		
Eugene-P.-Wigner	EW 015	HL
(Physik Neubau)	EW 201	HL
	EW 202	HL
	EW 203	HL
Mathematikgebäude	MA 001	SOE
	MA 004	O
	MA 005	O
	MA 041	O
	MA 042	O
	MA 043	O
	MA 141	O
	MA 142	Preparation and discussion
	MA 143	Preparation and discussion
	MA 144	O
	HE 101	O, SYSD
Chemiegebäude	C 130	CPP
	C 230	CPP
	C 243	CPP
	C 264	CPP
Physikalische Chemie	PC 203	CPP
Technische Chemie	TC 006	MM
	TC 010	MM
Architekturgebäude	A 053	TT
	A 060	VA
	A 151	HL
Gebäude Heizung/ Lüftung	HL 001	O
Elektrotechnik	E 020	DS, KFM, jDPG
	E 124	KFM, jDPG
	EMH 025	KFM

	EMH 225	KFM
Hochfrequenztechnik	HFT-FT 101	TT
	HFT-FT 131	O, TT
Bergbau/Hüttenwesen	BH-N 128	DY
	BH-N 243	DY
	BH-N 334	DY
	BH-N 333	DY

App for DPG Spring Meetings

Download the DPG Spring Meeting App for Android or iOS and create your own conference programme. In addition to the scientific programme, the app also provides information about the supporting programme and supplies you with relevant information about the venue and conference office. Take a look in the AppStore or PlayStore for „DPG Spring Meetings“ and install the free app!

Presentation

Scientific presentations will be held either orally or by poster. Presentations with a German abstract will be given in German.

Oral presentation

Lecturers are requested to provide their presentations electronically. All lecture rooms are equipped with a projector (“beamer”) with VGA input. The projectors mainly display in the 4:3 format. However they are compatible with the 16:9, limited to the display width. Some newer systems also work directly with 16:9. OHPs are not available.

Laptops must be provided by the speakers as well as all associated adapters (e.g. HDMI to VGA, Apple-adapter). Furthermore, the presentation should be recorded onto an USB stick as back-up in PDF and power point format.

All laptops must be set up and connected with the data projector before the start of the respective session. All rooms will be opened, at latest, 30 minutes prior to the lecture. Speakers are requested to be in the lecture room at least 25 minutes prior to the start of the session to report to the chairperson as well as the technical staff to ensure that

the laptops handshake with the projector and to receive a brief introduction to the equipment in the lecture room. There will be a “speakers ready room” available in the Main Building in room H 1036.

Poster presentation

The poster boards will be marked with the number according to the scientific programme. Authors are asked to mount their poster before their session. Each poster should display the number according to the scientific programme. Each poster should be no larger than 85 cm x 120 cm (A0 portrait format).

For the mounting of the poster please use the prepared “power strips” at the poster frame or contact the available student staff. Please make sure to use only power strips for mounting the poster (residue-free removing). The presenting authors should be at hand for discussion at their poster at least half of the poster session and should note this time at the poster.

The posters have to be removed after the session. Any poster remaining on display walls will be removed and disposed without requesting your permission. The conference management accepts no liability for the posters.

The Poster areas are located in the following areas of the TU Berlin:

	Location	Max. numbers of posters	
A	Main building (H) - Gallery 2nd floor	150	Poster area A is located in the Main Building, 2nd floor, Gallery round the Lichthof
B	Main building (H) – Gallery 3rd floor	150	Poster area B is located in the Main Building, 3rd floor, Gallery round the Lichthof
C	Main building (H) old library	75	Poster area C is located in the Main Building, 3rd floor, opposite Lichthof/Gallery
E	MA Gallery	35	Poster area E is located in the Mathematics Building, 1st floor
F	Tent (Pavilion A)	44	Poster area F is located in Pavilion A (tent) between the main building and the old TU Mensa

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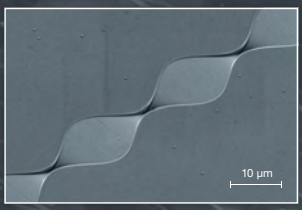
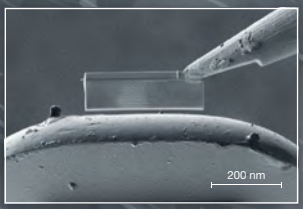
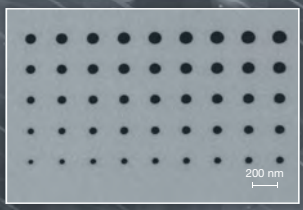


1-mm long fluidic channel fabricated by milling with stitching.



TEM lamella preparation by in-situ lift-out.



SEM control of a test array on a membrane.

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General Information

Transportation

Berlin offers a very good transportation infrastructure. A map of public transport in Berlin is available at the information desk.

Internet Access

For using the Wireless LAN network in the TU Berlin, guest accounts will be provided to you . You will receive the login and password with your registration. TU Berlin offers instructions for getting access to the WiFi at http://www.tubit.tu-berlin.de/wlan/parameter/en/.

Please connect your WiFi device to the network “TUB-Guest”. Open a browser (e.g. Firefox, Internet Explorer) and you will be automatically redirected to the login site. Please enter the guest username and the corresponding password (case sensitive) into the login form. After the confirmation of the terms of service you are online and enabled to surf in the web or to read e-mails.

If your home university is part of the eduroam union, you can access the TU Berlin WLAN “eduroam” using your own eduroam account. Please assure that you have installed the three certificates which can be found on the mentioned website.

There will be a WLAN help desk in the lobby of the Main Building near H 0104. Since the WLAN network of TU Berlin is not designed for parallel connection with high data transmission of several thousand users, there will be PC pools available in the Main Building (H 3017) and the Physics Building (EW 019), too. In these PC pools you can also connect your own laptop to the internet.

Rooms for Preparation and Discussion

For the convenience of the participants, the following rooms will be provided for preparation and private discussions: H 3012, H 3013, MA142, MA143.

Room for Working

Room H 3003a in the Main Building (H) offers all participants of the conference a place for undisturbed working with their own laptops. Please keep quiet within this room and avoid loud conversations and telephone calls.

Discussion with Plenary Speakers

After the plenary talks, coffee, tea, and refreshments will be served in the foyer next to the Audimax, and there will be a possibility of informal discussions with the plenary speakers.

Message Board

All alterations to the scientific programme and other important information for participants will be announced on a message board near the information desk (Building A) and via the homepage http://berlin18.dpg-tagungen.de/index.html.

Lunch, Snacks and Coffee Breaks

In the vicinity of the TU Berlin, there are many different restaurants from fast food to gourmet restaurants. The Mensa of the TU Berlin also offers plenty of opportunities for lunch at moderate prizes. A re-chargeable Mensa card can be purchased (including 1,50 € refundable deposit) in the Mensa building during the conference. Information about the location and menus of the Mensa can be found here: https://www.stw.berlin/en/dining-facilities.html.

A list of nearby restaurants is available at the registration desk. Various cafeterias are located in the Main Building (H), the Mathematics Building (MA) and the Architecture Building (A).

In Pavilion A (tent) you can find the industrial exhibition of physical equipment and literature and poster area F. Coffee, tea, and beverages are offered there for free as well as various snacks. Please make use of this offer and also visit the exhibition stands.

Coffee, tea, and beverages are offered during all breaks in the Main Building (H), the Main Annex (EB), the Physics Building (EW), the Mathematics Building (MA), the Chemistry (C) and Technical Chemistry Building (TC), the Architecture Building (A), the High Frequency Engineering Building (HFT), and the Mining Building (BH-N).

Wilhelm and Else Heraeus Communication Programme

Important notes for participants who apply for a grant of the Wilhelm and Else Heraeus Foundation:

At the beginning of the conference you will receive an identification form at the conference office. The participation in the conference must be certified by the conference desk. You have the possibility to leave this certificate by the

staff members of the DPG (recommended!) in the conference office or submit it to the DPG head office (DPG-Geschäftsstelle, Hauptstr. 5, 53604 Bad Honnef, Germany) by April 6, 2018 at the latest.

For more detailed information refer to http://berlin18.dpg-tagungen.de/index.html.

The Deutsche Physikalische Gesellschaft thanks the Wilhelm and Else Heraeus Foundation for the generous financial support of young academic talents. We hope that young physicists will continue to seize the offered opportunity for active scientific communication at scientific conferences. A total of about 30,000 young academics were supported by this programme so far.

Cloakroom

Participants are asked to carefully watch their clothes, valuables, laptops and other belongings.The organisers decline any liability. You will find a secured cloakroom in the Main Building and unsecured cloakrooms in the Mathematics (MA) and Physics Building (ER).

Events

Tutorials

On Sunday, March 11, 16:00 – 18:30, there will be tutorial workshops on current scientific topics for interested conference participants, in particular for students and young scientists. All conference participants are welcome.

Topics:

- Dynamics, Fluctuations and Scaling in Economic Markets (H 0104)
- Semiconductor Optics (H 1058)
- Spin-Orbit Coupling (H 1012)
- Quantum Technology (H 0105)

Sunday Evening Lecture

Date: Sunday, March 11, 18:45 – 19:30, H 0105

Ranga Yogeshwar: “Next exit future: Is it them or us?”

Welcome Evening

Date: Sunday, March 11, 19:00 – 21:30

On Sunday evening, the Welcome Evening will be held in the Lichthof (Atrium) of the Main Building (H). Food, beer,

and soft drinks will be served. “Die Vier von der Tanzstelle” will entertain you with music. Do not miss the opportunity to register (15:00 to 19:00) before the official beginning of the conference and to meet people in an informal atmosphere.

Foto: Günther Horvath

Welcome address

The SKM and EPS-CMD chairs will give a welcome address on Monday from 8:15 until 8:30 in the lecture hall H 0105.

EinsteinSlam

Date: Monday, March 12, 20:00, Location: Urania

(An der Urania 17, walking distance from subway station Wittenbergplatz, which is two subway stations from Ernst-Reuter-Platz – 4 minutes by subway)

EinsteinSlam is the competitive art of making complex science accessible to a broad audience. There are just 10 minutes for every attendee to present his / her self-made performance. The event will finish with a public poll in order to evaluate if a particular contribution was either instructive and amusing or rather should have never been performed. All presentations will be given in German. For more information please see www.einstein-slam.de .

“50 years of EPS”

Tuesday, March 13, 14:00 – 16:00, H 0104

The European Physical Society (EPS), founded in 1968 in Geneva, celebrates its 50th anniversary in 2018. The EPS Condensed Matter Division, which came into being shortly afterwards (in 1969), wishes to seize this opportunity to commemorate some of the remarkable events and mile-

stones that mark the EPS' history to present a number of condensed matter highlights over this period, but, also, to focus on the role of the European Physical Society today and in future years. All are warmly invited to participate in this event and in the discussion on today's and tomorrow's role of our learned society.

Ceremonial Session with Award Ceremony

Deutsche Physikalische Gesellschaft and European Physical Society

On Tuesday, March 13, 16:00, the Ceremonial Session with Award Ceremony will take place in Audimax H 0105, Straße des 17. Juni 135, 10623 Berlin. The programme is the following:

Music

Welcome

Prof. Dr. Eckehard Schöll, Technische Universität Berlin
Local Organizer

Speech

Prof. Dr. Christian Thomsen
President of the Technische Universität Berlin

Prof. Dr. Rüdiger Voss
President of the European Physical Society (EPS)

Prof. Dr. Rolf-Dieter Heuer
President of the Deutsche Physikalische Gesellschaft (DPG)

Carlos Moedas
EU Commissioner for Research, Science and Innovation

Music

DPG Award Ceremony

DPG Badge of Honour

Prof. Dr. Eckehard Schöll, Technische Universität Berlin

Walter-Schottky-Prize 2018

Prof. Dr. Sascha Schäfer, Carl von Ossietzky Universität Oldenburg

Gaede-Prize 2018

Assoc. Prof. Gareth S. Parkinson, PhD, Technische Universität Wien, Österreich

SKM Dissertation Prize 2018

(The laureate will be appointed after the respective dissertation prize symposium)

Music

EPS Europhysics Prize Ceremony

EPS CMD Europhysics Prize 2018

Prof. Dr. Lucio Braicovich and Prof. Dr. Giacomo Ghiringhelli, Politecnico di Milano, Italy

Ceremonial Lecture

"Resonant Inelastic X-Ray Scattering"

EPS Europhysics Prize Ceremony

The EPS CMD Europhysics Prize is awarded every 2 years for a recent work by one or more individuals in the area of physics of condensed matter, specifically work leading to advances in the fields of electronic, electrical and materials engineering which, in the opinion of the Society's selection committee, represents scientific excellence.

Concert

Apollo and Mercurius (Premiere of composition by Thomas Hennig for two pianos)

Wednesday, March 14, 18:00 - 19:00, Concert Hall of the University of Arts (UdK),

Universität der Künste, Hardenbergstraße 33

Piano: Thomas Hennig, Jakub Sawicki

The idea of this concert project was born after a concert on the occasion of Nobel Laureate Gerhard Ertl's Birthday in 2014 under the motto "Music meets Science" organised jointly by the Cluster of Excellence "UniCat" and the Collaborative Research Center SFB 910 "Control of Self-Organizing Nonlinear Systems" at TU Berlin. The first movement

Ceremonial Session

Deutsche Physikalische Gesellschaft
European Physical Society

Award Ceremony

Honorary Badge of the DPG

Prof. Dr. Dr. h.c. Eckehard Schöll
(Technische Universität Berlin)

Walter-Schottky-Prize 2018

Prof. Dr. Sascha Schäfer
(Carl von Ossietzky Universität Oldenburg)

Gaede-Prize 2018

Assoc. Prof. Gareth S. Parkinson, PhD
(Technische Universität Wien, Österreich)

SKM-Dissertation Prize 2018

(The Laureate will be announced after the SKM Dissertation Prize Symposium)

Music

EPS CMD Europhysics Prize 2018

Prof. Dr. Lucio Braicovich and Prof. Dr. Giacomo Ghiringhelli,
(Politecnico di Milano, Italy)

Ceremonial Lecture

“Resonant Inelastic X-Ray Scattering”

Prof. Dr. Lucio Braicovich and Prof. Dr. Giacomo Ghiringhelli
(Politecnico di Milano, Italy)

Tuesday, 13 March 2018, 16:00 – 18:15
Audimax (H 0105)

DPG

is entitled “Transformations” and addresses the topic of transformations, metamorphosis and variations of motifs in music itself, the second and the third movement refer to physical (“Magnetic fields”) and chemical (“Catalysis”) phenomena, respectively, which are transformed into musical representations, and are dedicated by the composer to Eckehard Schöll and Gerhard Ertl, respectively.

Public Evening Talk

Wednesday, March 14, 20:00 – 21:00, Urania

(An der Urania 17, walking distance from subway station Wittenbergplatz, which is two subway stations from Ernst-Reuter-Platz – 4 minutes by subway)

Prof. Dr. Dr. Frank Schweitzer, ETH Zurich, will speak about: „Kollektive Dynamik in sozialen Systemen: Netzwerke, Emotionen und Big Data“ (in German)

jDPG Pub Crawl

Wednesday, March 14, 21:00, Meeting point: New Clocktower at Breitscheidplatz (walking distance from Zoo station)

Everyone, who wants to leave the Campus behind on Wednesday evening and discover the area around Berlin‘s famous Kurfürstendamm, is welcomed to join the jDPG on a pub crawl and to network with other young participants. For questions send an email to dahlmanns@jdpg.de.

Lise Meitner Lecture

Thursday, March 15, 18:00 – 19.00, H 0105

In 2018 it will be Lise Meitner’s 140th birthday, and it will also be 80 years after she was forced to leave Germany, and 50 years after she died.

Prof. Dr. Nicola Spaldin, ETH Zurich, will speak about:

“Multiferroic Materials for a New Age”

The Public Evening Talk and Lise Meitner Lecture are open for all conference participants and interested public. The entrance is free.

Lab Tours

Several tours to institutes will be offered to interested participants. Please ask at the information desk for more details.

Job Market

During the conference various companies will present their working fields and career opportunities to all interested participants.

Room: H 1035

Programme:

Wednesday, March 14

12:00 – 13:00	Ritzenhoefer GmbH "The Art of Transformation"
13:15 – 14:15	Forschungszentrum Jülich GmbH "Karrierewege in der Physik – Forschungszentrum Jülich!"
14:30 – 15:30	McKinsey & Company, Inc. "Warum McKinsey?"

Thursday, March 15

12:00 – 13:00	Basycon Unternehmensberatung GmbH "Hypothesen, Modelle, Experimente – Was Forschung und Unternehmensberatung gemeinsam haben"
13:15 – 14:15	d-fine GmbH "Physiker (m/w) im Bereich Risiko und Finanzen – Vorstellung d-fine"
14:30 – 15:30	Senacor Technologies GmbH "Physiker in der IT-Beratung – Erfahrungsbericht eines Senacor Physikers"

Friday, March 16

12:00 – 13:00	The Boston Consulting Group GmbH "Als Naturwissenschaftler in die Strategieberatung"

The presentations will last for about 30 minutes plus discussion. Afterwards there will be time for personal conversations in room H 3012. For additional information and contacts refer to the information boards at the information desks located in Building A (Architekturgebäude) and in the Main Building (H).

Annual General Meetings of the DPG Divisions and the Working Group

Divisions SKM	Date	Time	Location
BP – Biological Physics	Wednesday, 14	18:00 - 19:00	H 1028
CPP – Chemical and Polymer Physics	Thursday, 15	18:45 - 19:45	C 130
DS – Thin Films	Wednesday, 14	18:30 - 19:30	H 0111
DY – Dynamics and Statistical Physics	Thursday, 15	18:15 - 18:45	BH-N 243
HL – Semiconductor Physics	Thursday, 15	18:00 - 19:00	EW 201
KFM – Crystalline Solids and their Microstructure	Wednesday, 14	18:30 - 19:00	EMH 025
MA – Magnetism	Thursday, 15	18:00 - 19:00	H 0110
MM – Metal and Material Physics	Wednesday, 14	19:45 - 20:45	TC 006
O – Surface Science	Thursday, 15	19:00 - 19:30	H 0105
SOE – Physics of Socio-economic Systems	Wednesday, 14	12:15 - 13:00	MA 001
TT – Low Temperature Physics	Thursday, 15	18:45 - 20:00	H 3005
VA – Vacuum Science and Technology	Monday, 12	15:45- 16:15	A 060
AGPhil – Philosophy of Physics	Friday, 16	12:45 - 13:30	H 2033

AIW Industry Day

The AIW Industry Day will take place on Wednesday, March 14, 15:00 – 18:15, Room E 020. For more information please refer to page 40 in this booklet.

Exhibition of Physical Equipment and Literature

From Tuesday, March 13 to Thursday, March 15 there will be an exhibition of physical equipment and literature. The exhibition will take place in the Lichthof, the foyers (ground

floor, ground floor right side and 1st floor), as well as in the nearby exhibition tent. More than 100 companies will present their products. A list of exhibitors and plans of the locations can be found at the end of this booklet. Opening hours are Tuesday - Thursday from 9:00 to 17:00; the entrance is free.

Lost and Found Property

You can bring found items to the info desk in the Main Building (H). There you can also get back your lost property.

Acknowledgement

The organisers want to thank

- Wilhelm and Else Heraeus Foundation, Hanau
- Technische Universität Berlin
- all industrial sponsors (see page 11-13 in this booklet)

for supporting the conference and all staff who make this conference possible.

Say Cheese!!

The DPG Spring Meetings are basically public to the press. Please note: On behalf of DPG, photos and videos will be recorded during the Spring Meetings. In the context of public relations, these recordings (as the case may be) will be published on our website, in social media or within prints of the DPG for example.

Disclaimer of liability

All participants are asked to take care of their wardrobe and valuables. The organisers assume no liability.

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Synopsis of the Daily Programme

Sunday, March 11, 2018

Tutorials

TUT 1 16:00 — 18:30 H 0104
Dynamics and Fluctuations in Economic and Financial Markets (SOE)

TUT 1.1 16:00 — 16:50 H 0104
Market microstructure: dynamics of the stock markets
•*Thomas Guhr*

TUT 1.2 16:50 — 17:40 H 0104
Maximum-entropy models in economics and finance
•*Tiziano Squartini*

TUT 1.3 17:40 — 18:30 H 0104
350 years of puzzles in economics – and a solution.
•*Ole Peters*

TUT 2 16:00 — 18:25 H 0105
Quantum Technologies (HL)

TUT 2.1 16:00 — 16:35 H 0105
Quantum Technology – how is research funded?
•*Gerd Leuchs*

TUT 2.2 16:40 — 17:15 H 0105
Superconducting Quantum Circuits
•*Rudolf Gross*

TUT 2.3 17:15 — 17:50 H 0105
Josephson junction based interferometers and amplifiers
•*Sebastian Kempf*

TUT 2.4 17:50 — 18:25 H 0105
Manipulation of quantum bits based on defect centres in diamond
•*Oliver Benson*

TUT 3 16:00 — 18:15 H 1012
Spin-Orbit Coupling (EPS)

TUT 3.1 16:00 — 16:45 H 1012
Role of spin in the structure of matter and spin-related phenomena
•*Michel I. Dyakonov*

TUT 3.2 16:45 — 17:30 H 1012
From the Spin Hall Effect to the Quantum Spin Hall Effect
•*Hartmut Buhmann*

TUT 3.3 17:30 — 18:15 H 1012
Spin Orbit Coupling in Doped Mott Insulators
•*Alessandra Lanzara*

TUT 4 16:00 — 18:25 H 1058
Semiconductor Optics (HL)

TUT 4.1 16:00 — 16:45 H 1058
Quantum dots for photonic quantum technologies
•*Peter Michler*

TUT 4.2 16:50 — 17:35 H 1058
Non-classical light emission and superradiant emitter coupling in semiconductor nanolasers
•*Frank Jahnke*

TUT 4.3 17:40 — 18:25 H 1058
Semiconductor spin-photon interfaces for quantum repeaters and cluster state generation
•*Ruth Oulton*

Sunday Evening Lecture

PLV I 18:45 — 19:30 H 0105
Next exit future: Is it them or us?
•*Ranga Yogeshwar*

Welcome Evening (for registered participants)

19:00 — 21:30 Lichthof

Monday, March 12, 2018

Plenary talks (PLV)

08:15 — 08:30 H 0105
Welcome address

Plenary Talks

PLV II 08:30 — 09:15 H 0105
Imaging Topological Electrons in Low Dimensions: from the Inorganic to the Organic
•*Michael F. Crommie*

PLV III 14:00 — 14:45 H 0105
Imaging and controlling nanoscale crystal growth in the transmission electron microscope
•*Frances M. Ross*

PLV IV 14:00 — 14:45 H 0104
Fast Parametric Interactions Between Superconducting Quantum Circuits
•*Raymond W Simmonds*

Prize Talks (PRV)

Prize Talk

PRV I 13:15 — 13:45 H 1012
Fabrication and characterization of spin Hall nano-oscillators
•*Toni Hache*
(Laureate of the Georg-Simon-Ohm-Prize 2018)

Plenary Special Talks (PSV)

Lunch Talks

PSV I 13:15 — 13:45 HE 101
What Counts in Public Transportation
•*Jan Sablatnig*

PSV II 13:15 — 13:45 H 0104
Promoting academic Cooperation:
The Alexander von Humboldt Foundation
•Dagmar Broemme

Symposium SKM Dissertation Prize 2018 (SYSD)

Invited Talks

SYSD 1.1 11:00 — 11:20 HE 101
Optical detection of charge carrier dynamics in a self-assembled quantum dot
•Annika Kurzmann

SYSD 1.2 11:20 — 11:40 HE 101
Carbon nanotubes as electrically driven on-chip light sources
•Felix Pyatkov

SYSD 1.3 11:40 — 12:00 HE 101
Surely you're joking, Mr. Feynman? The breakdown of diagrammatic perturbation theory
•Thomas Schäfer, Alessandro Toschi, Karsten Held

SYSD 1.4 12:00 — 12:20 HE 101
Ground-state cooling of a mechanical oscillator in hybrid nano-conductors
•Pascal Stadler, Gianluca Rastelli, Wolfgang Belzig

SYSD 1.5 12:20 — 12:40 HE 101
Electron-phonon interactions beyond the two-temperature approximation
•Lutz Waldecker

Session

SYSD 1 11:00 — 12:40 HE 101
SKM Dissertation Prize 2018

Symposium Information Driven Materials Research (SYID)

Invited Talks

SYID 1.1 09:30 — 10:00 H 0105
Data driven R&D for Materials: Cognitive Discovery
•Alessandro Curioni

SYID 1.2 10:00 — 10:30 H 0105
Rational design and synthesis of Pt-based catalysts for fuel cell applications
•*Younan Xia*

SYID 1.3 10:30 — 11:00 H 0105
2D, or not 2D? Materials discovery, data provenance, and workflow reproducibility.
•*Nicola Marzari*

SYID 1.4 11:00 — 11:30 H 0105
Generating and assessing data from combinatorial and high-throughput experiments for the design of new materials
•*Alfred Ludwig*

SYID 1.5 11:30 — 12:00 H 0105
Novel materials discovery: big-data-analytics methods and infrastructure for building maps of materials
•*Luca Ghiringhelli*

Session

SYID 1 09:30 — 12:00 H 0105
Information Driven Materials Research

Symposium Data-driven Methods in Molecular Simulations of Soft-Matter Systems (SYMS)

Invited Talks

SYMS 1.1 15:00 — 15:30 H 0105
Stochastic numerical algorithms: from molecular dynamics to big data analytics
•*Benedict Leimkuhler*

SYMS 1.2 15:30 — 16:00 H 0105
A Generally-Applicable Machine-Learning Scheme for Materials and Molecules
•*Michele Ceriotti*

SYMS 1.3 16:00 — 16:30 H 0105
Girsanov reweighting for path ensembles and Markov state models
•*Bettina G. Keller, Luca Donati, Carsten Hartmann*

SYMS 1.4 16:45 — 17:15 H 0105
Liquid State Theory Meets Deep Learning and Molecular Informatics
•Alpha Lee

SYMS 1.5 17:15 — 17:45 H 0105
Computational high-throuhgput screening of drug-membrane thermodynamics
•Tristan Bereau

Session

SYMS 1 15:00 — 17:45 H 0105
Data-driven Methods in Molecular Simulations of Soft-Matter Systems

Biological Physics Division (BP)

Invited Talks

BP 1.1 09:30 — 10:00 H 1028
Thermodynamics and kinetics of protein aggregation from atomistic simulations
•Birgit Strodel

BP 2.5 10:30 — 11:00 H 1058
Light-based tools for investigating cell-ECM and cell-cell interactions
•Aranzazu del Campo

BP 3.7 11:15 — 11:45 H 2013
Morphology control by active fluid flows
•Karen Alim

BP 5.6 16:15 — 16:45 H 1028
Synchronization of synthetic gene oscillators
•Lev Tsimring

BP 6.4 15:45 — 16:15 H 1058
Broken detailed balance in active biopolymer assemblies
•Chase Broedersz

BP 7.1 15:00 — 15:30 H 2013
Evolution of quantitative traits and non-equilibrium matrix ensembles
Simone Pompei, Torsten Held, •Michael Lässig

Sessions

BP 1 09:30 — 13:00 H 1028
Protein Structure and Dynamics

BP 2 09:30 — 13:00 H 1058
Biomaterials and Biopolymers

BP 3 09:30 — 13:00 H 2013
Cell Adhesion and Migration, Multicellular Systems I

BP 4 10:00 — 13:15 BH-N 243
Active Matter DY I

BP 5 15:00 — 16:45 H 1028
Systems Biology & Gene Expression and Signalling

BP 6 15:00 — 17:30 H 1058
Cytoskeletal Filaments I

BP 7 15:00 — 17:00 H 2013
Focus Session: Statistical Physics-Based Methods in Molecular Evolution – organised by Alexander Schug and Martin Weigt

BP 8 15:30 — 18:45 BH-N 243
Active Matter DY II

BP 9 17:30 — 19:30 Poster A
Postersession I

BP 10 17:30 — 19:30 Poster C
Postersession II

Chemical and Polymer Physics Division (CPP)

Invited Talks, Topical Talks

CPP 1.1 09:30 — 10:00 C 130
Diameter-dependent optical absorption and energy transfer from encapsulated dye molecules to single wall carbon nanotubes
•Sofie Cambré, Stein van Bezouw, Jochen Campo, Joeri Defillet, Wim Wenseleers, Dylan H. Arias, Rachelle Ihly, Andrew J. Ferguson, Justin C. Johnson, Jeffrey L. Blackburn

CPP 1.6 11:15 — 11:45 C 130
Self-organization and energy transfer in non-covalent porphyrin – carbon nanotube supramolecular hybrids
Géraud Delport, Jean-Sébastien Lauret, Stéphane Campidelli, Fabien Vialla, •Christophe Voisin

CPP 3.1 09:30 — 10:00 C 243
Time-resolved in-situ x-ray scattering to resolve structure formation in thin film processing
•Eva M. Herzig

CPP 4.8 11:15 — 11:45 C 264
Reconfigurable colloidal structures
•Daniela J. Kraft

CPP 5.1 09:30 — 10:00 PC 203
Strain-controlled criticality governs the nonlinear mechanics of fibre networks
•Abhinav Sharma, Albert Licup, Karin Jansen, Robbie Rens, Michael Sheinman, Jordan Shivers, Jingchen Feng, Gijsje Koenderink, Fred MacKintosh

CPP 12.1 15:00 — 15:30 C 130
Magnetoresistance in Single-Radical Molecular Junctions
•Elke Scheer

Sessions

CPP 1 09:30 — 13:00 C 130
Focus: Molecularly Functionalized Low-Dimensional Systems I – organised by Antonio Setaro, Carola Meyer, Aravind Vijayaraghvan and Matteo Mannini

CPP 2 09:30 — 11:00 C 230
Electrical, Dielectrical and Optical Properties of Thin Films I

CPP 3 09:30 — 13:00 C 243
Organic Electronics and Photovoltaics – Layer Morphology and Molecular Aggregation

CPP 4 09:30 — 13:00 C 264
Complex Fluids and Colloids I

CPP 5 09:30 — 12:45 PC 203
Polymer Networks and Elastomers I

CPP 6 09:30 — 12:15 H 0112
Magnetic nanoparticles

CPP 7 09:30 — 13:00 H 1058
Biomaterials and Biopolymers

CPP 8 09:30 — 13:15 H 2032
2D Materials (Symposium and Joint Session with HL and O): Session I

CPP 9 10:00 — 13:15 BH-N 243
Active Matter I

CPP 10 10:30 — 13:00 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials I

CPP 11 11:15 — 13:00 C 230
Responsive and Adaptive Systems

CPP 12 15:00 — 17:30 C 130
Focus: Molecularly Functionalized Low-Dimensional Systems II – organised by Antonio Setaro, Carola Meyer, Aravind Vijayaraghvan and Matteo Mannini

CPP 13 15:00 — 16:30 C 243
Organic Electronics and Photovoltaics – Hybrid and Organic Layer Systems

CPP 14 15:00 — 17:45 C 264
Interfaces and Thin Films I

CPP 15 15:00 — 16:30 MA 144
Solid-liquid interfaces: Reactions and electrochemisty I

CPP 16 15:00 — 17:15 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials II

CPP 17 15:30 — 18:45 BH-N 243
Active Matter II

CPP 18 15:30 — 19:15 BH-N 334
Focus: Droplets

CPP 19 16:45 — 18:15 MA 144
Solid-liquid interfaces: Reactions and electrochemisty II

CPP 20 17:30 — 19:30 Poster A
Poster Session I

Thin Films Division (DS)

Sessions

DS 1 09:30 — 11:30 H 0111
Layer Properties: Electronic, Optical and Mechanical

DS 2 09:30 — 13:15 H 2032
2D Materials: Session I

DS 3 09:30 — 13:15 E 020
Oxide Semiconductors for Novel Devices (Focussed Session): Session I

DS 4 10:30 — 13:00 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials I

DS 5 11:45 — 13:15 H 0111
Layer Deposition (ALD, MBE, Sputtering, ...)

DS 6 15:00 — 18:15 H 0111
Thin Film Applications

DS 7 15:00 — 17:45 H 2032
Thin Film Properties: Structure, Morphology and Composition (XRD, TEM, XPS, SIMS, RBS, AFM, ...): Session I

DS 8 15:00 — 16:30 EW 201
2D materials

DS 9 15:00 — 17:15 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials II

DS 10 15:00 — 18:15 E 020
Oxide Semiconductors for Novel Devices (Focussed Session): Session II

Dynamics and Statistical Physics Division (DY)

Invited Talks

DY 4.1 09:30 — 10:00 BH-N 243
Sounds and stubbornness of active fluids.
•*Denis Bartolo, Delphine Geyer, Alexandre Morin*

DY 5.1 09:30 — 10:00 BH-N 334
Irreversibility and dissipation in molecular motors and kinetic networks
•*Juan MR Parrondo*

DY 13.1 15:00 — 15:30 BH-N 334
Diffusive Droplet Dynamics in multicomponent fluid systems
•*Detlef Lohse*

Sessions

DY 2 09:30 — 12:45 H 0104
Focus Session: Recent Developments in Computational Many Body Physics

DY 3 09:30 — 13:00 C 264
Complex Fluids and Colloids I

DY 4 09:30 — 10:00 BH-N 243
Talk D. Bartolo

DY 5 09:30 — 10:00 BH-N 334
Talk J. Parrondo

DY 6 10:00 — 12:45 EB 107
Dynamics in many-body systems: interference, equilibration and localisation I

DY 7 10:00 — 11:45 BH-N 128
Modeling and Data Analysis

DY 8 10:00 — 13:15 BH-N 243
Active Matter I

DY 9 10:00 — 13:30 BH-N 334
Statistical Physics far from Thermal Equilibrium

DY 10 10:00 — 12:45 BH-N 333
Statistical Physics I (General)

DY 11 12:00 — 13:00 BH-N 128
Energy Systems

DY 12 15:00 — 17:00 H 2013
Focus Session: Statistical Physics-Based Methods in Molecular Evolution – organised by Alexander Schug and Martin Weigt

DY 13 15:00 — 15:30 BH-N 334
Talk D. Lohse

DY 14 15:30 — 17:45 EB 107
Dynamics in many-body systems: interference, equilibration and localisation II

DY 15 15:30 — 17:30 BH-N 128
Nonlinear Dynamics, Synchronization, Chaos I

DY 16 15:30 — 18:45 BH-N 243
Active Matter II

DY 17 15:30 — 19:15 BH-N 334
Focus: Droplets

DY 18 15:30 — 17:00 BH-N 333
Critical Phenomena and Phase Transitions

DY 19 17:30 — 18:15 BH-N 333
Extreme Events

Semiconductor Physics Division (HL)

Invited Talk

HL 12.1 16:45 — 17:15 EW 201
III-Nitride Quantum Dots as Single Photon Emitters
•Mark Holmes, Kang Gao, Florian Le Roux, Kihyun Choi, Satoshi Kako, Munetaka Arita, Yasuhiko Arakawa

Sessions

HL 3 09:30 — 13:15 H 2032
2D Materials: Session I

HL 4 09:30 — 13:00 EW 201
Quantum dots and wires: Optical properties I

HL 5 09:30 — 12:30 EW 202
Semiconductor Lasers

HL 6 09:30 — 13:00 EW 203
Photovoltaics I

HL 7 09:30 — 13:00 A 151
Topological insulators I

HL 8 15:00 — 16:30 EW 201
2D materials

HL 9 15:00 — 17:30 EW 202
III-V semiconductors (other than nitrides)

HL 10 15:00 — 17:30 EW 203
Nitrides: Devices

HL 11 15:00 — 17:30 A 151
Topological insulators II

HL 12 16:45 — 17:15 EW 201
Invited Talk: Mark Holmes

HL 13 17:30 — 19:30 Poster B
Poster Session I

Crystalline Solids and their Microstructure Division (KFM)

Invited Talks

KFM 1.1 09:30 — 10:00 EMH 025
Collective nano-optomechanics and liquids
•*Ivan Favero*

KFM 1.2 10:00 — 10:30 EMH 025
Whispering gallery optical parametric oscillators
•*Ingo Breunig*

KFM 2.1 09:30 — 10:00 EMH 225
Atomic-resolution imaging of electronic inversion layers at ferroelectric domain walls
•*Julia Mundy, J. Schaab, Y. Kumagai, A. Cano, M. Stengel, I. Kung, D. Gottlob, H. Doganay, M. Holtz, R. Held, Z. Yan, E. Bourret, C. Schneider, D. Schlom, D. Muller, R. Ramesh, N. Spaldin, D. Meier*

KFM 2.7 11:30 — 12:00 EMH 225
Understanding the dielectric enhancement from domain walls in conventional and relaxor ferroelectrics
•Andrew Rappe

KFM 5.1 15:00 — 15:30 EMH 025
Whispering-gallery-like modes in two and three dimensional microcavities
•Martina Hentschel

KFM 6.1 15:00 — 15:30 EMH 225
First-principles studies of ferroelectric and ferroelastic domain walls
•Jorge Íñiguez

KFM 6.7 17:15 — 17:45 EMH 225
Probing STO domain walls with scanning SQUID microscopy
•Beena Kalisky

Sessions

KFM 1 09:30 — 12:50 EMH 025
Whispering Gallery Mode Resonators I

KFM 2 09:30 — 12:45 EMH 225
Ferroelectric Domain Walls I

KFM 3 09:30 — 13:10 E 124
Crystal Structure, Defects, Real Structure and Microstructure in Materials

KFM 4 15:00 — 18:30 EB 301
Skyrmions I

KFM 5 15:00 — 18:10 EMH 025
Whispering Gallery Mode Resonators II

KFM 6 15:00 — 18:30 EMH 225
Ferroelectric Domain Walls II

KFM 7 15:00 — 18:20 E 124
Microstructure of thin films / TEM-based Nanoanalysis

Magnetism Division (MA)

Invited Talks, Topical Talk

MA 2.1 09:30 — 10:00 H 1012
Advanced X-ray Optics – Zone Plates, Kinoforms and Computer Generated Holograms
•Kahraman Keskinbora, Umut T. Sanli, Margarita Baluktsian, Gül Dogan, Iuliia Bykova, Markus Weigand, Gisela Schütz

MA 2.2 10:00 — 10:30 H 1012
Time-resolved imaging of nanoscale spin textures and spin waves
•Jörg Raabe, Simone Finizio, Sebastian Wintz

MA 2.3 10:30 — 11:00 H 1012
Direct observation of magnetic droplet solitons
•Martina Ahlberg, Sunjae Chung, Q. Tuan Le, Ahmad A. Awad, Markus Weigand, Iuliia Bykova, Roman Khymyn, Mykola Dvornik, Hamid Mazraati, Afshin Houshang, Sheng Jiang, T. N. Anh Nguyen, Eberhard Goering, Gisela Schütz, Joachim Gräfe, Johan Åkerman

MA 2.4 11:15 — 11:45 H 1012
Studying nanomagnets by XMCD PEEM
•Florian Kronast

MA 2.5 11:45 — 12:15 H 1012
A time-resolved view on magnetic domains and spin textures by x-ray holography
•Stefan Eisebitt

MA 8.1 15:00 — 15:30 H 1012
Multiple nanostructures based on anodized aluminium oxide templates
•Yong Lei

MA 8.3 15:45 — 16:15 H 1012
Towards a three dimensional curvilinear magnonic transducer
•Jorge A Otalora, Jürgen Lindner, Helmut Schultheiss, Kilian Lenz, Andy Thomas, Kornelius Nielsch, Attila Kákay

MA 8.4 16:15 — 16:45 H 1012
Controlled domain wall propagation in cylindrical nanowires
•Cristina Bran

MA 8.5 17:00 — 17:30 H 1012
Magnetic hardening of nanowires by sandwiching with antiferromagets
•Ulf Wiedwald

MA 8.7 17:45 — 18:15 H 1012
Hybrid Magnetoelectric Nanowires for Nanorobotic Applications
•Salvador Pané

MA 10.1 15:00 — 15:30 EB 301
Structure, Energetics, and Deterministic Writing of Skyrmions in Thin Film Ferromagnets
•Felix Büttner

MA 14.1 15:00 — 15:25 H 0112
On the magnetocaloric properties of Heusler compounds
•Tino Gottschall

MA 14.2 15:25 — 15:50 H 0112
Topological Magnon Materials and Transverse Magnon Transport
•Alexander Mook

MA 14.3 15:50 — 16:15 H 0112
Ferromagnet-Free Magnetoelectric Thin Film Elements
•Tobias Kosub

MA 14.4 16:15 — 16:40 H 0112
Optically induced ferro- and antiferromagnetic dynamics in the rare-earth metal dysprosium
•Nele Thielemann-Kühn

MA 15.1 16:55 — 17:15 H 0112
Magnetic particle mapping with magnetoelectric sensors for characterization of bioscaffolds
•Ron-Marco Friedrich, Sebastian Zabel, Jan-Martin Wagner, Christine Selhuber-Unkel, Franz Faupel

MA 15.2 17:15 — 17:35 H 0112
Uncovering Chiral and Topological Orbital Magnetism of Domain Walls and Skyrmions
•Fabian R. Lux

MA 15.3 17:35 — 17:55 H 0112
Unified description of high frequency magnetodynamics, and a new way of measuring the magnon contribution to the specific heat
•Benjamin Zingsem, Michael Winklhofer, Sabrina Masur, Paul Wendtland, Ruslan Salikov, Florian M. Römer, Ralf Meckenstock, Michael Farle

Sessions

MA 1 09:30 — 12:15 H 0112
Magnetic nanoparticles

MA 2 09:30 — 12:45 H 1012
Focus Session: Nanomagnetism in the x-ray spotlight

MA 3 09:30 — 13:00 H 3010
Quantum Magnets and Molecular Magnets

MA 4 09:30 — 12:45 EB 202
Spin structures and magnetic phase transitions

MA 5 09:30 — 13:15 EB 301
Heusler compounds, semimetals and oxides

MA 6 09:30 — 12:45 EB 407
Ultrafast magnetism I

MA 7 10:15 — 13:15 TC 010
Focus Session: Magnetism in Materials Science: Thermodynamics, Kinetics and Defects I

MA 8 15:00 — 18:30 H 1012
Focus Session: Magnetic structurally and compositionally modulated nanowires and nanotubes

MA 9 15:00 — 18:15 EB 202
Magnetic domain walls

MA 10 15:00 — 18:30 EB 301
Skyrmions I

MA 11 15:00 — 17:45 EB 407
Ultrafast magnetism II

MA 12 15:00 — 17:45 HFT-FT 101
Superconductivity – Topological Defects in Superconductors and Magnets

MA 13 15:45 — 18:45 TC 010
Focus Session: Magnetism in Materials Science: Thermodynamics, Kinetics and Defects II

MA 14 15:00 — 16:55 H 0112
INNOMAG e.V. Dissertationspreis 2018 / Ph.D. Thesis Prize

MA 15 16:55 — 18:05 H 0112
INNOMAG e.V. Diploma-/Master Prize 2018

Metal and Material Physics Division (MM)

Invited Talks, Topical Talks

MM 1.1 09:30 — 10:00 TC 006
Beyond Hall-Petch: Mechanism based description of dislocation grain-boundary interactions
•Christoph Kirchlechner, Nataliya Malyar, Juan Li, Nicolas Peter, Christian Liebscher, Jean-Sebastien Micha, Gerhard Dehm

MM 3.1 10:15 — 10:45 H 0107
Effects of hydrogen on plasticity and fracture in iron – atomic level to mesoscale theory
•Anthony Paxton

MM 3.2 10:45 — 11:15 H 0107
Hydrogen-assisted failure in Ni-based superalloy 718 studied under in situ hydrogen charging: The role of localized deformation in crack propagation
Zahra Tarzimoghadam, •Dirk Ponge, Jutta Klöwer, Dierk Raabe

MM 4.1 10:15 — 10:45 TC 006
Plasticity in complex crystals * On the role of building blocks in intermetallics and layered compounds
•Sandra Korte-Kerzel, Sebastian Schröders, Stefanie Sandlöbes, James Gibson, William Clegg

MM 5.1 10:15 — 10:45 TC 010
First principles many-body calculations for rare earth-based materials: present status and open challenges
•*Silke Biermann*

MM 5.5 11:45 — 12:15 TC 010
We need perfect defects – challenging the Brown's paradox in permanent magnetism
•*Oliver Gutfleisch*

MM 5.6 12:15 — 12:45 TC 010
Interplay of moment-volume and electron-phonon coupling in the itinerant electron metamagnet $LaFe_{13}$–xSixHy
•*Markus Ernst Gruner*

MM 8.1 11:45 — 12:15 TC 006
Deformation twinning in nanostructured metallic systems: molecular dynamics study
•*Sandrine Brochard, Romuald Béjaud, Julien Durinck*

MM 9.1 15:00 — 15:30 TC 006
Deciphering fracture patterns: what crack paths teach us about the mechanics and physics of fracture
•*Laurent Ponson*

MM 11.1 15:45 — 16:15 H 0107
Hydrogen transportation across palladium surfaces: Microscopic mechanism and control
•*Markus Wilde, Satoshi Ohno, Katsuyuki Fukutani*

MM 11.2 16:15 — 16:45 H 0107
Hydrogen interaction with metal substrates studied from first principles
•*Axel Groß*

MM 12.1 15:45 — 16:15 TC 006
Microscale Fracture Testing: State of the Art and Future Challenges
•*David Armstrong*

MM 13.1 15:45 — 16:15 TC 010
Ferromagnetic Nuclear Resonance for studying defects in multilayers and nanocomposites: Structure and magnetic properties
•*Christian Mény*

MM 13.5 17:30 — 18:00 TC 010
Improving the finite-temperature description of magnetic materials
•Anders Bergman

MM 16.1 17:30 — 18:00 H 0107
Development of Hydrogen Storage Materials and Systems
•Martin Dornheim

MM 17.5 18:30 — 19:00 TC 006
Crack dynamics in brittle crystals: the varying cleavage energies.
•Dov Sherman, Merna Shaheen Mualim

Sessions

MM 1 09:30 — 10:00 TC 006
Invited talk Kirchlechner

MM 2 10:15 — 11:30 H 0106
Battery Materials

MM 3 10:15 — 13:15 H 0107
Topical session (Symposium MM): Hydrogen in Materials

MM 4 10:15 — 11:30 TC 006
Topical session (Symposium EPS and MM): Mechanical Properties at Small Scales

MM 5 10:15 — 13:15 TC 010
Topical session (Symposium EPS and MM, joint session with MA): Magnetism in Materials Science: Thermodynamics, Kinetics and Defects

MM 6 10:30 — 13:00 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials I

MM 7 11:45 — 13:00 H 0106
Battery Materials

MM 8 11:45 — 13:15 TC 006
Topical session (Symposium EPS and MM): Mechanical Properties at Small Scales

MM 9 15:00 — 15:30 TC 006
Invited talk Ponson

MM 10 15:45 — 17:00 H 0106
Battery Materials

MM 11 15:45 — 17:00 H 0107
Topical session (Symposium MM): Hydrogen in Materials

MM 12 15:45 — 17:15 TC 006
Topical Session (Symposium MM): Fundamentals of Fracture

MM 13 15:45 — 18:45 TC 010
Topical session (Symposium EPS and MM, joint session with MA): Magnetism in Materials Science: Thermodynamics, Kinetics and Defects

MM 14 15:00 — 17:15 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials II

MM 15 17:30 — 18:45 H 0106
Battery Materials

MM 16 17:30 — 19:00 H 0107
Topical session (Symposium MM): Hydrogen in Materials

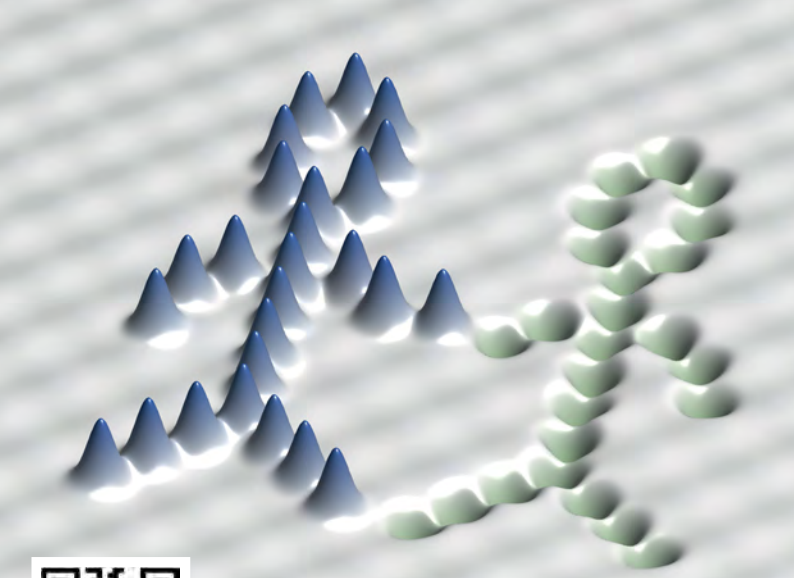
MM 17 17:30 — 19:00 TC 006
Topical Session (Symposium MM): Fundamentals of Fracture

Surface Science Division (O)

Invited Talks

O 1.1 09:30 — 10:15 HE 101
Manipulation of Single Functional Molecules: Wires and Motors
•*Leonhard Grill*

O 5.1 10:30 — 11:00 MA 042
In-situ studies of organic thin films
•*Thorsten Wagner*



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DPG mentoring

O 9.1 10:30 — 11:00 HFT-FT 131
CeO_2 (111) defect structure, oxygen migration and polaron hopping: A theoretical perspective
•M. Veronica Ganduglia-Pirovano, Gustavo E. Murgida, Valeria Ferrari, Ana Maria Llois, Dawei Zhang, Zhong-Kang Han, Yi Gao

O 9.2 11:00 — 11:30 HFT-FT 131
Interactions at the interface between cerium oxide and metals
•Paola Luches

O 9.3 11:30 — 12:00 HFT-FT 131
Unraveling surface chemistry of C-H reforming reactions over Ni-CeOx(111) catalysts
•Sanjaya Senanayake

O 11.1 15:00 — 15:30 MA 004
Elementary phenomena in hybrid graphene nanoribbons on surfaces
•Nacho Pascual

O 12.7 16:45 — 17:15 MA 005
Nonlinear Surface Phonon Polariton Spectroscopy
Nikolai C. Passler, Ilya Razdolski, Christopher J. Winta, Sandy Gewinner, Wieland Schöllkopf, Stefan A. Maier, Joshua D. Caldwell, Martin Wolf, •Alexander Paarmann

O 14.1 15:00 — 15:30 MA 042
Non-commensurate epitaxy with and without coincidences
•Roman Forker

O 14.8 17:15 — 17:45 MA 042
Spotlight on Excitonic Coupling in Textured and Polymorphic Anilino Squaraine Thin Films
•Manuela Schiek

O 18.1 15:00 — 15:30 HE 101
Surface chemistry of ruthenates
•Ulrike Diebold, Daniel Halwidl, Wernfried Mayer-Schmözer, Martin Setvin, Florian Mittendorfer, Josef Redinger, Michael Schmid

O 18.2 15:30 — 16:00 HE 101
Multiscale modelling of metal oxide interfaces and nanoparticles
•Kersti Hermansson

Sessions

O 1 09:30 — 10:15 HE 101
Overview Talk: Leonhard Grill

O 2 10:30 — 13:00 MA 004
Scanning probe techniques: Method development I

O 3 10:30 — 13:00 MA 005
Ultrafast Electron and spin dynamics at interfaces I

O 4 10:30 — 12:45 MA 041
Plasmonics and nanooptics: Fabrication and characterization

O 5 10:30 — 13:00 MA 042
Organic-inorganic hybrid systems and organic films I

O 6 10:30 — 13:15 MA 043
Graphene: Electronic properties, structure and substrate interaction I

O 7 10:30 — 13:00 MA 141
Heterogeneous Catalysis: Experiment

O 8 10:30 — 13:00 MA 144
Solid-liquid interfaces: Structure, Spectroscopy I

O 9 10:30 — 13:00 HFT-FT 131
Focus Session: Frontiers in Reducible Oxide Surface Science I

O 10 10:30 — 13:00 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials I

O 11 15:00 — 18:15 MA 004
Focus Session: Molecular Nanostructures on surfaces – New Concepts towards Complex Architectures I

O 12 15:00 — 18:15 MA 005
Ultrafast Electron and spin dynamics at interfaces II

O 13 15:00 — 18:15 MA 041
Plasmonics and nanooptics: Light-matter interaction, spectroscopy I

O 14 15:00 — 18:15 MA 042
Organic-inorganic hybrid systems and organic films II

O 15 15:00 — 16:30 MA 043
Graphen: Adsorption, intercalation and doping I

O 16 15:00 — 18:15 MA 141
Heterogeneous Catalysis: Theory

O 17 15:00 — 16:30 MA 144
Solid-liquid interfaces: Reactions and electrochemisty I

O 18 15:00 — 18:15 HE 101
Focus Session: Frontiers in Reducible Oxide Surface Science II

O 19 15:00 — 17:15 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials II

O 20 16:45 — 18:15 MA 043
Graphen: Adsorption, intercalation and doping II

O 21 16:45 — 18:15 MA 144
Solid-liquid interfaces: Reactions and electrochemisty II

Physics of Socio-economic Systems Division (SOE)

Prize Talk, Invited Talk

SOE 6.1 15:00 — 15:45 MA 001
Tipping points and crises in simple macroeconomic models
•*Jean-Philippe Bouchaud*

SOE 6.2 16:00 — 16:45 MA 001
Network science beyond networks: Information flow models for social and biological systems
•*Martin Rosvall*

Sessions

SOE 2 09:30 — 10:30 MA 001
Financial Markets and Risk Management I

SOE 3 10:30 — 11:30 MA 001
Economic Models I

SOE 4 11:30 — 13:15 MA 001
Social Systems, Opinion and Group Dynamics I

SOE 5 12:00 — 13:00 BH-N 128
Energy Systems / Power Grids

SOE 6 15:00 — 17:00 MA 001
Award Session: Young Scientist Award for Socio- and Econophysics (YSA)

SOE 7 17:00 — 20:00 Poster E
Poster

Low Temperature Physics Division (TT)

Invited Talks

TT 2.1 09:30 — 10:00 H 0104
Revealing Fermionic Quantum Criticality from New Monte Carlo Techniques
•Zi Yang Meng

TT 2.2 10:00 — 10:30 H 0104
Computational Approaches to Many-Body Localisation
•David J. Luitz

TT 2.3 10:30 — 11:00 H 0104
Tensor Network Techniques and Dynamical Systems
Nicola Pancotti, Michael Knapp, David Huse, Mari Carmen Banuls, •Ignacio Cirac

TT 2.4 11:15 — 11:45 H 0104
Digital Quantum Simulation
•Bela Bauer

TT 2.5 11:45 — 12:15 H 0104
Quantum Monte Carlo Simulation of Coupled Fermion-Boson Systems
Manuel Weber, Fakher Assaad, •Martin Hohenadler

TT 2.6 12:15 — 12:45 H 0104
Machine Learning Methods for Quantum Many-Body Physics
•Giuseppe Carleo

TT 5.8 11:30 — 12:00 H 3005
Superconductivity in $YbRh_2Si_2$
•Erwin Schuberth

TT 9.1 09:30 — 10:00 HFT-FT 101
Unconventional Superconductivity in Quantum-Dot Systems
•Stephan Weiss

Sessions

TT 2 09:30 — 12:45 H 0104
Focus Session: Recent Developments in Computational Many Body Physics

TT 3 09:30 — 13:00 H 0110
Superconductivity: Properties and Electronic Structure I

TT 4 09:30 — 13:00 H 2053
Superconductivity: Qubits I

TT 5 09:30 — 13:00 H 3005
f-Electron Systems and Heavy Fermions I

TT 6 09:30 — 13:00 H 3010
Quantum Magnets and Molecular Magnets

TT 7 09:30 — 13:00 A 053
Topological Semimetals I

TT 8 09:30 — 13:00 A 151
Topological Insulators I

TT 9 09:30 — 13:00 HFT-FT 101
Quantum Dots, Quantum Wires, Point Contacts

TT 10 09:30 — 13:15 EB 301
Heusler Compounds, Semimetals and Oxides

TT 11 09:30 — 12:45 EMH 225
Ferroelectric Domain Walls I

TT 12 10:00 — 12:45 EB 107
Dynamics in Many-Body Systems: Interference, Equilibration and Localisation I

TT 13 10:30 — 13:15 MA 043
Graphene: Electronic Properties, Structure and Substrate Interaction I

TT 14 10:30 — 13:00 HL 001
Frontiers of Electronic-Structure Theory: Correlated Electron Materials I

TT 15 15:00 — 18:45 H 0104
Dual-Method Approaches to Quantum Many-Body Systems I

TT 16 15:00 — 17:30 H 0110
Superconductivity: Properties and Electronic Structure II

TT 17 15:00 — 17:00 H 2053
Superconductivity: Qubits II

TT 18 15:00 — 17:30 H 3005
f-Electron Systems and Heavy Fermions II

TT 19 15:00 — 18:15 H 3010
Frustrated Magnets – Spin Liquids – Theory

TT 20 15:00 — 18:45 A 053
Topological Semimetals II

TT 21 15:00 — 17:30 A 151
Topological Insulators II

TT 22 15:00 — 17:45 HFT-FT 101
Superconductivity: Topological Defects in Superconductors and Magnets

TT 23 15:00 — 16:30 MA 043
Graphene: Adsorption, Intercalation and Doping I

TT 24 16:45 — 18:15 MA 043
Graphene: Adsorption, Intercalation and Doping II

TT 25 15:00 — 17:15 HL 001
Frontiers of Electronic-Structure Theory: Correlated Electron Materials II

TT 26 15:00 — 18:30 EB 301
Skyrmions I

TT 27 15:00 — 18:30 EMH 225
Ferroelectric Domain Walls II

TT 28 15:00 — 19:00 Poster B
Poster Session: Topological Topics

TT 29 15:00 — 19:00 Poster B
Poster Session: Cryogenic Particle Detectors and Cyotechnique

TT 30 15:00 — 19:00 Poster B
Poster Session: Disordered Quantum Systems

TT 31 15:30 — 17:45 EB 107
Dynamics in Many-Body Systems: Interference, Equilibration and Localisation II

Vacuum Science and Technology Division (VA)

Invited Talks

VA 1.1 09:00 — 09:45 A 060
Ion Pump design for improved pumping speed at low pressure
•*Mauro Audi*

VA 2.1 10:15 — 11:00 A 060
DIJ: New energy-efficient type of oil diffusion pump
•*Stefan Lausberg*

VA 3.1 14:00 — 14:45 A 060
Measurement and simulation of deuterium and tritium retention in the KATRIN beam line
•*Carsten Röttele, KATRIN Collaboration*

Sessions

VA 1 09:00 — 10:15 A 060
Vacuum Physics

VA 2 10:15 — 12:00 A 060
Vacuum Generation and Measurement

VA 3 14:00 — 15:45 A 060
Large Vacuum Systems

VA 4 15:45 — 16:15 A 060
Annual General Meeting of the
Vacuum Science and Technology Division

EinsteinSlam

AKjDPG 2 20:00 — 22:00 Urania

Tuesday, March 13, 2018

Plenary talks (PLV)

Plenary Talk, Ceremonial Lecture

PLV V 08:30 — 09:15 H 0105
Upside-Down and Inside-Out: Biomechanics of Cell Sheet Folding
•*Raymond Goldstein*

Ceremonial Session with Award Ceremony

16:00 — 18:15 H 0105
Ceremonial Lecture

PLV VI H 0105
Resonant Inelastic X-Ray Scattering
•*Lucio Braicovich, Giacomo Claudio Ghiringhelli (Laureates of the EPS CMD Europhysics Prize 2018)*

Prize Talks (PRV)

Prize Talk

PRV II 13:15 — 13:45 H 0105
Single-Atom Catalysis: An Atomic-Scale View
•*Gareth Parkinson*
(Laureate of the Gaede-Prize 2018)

Plenary Special Talks (PSV)

Lunch Talks

PSV III 13:15 — 13:45 HE 101
Protecting Identities – as a Physicist in the Business for international Government Solutions
•*Silke Bargstädt-Franke*

PSV IV 13:15 — 13:45 H 0104
FET Open: the European Innovation Council's exploratory engine for research on future disruptive technologies
•*Martin Lange*

Symposium Physics of Biological and Synthetic Active Matter (SYBS)

Invited Talks

SYBS 1.1 09:30 — 10:00 H 0105
Bacterial collective behaviours
•Knut Drescher

SYBS 1.2 10:00 — 10:30 H 0105
Nonlinear dynamics of beating cilia and flagella: Swimming, steering, and synchronisation
•Benjamin M. Friedrich

SYBS 1.3 10:30 — 11:00 H 0105
Learning to navigate in dynamic environments: animal behavior and artificial intelligence
•Antonio Celani

SYBS 1.4 11:15 — 11:45 H 0105
Suspensions of active colloids
•Cecile Cottin-Bizonne, Félix Ginot, Isaac Theurkauff, Christophe Ybert

SYBS 1.5 11:45 — 12:15 H 0105
Spontaneous chiral symmetry breaking in active fluids
•Jörn Dunkel

Session

SYBS 1 09:30 — 12:15 H 0105
Physics of Biological and Synthetic Active Matter

Biological Physics Division (BP)

Invited Talks

BP 11.1 09:30 — 10:00 H 1028
Cryo-Electron Tomography: Method Development and Application on Cell-Cell Junctions and Nuclear Exploration
•Achilleas Frangakis

BP 12.5 10:30 — 11:00 H 1058
Atomistic Simulation of Biomolecular Function: Ribosomal translation, Intrinsically Disordered Proteins, and a Dynasome Perspective
•Helmut Grubmüller

Sessions

BP 11 09:30 — 13:00 H 1028
Bioimaging and Biopspectroscopy I

BP 12 09:30 — 13:00 H 1058
Computational Biophysics I

BP 13 12:30 — 13:15 MA 001
Evolutionary Game Theory

BP 14 14:00 — 15:45 BH-N 243
Microswimmers DY I

BP 15 14:00 — 16:00 Poster B
Postersession III

Chemical and Polymer Physics Division (CPP)

Invited Talks, Topical Talk

CPP 21.1 09:30 — 10:00 C 130
Superresolution microscopy of pNIPAM microgels
•Frank Scheffold, Gaurasundar Marc Conley, Philippe Aebischer, Sofi Nöjd, Marco Braibanti, Peter Schurtenberger

CPP 23.1 09:30 — 10:00 C 243
Non-fullerene acceptors for commercially viable organic photovoltaics
•Derya Baran

CPP 25.1 09:30 — 10:00 PC 203
Understanding self-assembly in gyroid terpolymer films
•Ilja Gunkel

CPP 25.6 11:15 — 11:45 PC 203
Soft Interfaces Studied with the Quartz Crystal Microbalance
•Diethelm Johannsmann, Arne Langhoff

CPP 30.1 11:45 — 12:15 C 264
Novel hyphenated rheology techniques for the study of quiescent and flow-induced polymer crystallization
Volker Räntzsch, Mürüvvet Begüm Özen, Karl-Friedrich Ratzsch, Gisela Guthausen, •Manfred Wilhelm

CPP 31.1 14:00 — 14:30 PC 203
The role of correlations in the collective behaviour of microswimmer suspensions
•*Alexander Morozov*

Sessions

CPP 21 09:30 — 13:00 C 130
Focus: Smart Hydrogels and Hydrogel Based Devices I – organised by Gerald Gerlach, Walter Richtering and Thomas Hellweg

CPP 22 09:30 — 10:30 C 230
Data-driven Methods in Molecular Simulations of Soft-Matter Systems

CPP 23 09:30 — 13:00 C 243
Organic Photovoltaics I

CPP 24 09:30 — 11:45 C 264
Complex Fluids and Colloids II

CPP 25 09:30 — 13:00 PC 203
Interfaces and Thin Films II

CPP 26 09:30 — 13:15 H 2032
2D Materials (Symposium and Joint Session with HL and O): Session II

CPP 27 10:30 — 13:00 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials III

CPP 28 11:00 — 12:30 BH-N 334
Condensed Matter Simulations augmented by Advanced Statistical Methodologies I

CPP 29 11:15 — 13:00 C 230
Nanostructures, Nanostructuring and Nanosized Soft Matter I

CPP 30 11:45 — 13:00 C 264
Friction and Rheology

CPP 31 14:00 — 16:00 PC 203
Modeling and Simulation of Soft Matter I

CPP 32 14:00 — 16:00 Poster B
Poster Session II

CPP 33 14:00 — 16:00 Poster C
Poster Session III

CPP 34 14:00 — 15:15 BH-N 128
Condensed Matter Simulations augmented by Advanced Statistical Methodologies II

CPP 35 14:00 — 15:45 BH-N 243
Microswimmers I

CPP 36 14:00 — 15:45 EB 107
Particulate Matter: From microscopic interactions to collective motion

Thin Films Division (DS)

Invited Talks

DS 13.1 09:30 — 10:00 E 020
Electron transport in beta-gallium oxide
•Rebecca L. Peterson, Zumrad Kabilova, Cagliyan Kurdak

DS 13.2 10:00 — 10:30 E 020
Deep level defects in bulk and epi-grown β-Ga2O3
•Lasse Vines

DS 13.3 10:30 — 11:00 E 020
Indium Oxide and its surface electrons – a model system to study gas interaction and metal/semiconductor junctions
•Marcel Himmerlich, Theresa Berthold, Jonas Michel, Simeon Katzer, Stefan Krischok

DS 13.4 11:00 — 11:30 E 020
Phonons and excitons in Ga_2O_2 polytypes
•Markus R. Wagner

Sessions

DS 11 09:30 — 13:15 H 0111
Thin Film Properties: Structure, Morphology and Composition (XRD, TEM, XPS, SIMS, RBS, AFM, ...): Session II

DS 12 09:30 — 13:15 H 2032
2D Materials: Session II

DS 13 09:30 — 11:30 E 020
Oxide Semiconductors for Novel Devices (Focussed Session): Session III

DS 14 10:30 — 13:00 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials III

DS 15 11:45 — 13:00 E 020
Thermoelectric and Phase Change Materials

DS 16 14:00 — 15:45 A 151
2D materials: Graphene and BN

DS 17 18:15 — 20:15 Poster B
Poster Session I

Dynamics and Statistical Physics Division (DY)

Invited Talks

DY 20.1 09:30 — 10:00 EB 107
Light fields in complex media: mesoscopic physics meets wave control
•*Stefan Rotter*

DY 22.1 09:30 — 10:00 BH-N 243
Complex Systems in Mechanical Engineering? A paradigm shift ahead.
•*Norbert Hoffmann*

Sessions

DY 20 09:30 — 10:00 EB 107
Talk S. Rotter

DY 21 09:30 — 11:45 C 264
Complex Fluids and Colloids II

DY 22 09:30 — 10:00 BH-N 243
Talk H. Hoffmann

DY 23 10:00 — 12:15 EB 107
Quantum Chaos

DY 24 10:00 — 11:00 BH-N 128
Complex Systems

DY 25 10:00 — 13:00 BH-N 243
Statistical Physics II (General)

DY 26 11:00 — 12:30 BH-N 334
Condensed Matter Simulations augmented by Advanced Statistical Methodologies I

DY 27 11:15 — 12:45 BH-N 128
Microfluidics

DY 28 12:30 — 13:15 MA 001
Evolutionary Game Theory (joint SOE/BP/DY)

DY 29 14:00 — 15:45 EB 107
Particulate Matter: From microscopic interactions to collective motion

DY 30 14:00 — 16:00 PC 203
Modeling and Simulation of Soft Matter I

DY 31 14:00 — 15:15 BH-N 128
Condensed Matter Simulations augmented by Advanced Statistical Methodologies II

DY 32 14:00 — 15:45 BH-N 243
Microswimmers I

DY 33 14:00 — 16:00 BH-N 334
Delay and Feedback Dynamics

DY 34 14:00 — 15:15 BH-N 333
Nonlinear Stochastic Systems

Semiconductor Physics Division (HL)

Invited Talks

HL 16.1 09:30 — 10:00 EW 201
Exploring the limits of position measurement with optomechanics
Sergey A. Fedorov, Vivishek Sudhir, Nils J. Engelsen, Ryan Schilling, Hendrik Schütz, Amir H. Ghadimi, Mohammad J. Bereyhi, Dalziel J. Wilson, •Tobias J. Kippenberg

HL 16.2 10:00 — 10:30 EW 201
On-chip integration of superconducting single photon detectors
•Wolfram Pernice

HL 16.5 11:15 — 11:45 EW 201
Integrated III-V nonlinear quantum optical devices
•Gregor Weihs

HL 16.12 14:00 — 14:30 EW 201
Hybrid waveguide platforms for quantum optics
•Michal Bajcsy

HL 17.1 09:30 — 10:00 EW 202
Quantitative Electron Microscopy for III/V on Silicon integration
•Kerstin Volz

HL 17.2 10:00 — 10:30 EW 202
Total Tomography of Nonplanar Heterostructures: Doping and Confinement Pontentials
•Lincoln Lauhon

HL 17.6 11:30 — 12:00 EW 202
Modulating electron beams in space and time to probe for genuine structures and function at the atomic scale
•Christian Kisielowski

HL 17.7 12:00 — 12:30 EW 202
Advanced Nano-scale Characterization of Nitrides using Helium Temperature Scanning Transmission Electron Microscopy Cathodoluminescence
•Gordon Schmidt

HL 17.8 12:30 — 13:00 EW 202
Tip-enhanced Raman spectroscopy in semiconductor nanostructures and graphene
Emanuele Poliani, •Janina Maultzsch

Sessions

HL 14 09:30 — 13:15 H 2032
2D Materials: Session II

HL 15 09:30 — 13:15 EW 015
Focussed Session: Geometry- and Topology-Controlled Nanoarchitectures I

HL 16 09:30 — 15:45 EW 201
Focus Session: Quantum Nanophotonics in Solid State Systems: Status, Challenges and Perspectives I

HL 17 09:30 — 13:00 EW 202
Focussed Session:
Atomic Scale Characterisation

HL 18 09:30 — 12:45 EW 203
Perovskite and Hybrid Photovolatics

HL 19 09:30 — 13:15 A 151
Quantum dots and wires: Transport properties

HL 20 14:00 — 15:45 EW 015
Focussed Session: Geometry- and Topology-Controlled Nanoarchitectures II

HL 21 14:00 — 15:15 EW 202
Photo-voltaics II

HL 22 14:00 — 15:30 EW 203
Nitrides: Preparation and characterisation I

HL 23 14:00 — 15:45 A 151
2D materials: Graphene and BN

HL 24 18:30 — 20:30 Poster F
Poster Session II

Crystalline Solids and their Microstructure Division (KFM)

Invited Talk

KFM 10.1 09:30 — 10:00 EMH 225
Insights into the Inside provided by Coherent X-ray Imaging
•*Tim Salditt*

Sessions

KFM 8 09:30 — 12:15 EB 202
Multiferroics and magnetoelectrics I

KFM 9 09:30 — 13:15 EB 301
Skyrmions II

KFM 10 09:30 — 13:40 EMH 225
Spectroscopy and Microscopy I with X-rays and Ions

KFM 11 10:00 — 11:40 EMH 025
Dielectric, Elastic and Electromechanical Properties

Magnetism Division (MA)

Invited Talks, Topical Talk

MA 17.1 09:35 — 10:20 H 1012
Understanding spin and lattice interactions at ultrafast timescales
•Peter M. Oppeneer

MA 17.3 10:40 — 11:10 H 1012
Spin-Lattice coupling in ultrafast magnetization dynamics
•Bert Koopmans

MA 17.4 11:25 — 11:55 H 1012
The role of spin-lattice interaction in optical control of magnetism
•Alexey Kimel

MA 17.6 12:15 — 12:45 H 1012
Driving magnetization precession by dynamical compressive and shear strain in a low-symmetry metallic film
•Alexandra M. Kalashnikova, Tetiana L. Linnik, Vladimir N. Kats, Jasmin Jaeger, Alexey S. Salasyuk, Dmitri R. Yakovlev, Andrew W. Rushforth, Andrey V. Akimov, Manfred Bayer, Alexey V. Scherbakov

MA 17.7 12:45 — 13:15 H 1012
Ultrafast Thermal Transport in Magnetic Heterostructures
•Richard Wilson, Michael Gomez, Jon Gorchon, Yang Yang, Charles-Henri Lambert, Sayeef Salahuddin, Jeff Bokor

MA 19.8 11:30 — 12:00 EB 301
Composite topological excitations in ferromagnet-superconductor heterostructures
•Kjetil Hals

Sessions

MA 16 09:30 — 12:15 H 0112
Magnetic characterization techniques

MA 17 09:30 — 13:15 H 1012
PhD Symposium: Ultrafast spin-lattice interactions

MA 18 09:30 — 12:15 EB 202
Multiferroics and magnetoelectrics I

MA 19 09:30 — 13:15 EB 301
Skyrmions II

MA 20 09:30 — 12:45 EB 407
Magnetocaloric effects

MA 21 09:30 — 13:00 Poster A
Poster I

MA 22 11:45 — 13:00 H 0106
Focus Session:
Magnetism in Materials Science: Thermodynamics, Kinetics and Defects III

Metal and Material Physics Division (MM)

Invited Talk, Topical Talks

MM 18.1 09:30 — 10:00 TC 006
Hydrogen storage in individual metal nanoparticles
•Andrea Baldi, Tarun Narayan, Fariah Hayee, Ai Leen Koh, Robert Sinclair, Jennifer Dionne

MM 20.1 10:15 — 10:45 H 0107
Sensing Hydrogen with (Single) Nanoparticles
•Christoph Langhammer

MM 21.1 10:15 — 10:45 TC 006
Comparison of interfacial fracture properties in molecular dynamics simulations: A primer on selecting grain boundary sets
•Remi Dingreville, Doruk Aksoy, Douglas Spearot

MM 24.1 11:45 — 12:15 H 0106
Grain boundary migration and grain growth in non-ferromagnetic metals under the impact of a magnetic field
•*Dmitri A. Molodov*

Sessions

MM 18 09:30 — 10:00 TC 006
Invited talk Baldi

MM 19 10:15 — 11:30 H 0106
Battery Materials

MM 20 10:15 — 13:00 H 0107
Topical session (Symposium MM): Hydrogen in Materials

MM 21 10:15 — 11:30 TC 006
Topical Session (Symposium MM): Fundamentals of Fracture

MM 22 10:15 — 11:15 TC 010
Microstructure and Phase Transformations

MM 23 10:30 — 13:00 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials III

MM 24 11:45 — 13:00 H 0106
Topical session (Symposium EPS and MM, joint session with MA): Magnetism in Materials Science: Thermodynamics, Kinetics and Defects

MM 25 11:45 — 13:15 TC 006
Topical Session (Symposium MM): Fundamentals of Fracture

MM 26 11:45 — 13:00 TC 010
Microstructure and Phase Transformations

MM 27 18:30 — 19:45 Poster E
Poster Session I

Surface Science Division (O)

Invited Talks

O 22.1 09:30 — 10:15 HE 101
Metal-organic coordination on surfaces: towards complexity and functionality
•Nian Lin

O 23.1 10:30 — 11:00 MA 004
Electronic properties of functional organic compounds at surfaces: From zero- to two-dimensional
•Petra Tegeder

O 24.1 10:30 — 11:00 MA 005
Modelling Photo-electrochemistry on Oxide Surfaces
•Harald Oberhofer

O 24.5 11:45 — 12:15 MA 005
Potential-Specific Structure at the Hematite-Electrolyte Interface
Martin E. McBriarty, Joanne E. Stubbs, Peter J. Eng, Guido von Rudorff, Jochem Blumberger, •Kevin M. Rosso

O 24.6 12:15 — 12:45 MA 005
Photoelectrochemistry on hematite: a first-principles view
•Anders Hellman

O 27.1 10:30 — 11:00 MA 043
Inside graphene devices
•Clemens Winkelmann, Sayanti Samaddar, Alessandro De Cecco, Hervé Courtois, Indra Yudhistira, Shaffique Adam, Vladimir Prudkovskiy, Claire Berger, Walt de Heer

O 30.1 10:30 — 11:00 HE 101
Recent Progress in Nonlinear Phononics and Josephson Plasmonics
•Andrea Cavalleri

O 30.2 11:00 — 11:30 HE 101
Femtosecond nanoscopy of collective excitations in semiconductors
•Markus A. Huber, Fabian Mooshammer, Markus Plankl, Leonardo Viti, Fabian Sandner, Miriam S. Vitiello, Tyler L. Cocker, Rupert Huber

O 30.3 11:30 — 12:00 HE 101
Boron nitride nanoresonators for phonon-enhanced molecular vibrational spectroscopy at the strong coupling limit
•Marta Autore, Peining Li, Irene Dolado, Francisco J. Alfaro-Mozaz, Ruben Esteban, Ainhoa Atxabal, Fèlix Casanova, Luis E. Hueso, Pablo Alonso-González, Javier Aizpurua, Alexey Y. Nikitin, Saül Vélez, Rainer Hillenbrand

O 30.4 12:00 — 12:30 HE 101
Ballistic surface plasmons in high mobility Dirac liquid of graphene
•Dmitri Basov

O 30.5 12:30 — 13:00 HE 101
Novel Materials and Approaches for Dynamic IR Nano-Optics
•Joshua Caldwell

O 37.1 14:00 — 14:30 MA 141
Unraveling the structure and dynamics at solid-liquid interfaces by machine learning potentials
Matti Hellström, Vanessa Quaranta, •Jörg Behler

Sessions

O 22 09:30 — 10:15 HE 101
Overview Talk: Nian Lin

O 23 10:30 — 13:00 MA 004
Focus Session: Molecular Nanostructures on surfaces – New Concepts towards Complex Architectures II

O 24 10:30 — 13:15 MA 005
Focus Session: Structure and Chemistry of Metal-Oxide Surfaces I

O 25 10:30 — 13:00 MA 041
Plasmonics and nanooptics: Light-matter interaction, spectroscopy II

O 26 10:30 — 13:00 MA 042
Organic-inorganic hybrid systems and organic films III

O 27 10:30 — 13:15 MA 043
Graphene: Electronic properties, structure and substrate interaction II

O 28 10:30 — 13:15 MA 141
Electronic Structure Theory: General I

O 29 10:30 — 13:15 MA 144
Metallic nanowires on semiconductor surfaces

O 30 10:30 — 13:00 HE 101
Focus Session: Phonon Polaritons: Opportunities for THz Nanooptics I

O 31 10:30 — 13:00 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials III

O 32 14:00 — 15:30 MA 004
Electronic structure of surfaces: Spectroscopy, surface states I

O 33 14:00 — 15:15 MA 005
Semiconductor substrates: Structure, epitaxy and growth

O 34 14:00 — 15:30 MA 041
Plasmonics and nanooptics: Light-matter interaction, spectroscopy III

O 35 14:00 — 15:45 MA 042
Organic-inorganic hybrid systems and organic films IV

O 36 14:00 — 16:00 MA 043
2D materials beyond graphene: TMDCs, silicene and relatives I

O 37 14:00 — 16:15 MA 141
Electronic-Structure Theory: General II

O 38 14:00 — 15:45 MA 144
Metal substrates: Adsorption of atoms and inorganic molecules

O 39 14:00 — 15:30 HE 101
Focus Session: Phonon Polaritons: Opportunities for THz Nanooptics II

O 40 15:15 — 15:45 MA 005
Semiconductor substrates: Adsorption

O 41 18:15 — 20:30 Poster A
Poster: Metal Substrates – Structure, Epitaxy, Growth and Adsorption

O 42 18:15 — 20:30 Poster A
Poster: Organic-Inorganic Hybrid Systems and Organic Films

O 43 18:15 — 20:30 Poster A
Poster: Semiconductor Substrates – Adsorption

O 44 18:15 — 20:30 Poster A
Poster: Oxide and Insulator surfaces: Structure, Epitaxy, Growth and Adsorption

O 45 18:15 — 20:30 Poster A
Poster: Solid-Liquid Interfaces – Structure, Spectroscopy, Reactions and Electrochemistry

O 46 18:15 — 20:30 Poster A
Poster: Molecular Films – Photovoltaics, Electronics and Morphology

O 47 18:15 — 20:30 Poster A
Poster: Graphene – Electronic Properties, Structure, Adsorption, Intercalation and Doping

O 48 18:15 — 20:30 Poster A
Poster: 2D Materials beyond Graphene: TMDCs, Silicene and Relatives

O 49 18:15 — 20:30 Poster A
Poster: Nanostructures on Surfaces I

O 50 18:15 — 20:30 Poster B
Poster: Nanostructures on Surfaces II

O 51 18:15 — 20:30 Poster B
Poster: Electronic Structure of Surfaces: Spectroscopy, Surface States

O 52 18:15 — 20:30 Poster B
Poster: Electronic structure: Surface Magnetism and Spin Phenomena

Physics of Socio-economic Systems Division (SOE)

Invited Talk

SOE 8.1 09:30 — 10:15 MA 001
Estimation of Agent-Based Models using Sequential Monte Carlo Methods
•*Thomas Lux*

Sessions

SOE 8 09:30 — 10:15 MA 001
Monte Carlo Methods in Financial Market Modeling (Invited Talk Thomas Lux)

SOE 9 10:15 — 11:30 MA 001
Economic Models II

SOE 10 11:30 — 12:30 MA 001
Financial Markets and Risk Management II

SOE 11 12:30 — 13:15 MA 001
Evolutionary Game Theory

SOE 12 14:00 — 15:45 MA 001
Focus Session: Opinion Formation and Voter Models

Low Temperature Physics Division (TT)

Invited Talks

TT 32.1 09:30 — 10:00 H 0104
Spin-Triplet Superconductivity in the Ruthenate
•*Yoshiteru Maeno*

TT 32.2 10:00 — 10:30 H 0104
Paths Towards Chiral d-wave Superconductivity
•*Ronny Thomale*

TT 32.3 10:30 — 11:00 H 0104
Towards the Design of Majorana Bound States in Artificially Constructed Magnetic Atom Chains on Elemental Superconductors
•*Roland Wiesendanger*

TT 32.4 11:15 — 11:45 H 0104
Design of Majorana Modes: From Magnetic Skyrmions to Dimensional Tuning
•Dirk Morr

TT 32.5 11:45 — 12:15 H 0104
Experimental Hints of Topological Superconductivity in Hybrid Ferromagnet-Superconductor Systems
Gerbold Ménard, Sébastien Guissart, Christophe Brun, Raphaël Leriche, Mircea Trif, François Debontridder, Dominique Demaille, Dimitri Roditchev, Pascal Simon, •Tristan Cren

TT 34.1 09:30 — 10:00 H 2053
Non-Equilibrium Spin- and Charge Transport Phenomena in Superconductor-Ferromagnet Hybrid Structures
•Torsten Pietsch

Sessions

TT 32 09:30 — 12:45 H 0104
Focus Session: Chiral Topological Superconductors and Majorana Fermions

TT 33 09:30 — 11:30 H 0110
Nanotubes and Nanoribbons

TT 34 09:30 — 13:00 H 2053
Superconductivity: Tunneling and Josephson Junctions

TT 35 09:30 — 13:00 A 053
Superconductivity: Fe-based Superconductors – 122 and Theory

TT 36 09:30 — 12:15 HFT-FT 101
Correlated Electrons: 1D Theory

TT 37 09:30 — 13:15 EB 301
Skyrmions II

TT 38 09:30 — 12:45 EB 407
Magnetocaloric Effects

TT 39 09:30 — 15:45 EW 201
Focus Session: Quantum Nanophotonics in Solid State Systems I

TT 40 10:00 — 13:00 H 3010
Dual-Method Approaches to Quantum Many-Body Systems II

TT 41 10:15 — 13:00 H 3005
Frustrated Magnets – Spin Liquids – Experiments

TT 42 10:15 — 13:00 HFT-FT 131
Charge Order

TT 43 10:30 — 13:15 MA 043
Graphene: Electronic Properties, Structure and Substrate Interaction II

TT 44 10:30 — 13:00 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials III

TT 45 11:45 — 13:00 H 0110
Nano- and Optomechanics

TT 46 18:15 — 20:30 Poster A
Poster Session: Graphene

Working Group "Young DPG" (AKjDPG)

Session

AKjDPG 3 09:30 — 13:15 H 1012
PhD Symposium:
Ultrafast spin-lattice interactions

Exhibition of Physical Equipment and Literature

09:00 — 17:00 Foyers EG, EG rechts, 1. OG, Lichthof, Zelt

50 years of EPS

14:00 — 16:00 H 0104

Wednesday, March 14, 2018

Plenary talks (PLV)

Plenary Talks

PLV VII 08:30 — 09:15 H 0105
Nanoscale thermal imaging of dissipation in quantum systems
•Eli Zeldov

PLV VIII 14:00 — 14:45 H 0105
Quantum photonics using van der Waals heterostructures
•Atac Imamoglu

PLV IX 14:00 — 14:45 H 0104
Hairy Hydrodynamics
•Anette Hosoi

Prize Talks (PRV)

Prize Talk

PRV III 13:15 — 13:45 H 0105
Ultrafast transmission electron microscopy
•Sascha Schäfer
(Laureate of the Walter-Schottky-Prize 2018)

Plenary Special Talks (PSV)

Lunch Talks

PSV V 13:15 — 13:45 HE 101
Physics meets optical manufacturing
•Ulrike Fuchs

PSV VI 13:15 — 13:45 H 0104
The German Research Foundation – overview and international programmes
•Cosima Schuster

Symposium Topology in Condensed Matter Physics (SYTO)

Invited Talks

SYTO 1.1 09:30 — 10:00 H 0105
Beyond Topologically Ordered States: Insights from Entanglement
•B. Andrei Bernevig

SYTO 1.2 10:00 — 10:30 H 0105
Topological Magnon Materials
Alexander Mook, Jürgen Henk, •Ingrid Mertig

SYTO 1.3 10:30 — 11:00 H 0105
Topological Order of Interacting Polymers on a Substrate
•Vincenzo Vitelli

SYTO 1.4 11:15 — 11:45 H 0105
Quantization of Heat Flow in Fractional Quantum Hall States
•Moty Heiblum

SYTO 1.5 11:45 — 12:15 H 0105
Currents and Phases in Quantum Rings
•Kathryn Moler

Session

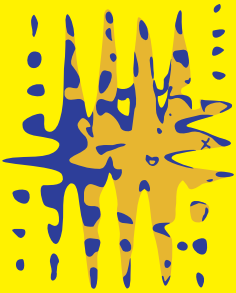
SYTO 1 09:30 — 12:15 H 0105
Topology in Condensed Matter Physics

Symposium Voltage Control of Functional Interfaces: Magneto-ionic Meet Memristive Systems (SYVC)

Invited Talks

SYVC 1.1 15:00 — 15:30 H 0105
Magneto-ionic control of interfacial magnetism
•Geoffrey Beach

SYVC 1.2 15:30 — 16:00 H 0105
Ionic Control of Materials Beyond Interfaces
•Dustin Gilbert



22. DEUTSCHE PHYSIKERINNENTAGUNG

27. – 30.09.2018, Oldenburg

Symposium „Topologie in der Physik – von Skyrmionen bis hin zu Schwarzen Löchern“

Vorträge der Gustav-Hertz-Preisträgerin Lavinia Heisenberg und der Hertha-Sponer-Preisträgerin Karin Everschor-Sitte

Wissenschaftliche Vorträge und Postersitzung

Laborführungen

Veranstaltungen zu Berufs- und Karriereplanung und zur Vereinbarkeit von Familie und Beruf

Kostenlose Kinderbetreuung

SchülerInnenprogramm

Rahmenprogramm mit Stadtführung

Weitere Infos folgen unter
www.physikerinnentagung.de

DPG

SYVC 1.3 16:00 — 16:30 H 0105
Microscopic Mechanisms of Memristive Switching in Metal Oxides
•Rainer Waser, Stephan Menzel, Regina Dittmann

SYVC 1.4 17:00 — 17:30 H 0105
In-situ and operando SQUID magnetometry under electrochemical control
•Roland Würschum, Markus Gößler, Gregor Klinser, Eva-Maria Steyskal, Heinz Krenn

SYVC 1.5 17:30 — 18:00 H 0105
Reversible chemistry as a tool for dynamic control of physical properties
•Robert Kruk, Subho Dasgupta, Bijoy Das, Horst Hahn

Session

SYVC 1 15:00 — 18:00 H 0105
SYVC: Voltage Control of Functional Interfaces – Magneto-ionic Meet Memristive Systems

Biological Physics Division (BP)

Invited Talks

BP 16.7 11:15 — 11:45 H 1028
Computer simulation of collective phenomena that alter the topology of membranes
•Marcus Müller

BP 17.5 10:30 — 11:00 H 1058
Tension build-up and membrane deformations in actin-membrane biomimetic systems
•Cécile Sykes

BP 18.1 09:30 — 10:00 H 2013
Dynamics of cellular metabolism, size, and motility
•Sander Tans

BP 21.1 15:00 — 15:30 H 1028
Emergent Dynamics of Active Particles
•Roland G. Winkler

BP 22.4 15:45 — 16:15 H 1058
Complex shapes and dynamics of red blood cells in shear flow under physiological conditions
Johannes Mauer, Simon Mendez, Luca Lanotte, Manouk Abkarian, Gerhard Gompper, •Dmitry A. Fedosov

BP 23.6 16:15 — 16:45 H 2013
Illuminating physical cues for the early embryogenesis of a simple model organism
•Matthias Weiss

Sessions

BP 16 09:30 — 13:00 H 1028
Membranes and Vesicles I

BP 17 09:30 — 13:00 H 1058
Cell Mechanics I

BP 18 09:30 — 13:00 H 2013
Focus Session: Physics of Microbial Systems – organised by Tobias Bollenbach and Benedikt Sabass

BP 19 09:30 — 12:15 MA 001
Networks

BP 20 10:00 — 13:30 BH-N 333
Statistical Physics of Biological Systems DY

BP 21 15:00 — 17:30 H 1028
Microswimmers

BP 22 15:00 — 17:30 H 1058
Computational Biophysics II

BP 23 15:00 — 17:15 H 2013
Bioimaging and Biopspectroscopy II

BP 24 15:00 — 16:30 PC 203
Bioinspired Functional Materials, Biomaterials and Biopolymers

BP 25 15:30 — 18:45 BH-N 243
Active Matter DY III

BP 26 18:00 — 19:00 H 1028
Annual General Meeting of the BP Division (BP Mitgliederversammlung)

Chemical and Polymer Physics Division (CPP)

Invited Talks, Topical Talks

CPP 37.1 09:30 — 10:00 C 130
Enzyme-functionalized polymer microgels for drug building block synthesis
•Julian Thiele

CPP 37.5 11:00 — 11:30 C 130
Microgel-functionalized membranes
•Matthias Wessling

CPP 38.1 09:30 — 10:00 C 230
The favorite polymer libations
•Carlos M. Marques, Debashish Mukherji, Kurt Kremer

CPP 39.1 09:30 — 10:00 C 243
Charge generation and recombination in an organic BHJ solar cell with low energetic offsets
•Thuc-Quyen Nguyen

CPP 40.1 09:30 — 10:00 C 264
Slippage over superhydrophobic surfaces: fundamentals and local phenomena
•Clarissa Schönecker, David Schäffel, Kaloian Koynov, Doris Vollmer, Hans-Jürgen Butt

CPP 45.1 11:00 — 11:30 C 243
Double-Semidilute Liquid and Gel Coacervates formed by Oppositely Charged Polyelectrolytes
•Michael Rubinstein, Sergey Panyukov, Qi Liao

CPP 48.1 15:00 — 15:30 C 130
Long lifetimes and small phonon energies in metal-halide perovskite solar cells
•Thomas Kirchartz, David Egger, Uwe Rau

Sessions

CPP 37 09:30 — 13:00 C 130
Focus: Smart Hydrogels and Hydrogel Based Devices II – organised by Gerald Gerlach, Walter Richtering and Thomas Hellweg

CPP 38 09:30 — 12:00 C 230
Modeling and Simulation of Soft Matter II

CPP 39 09:30 — 10:45 C 243
Organic Photovoltaics II

CPP 40 09:30 — 13:00 C 264
Wetting, Microfluidics and Confined Liquids I

CPP 41 09:30 — 12:15 MA 001
Networks (joint session SOE/DY/BP)

CPP 42 09:30 — 12:30 EMH 025
Materials for Energy Storage I

CPP 43 09:30 — 13:00 H 1028
Membranes and Vesicles I

CPP 44 10:30 — 13:00 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials IV

CPP 45 11:00 — 13:00 C 243
Charged Soft Matter, Polyelectrolytes and Ionic Liquids I

CPP 46 11:00 — 13:00 Poster A
Poster Session IV

CPP 47 12:00 — 13:00 C 230
Electrical, Dielectrical and Optical Properties of Thin Films II

CPP 48 15:00 — 17:45 C 130
Focus: Fundamental Physics of Perovskites I – organised by Lukas Schmidt-Mende and Vladimir Dyakonov

CPP 49 15:00 — 17:45 C 230
Soft Matter Physics: Emerging Topics, New Instruments and Methods

CPP 50 15:00 — 17:15 C 243
Charged Soft Matter, Polyelectrolytes and Ionic Liquids II

CPP 51 15:00 — 17:00 C 264
Hydrogels and Microgels

CPP 52 15:00 — 16:30 PC 203
Bioinspired Functional Materials, Biomaterials and Biopolymers

CPP 53 15:00 — 16:15 MA 144
Solid-liquid interfaces: Reactions and electrochemisty III

CPP 54 15:00 — 17:30 H 1028
Microswimmers

CPP 55 15:00 — 17:45 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials V

CPP 56 15:00 — 17:50 EMH 025
Materials for Energy Storage II

CPP 57 15:30 — 18:45 BH-N 243
Active Matter

CPP 58 16:00 — 18:15 H 0111
Organic Thin Films, Organic-Inorganic Interfaces: Session I

CPP 59 16:45 — 18:00 MA 144
Solid-liquid interfaces: Reactions and electrochemisty IV

CPP 60 17:00 — 17:30 C 264
Polymer and Molecular Dynamics I

Thin Films Division (DS)

Invited Talks

DS 18.1 09:30 — 10:00 H 0111
Infrared nanopolarimetric analysis of structure and anisotropy of thin films
•Karsten Hinrichs, Timur Shaykhutdinov

DS 19.1 09:30 — 10:00 H 2032
3D direct-write nanofabrication using an electron beam
•Jason Fowlkes, Robert Winkler, Eva Mutunga, Brett Lewis, Harald Plank, Philip Rack

DS 19.2 10:00 — 10:30 H 2032
Nanosuperconductivity with Focused Particle Beam Induced Deposition structures
•Rosa Córdoba, Javier Sesé, José María De Teresa

DS 19.3 10:30 — 11:00 H 2032
Chemistry for ELectron-Induced NAnofabrication
•Petra Swiderek

DS 19.4 11:00 — 11:30 H 2032
The direct electron beam writing of plasmonic nanostructures
•Katja Höflich

DS 25.1 16:00 — 16:30 H 0111
Prospects of Engineering Chemistry and Electronic Character of Interfaces in Multifunctional (Bio)Organic-Inorganic Hybrids
•Maria Losurdo

Sessions

DS 18 09:30 — 13:00 H 0111
Optical Analysis of Thin Films (Reflection, Ellipsometry, Raman, IR-DUV Spectroscopy, ...): Session I

DS 19 09:30 — 13:00 H 2032
Lithography I: Focused Electron Beam Induced Processing: 3D Nano-Printing for Material Science (Focus Session): Morning Session

DS 20 09:30 — 13:15 A 151
2D materials: Chalcogenides I

DS 21 10:30 — 13:00 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials IV

DS 22 15:00 — 15:45 H 0111
Optical Analysis of Thin Films (Reflection, Ellipsometry, Raman, IR-DUV Spectroscopy, ...): Session II

DS 23 15:00 — 18:00 H 2032
Lithography II: Focused Electron Beam Induced Processing: 3D Nano-Printing for Material Science (Focussed Session): Afternoon Session

DS 24 15:00 — 17:45 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials V

DS 25 16:00 — 18:15 H 0111
Organic Thin Films, Organic-Inorganic Interfaces: Session I

DS 26 18:30 — 19:30 H 0111
Annual General Meeting of the Thin Films Division

Dynamics and Statistical Physics Division (DY)

Invited Talks

DY 36.1 09:30 — 10:00 EB 107
Computing quantum thermalization dynamics: from quantum chaos to emergent hydrodynamics
•*Ehud Altman*

DY 36.6 11:15 — 11:45 EB 107
Quantum Thermalization Dynamics: From Information Scrambling to Emergent Hydrodynamics
•*Michael Knap*

DY 40.1 09:30 — 10:00 BH-N 243
Measurement of the functional form of Shannon entropy by partial erasure of a bit
•*John Bechhoefer, Momčilo Gavrilov, Raphaël Chétrite*

DY 41.1 09:30 — 10:00 BH-N 334
From bifurcations of single sliding drops to their ensemble statistics
•*Uwe Thiele*

DY 44.1 10:00 — 10:30 BH-N 334
Self-organisation and positioning of sub-cellular protein clusters
•*Sean M. Murray*

DY 44.5 11:30 — 12:00 BH-N 334
Spatial heterogeneities shape collective behavior of the signaling amoeboid cells
•*Azam Gholami*

DY 48.1 15:00 — 15:30 MA 001
Network structure and dynamics: when and how multiplex really matters?
•Vito Latora

DY 49.1 15:00 — 15:30 BH-N 334
Nanorod fractionation via lyotropic liquid crystal formation, and its effect on phase diagram and gelation
Camila Honorato-Rios, Claudius Lehr, Christina Schütz, Roland Sanctuary, Mikhail Osipov, Jörg Baller, •Jan Lagerwall

Sessions

DY 35 09:30 — 13:00 H 3010
Nonequilibrium Quantum Many-Body Systems I

DY 36 09:30 — 12:15 EB 107
Focus: Chaos and Correlation in Quantum Matter

DY 37 09:30 — 12:15 MA 001
Networks: From Topology to Dynamics (joint session SOE/DY/BP)

DY 38 09:30 — 12:00 C 230
Modeling and Simulation of Soft Matter II

DY 39 09:30 — 13:00 C 264
Wetting, Microfluidics and Confined Liquids I

DY 40 09:30 — 10:00 BH-N 243
Talk J. Bechhoefer

DY 41 09:30 — 10:00 BH-N 334
Talk U. Thiele

DY 42 10:00 — 12:45 BH-N 128
Turbulence

DY 43 10:00 — 13:45 BH-N 243
Stochastic thermodynamics and information processing

DY 44 10:00 — 13:00 BH-N 334
Pattern Formation I

DY 45 10:00 — 13:30 BH-N 333
Statistical Physics in Biological Systems

DY 46 15:00 — 17:30 H 1028
Microswimmers

DY 47 15:00 — 18:30 H 3010
Nonequilibrium Quantum Many-Body Systems II

DY 48 15:00 — 15:30 MA 001
Talk V. Latora

DY 49 15:00 — 15:30 BH-N 334
Talk J. Lagerwall

DY 50 15:30 — 18:15 EB 107
Quantum Dynamics, Decoherence and Quantum Information

DY 51 15:30 — 18:00 MA 001
Networks: From Topology to Dynamics

DY 52 15:30 — 18:45 BH-N 243
Active Matter III

DY 53 15:30 — 19:15 BH-N 334
Complex Fluids and Soft Matter (joint session DY/ CPP / BP)

Semiconductor Physics Division (HL)

Invited Talks

HL 25.1 09:30 — 10:00 EW 201
The quantum knitting machine: a quantum dot as device for deterministic production of cluster states of many entangled photons
•*David Gershoni*

HL 25.7 11:30 — 12:00 EW 201
Exploiting the Bright and the Dark Side of Deterministic Solid-State Quantum-Light Sources
•*Tobias Heindel*

HL 29.1 15:00 — 15:30 EW 201
Device Applications of Metafilms and Metasurfaces
•*Mark Brongersma*

HL 29.2 15:30 — 16:00 EW 201
Harmonic generation and photon management at the nanoscale in AlGaAs nanoantennas
•Costantino De Angelis, Dragomir Neshev, Luca Carletti, Lavinia Ghirardini, Davide Rocco, Valerio Gili, Giovanni Pellegrini, Marco Finazzi, Andrea Locatelli, Ivan Favero, Giuseppe Marino, Michele Celebrano, Giuseppe Leo

HL 29.5 17:00 — 17:30 EW 201
Meta-optics and functional metasurfaces driven by Mie resonances
•Yuri Kivshar

HL 29.6 17:30 — 18:00 EW 201
Nonlinear Metasurface Holography
•Thomas Zentgraf

Sessions

HL 25 09:30 — 13:15 EW 201
Focussed Session: Quantum Nanophotonics in Solid State Systems: Status, Challenges and Perspectives II

HL 26 09:30 — 13:00 EW 202
Ultra-fast phenomena

HL 27 09:30 — 13:00 EW 203
Nitrides: Preparation and characterization II

HL 28 09:30 — 13:15 A 151
2D materials: Chalcogenides I

HL 29 15:00 — 18:30 EW 201
Focussed Session: Metasurfaces I

HL 30 15:00 — 17:30 EW 202
Heterostructures, interfaces, and surfaces

HL 31 15:00 — 17:30 EW 203
Quantum information systems

HL 32 15:00 — 17:30 A 151
Quantum dots and wires: Optical properties II

HL 33 17:30 — 19:30 Poster F
Poster Session III

Crystalline Solids and their Microstructure Division (KFM)

Invited Talks

KFM 13.1 09:30 — 10:00 E 020
Advanced Cell Adhesion of Modified Ultrananocrystalline Diamond Surfaces
•*Cyril Popov*

KFM 13.5 11:20 — 11:50 E 020
CVD diamond for high power electronic devices
•*Verena Zürbig*

KFM 14.1 09:30 — 10:00 EMH 025
Resource-efficient dielectric materials for short-time energy storage
•*Stephan Krohns*

KFM 14.7 12:00 — 12:30 EMH 025
Dielectric Polymer Nanocomposites for Electrical Energy Storage
•*Qing Wang*

KFM 15.1 09:30 — 10:00 EMH 225
Oxygen vacancy controlled functionalities at interfaces of multiferroic tunnel junctions.
•*Jacobo Santamaria*

KFM 18.1 15:00 — 15:30 E 124
Application of Diamond Technology to Microwave Systems in Nuclear Fusions Machines
•*Giovanni Grossetti, Gaetano Aiello, Francesco Mazzocchi, Andreas Meier, Sabine Schreck, Peter Spaeh, Dirk Strauss, Theo Scherer*

KFM 19.1 15:00 — 15:30 EMH 025
Electrical double layer capacitors, Insights from fundamental research and their impact on storage devices
•*Gudrun Reichenauer*

KFM 20.1 15:00 — 15:30 EMH 225
Merging Nonlinear Optics and Multiferroic Heterostructure Design
•*Manfred Fiebig*

Sessions

KFM 12 09:30 — 12:00 EB 202
Multiferroics and magnetoelectrics II

KFM 13 09:30 — 12:50 E 020
Diamond I

KFM 14 09:30 — 12:30 EMH 025
Materials for Energy Storage I

KFM 15 09:30 — 12:45 EMH 225
Multiferroic Oxide Thin Films and Heterostructures I

KFM 16 09:30 — 13:00 H 2032
Lithography I: Focused Electron Beam Induced Processing: 3D Nano-Printing for Material Science (Focussed Session): Morning Session

KFM 17 15:00 — 18:30 EB 301
Skyrmions III

KFM 18 15:00 — 17:30 E 124
Diamond II + Poster

KFM 19 15:00 — 17:50 EMH 025
Materials for Energy Storage II

KFM 20 15:00 — 18:15 EMH 225
Multiferroic Oxide Thin Films and Heterostructures II

KFM 21 15:00 — 18:00 H 2032
Lithography II: Focused Electron Beam Induced Processing: 3D Nano-Printing for Material Science (Focussed Session): Afternoon Session

KFM 22 18:30 — 19:00 EMH 025
Annual General Meeting of the KFM Division

Magnetism Division (MA)

Invited Talks, Topical Talk

MA 24.1 09:30 — 10:00 H 1012
Control of Mesoscopic Magnetism for Computation
•Laura Heyderman

MA 24.3 10:15 — 10:45 H 1012
Spin waves for unconventional computing and data processing
•*Philipp Pirro, Thomas Brächer, Andrii Chumak*

MA 24.4 11:00 — 11:30 H 1012
p-bits, p-transistors and p-circuits
•*Kerem Camsari*

MA 24.6 11:45 — 12:15 H 1012
Bits and Brains: New materials and brain-inspired concepts for low energy information processing
•*Theo Rasing*

MA 31.1 15:00 — 15:30 H 0110
Magnonics, Quo Vadis?
•*Volodymyr Kruglyak*

Sessions

MA 23 09:30 — 12:30 H 0112
Non-ultrafast magnetization dynamics

MA 24 09:30 — 12:15 H 1012
Focus Session: Exploiting spintronics for unconventional computing

MA 25 09:30 — 12:00 EB 202
Multiferroics and magnetoelectrics II

MA 26 09:30 — 12:15 EB 301
Thin films – coupling effects

MA 27 09:30 — 12:45 EB 407
Spin currents and spin torques

MA 28 09:30 — 12:45 EMH 225
Multiferroic Oxide Thin Films and Heterostructures I

MA 29 11:45 — 13:00 A 053
Topological Insulators I

MA 30 15:00 — 17:45 H 0104
Focus Session: Topological Defects in Superconductors and Magnets

MA 31 15:00 — 18:15 H 0110
Magnonics I

MA 32 15:00 — 16:45 H 0112
Micromagnetism and computational magnetics

MA 33 15:00 — 18:00 H 1012
Biomedical and molecular magnetism

MA 34 15:00 — 17:00 EB 202
Spintronics

MA 35 15:00 — 18:30 EB 301
Skyrmions III

MA 36 15:00 — 18:15 EB 407
Topological insulators and Weyl semimetals

MA 37 15:00 — 18:15 EMH 225
Multiferroic Oxide Thin Films and Heterostructures II

Metal and Material Physics Division (MM)

Invited Talk, Topical Talks

MM 28.1 09:30 — 10:00 TC 006
Accurate and fast machine learning n-body force fields
Aldo Glielmo, Claudio Zeni, James Kermode, •Alessandro De Vita

MM 31.1 10:15 — 10:45 TC 006
Multiscale QM/MM Modelling of Materials Chemomechanics
•James Kermode

MM 40.1 15:15 — 15:45 TC 006
Novel high-entropy carbides discovered by synthesizability descriptors
•Stefano Curtarolo

MM 44.1 17:00 — 17:30 H 0107
Atomistic plasticity mechanisms in metallic glass thin films: new insights from advanced transmission electron microscopy
•Hosni Idrissi, Matteo Ghidelli, Sebastien Gravier, Jean-Jacques Blandin, Jean-Pierre Raskin, Dominique Schryvers, Thomas Pardoen

MM 45.1 17:00 — 17:30 TC 006

Fracture Tougness of Tungsten Alloys

•Reinhard Pippan, Vladica Nicolic, Manuel Pfeifenberger, Daniel Scheiber, Lorenz Romaner, Daniel Firneis

Sessions

MM 28 09:30 — 10:00 TC 006

Invited talk De Vita

MM 29 10:15 — 11:15 H 0106

Nanomaterials

MM 30 10:15 — 11:30 H 0107

Interfaces

MM 31 10:15 — 11:30 TC 006

Topical session (Symposium MM): Fundamentals of Fracture

MM 32 10:15 — 11:15 TC 010

Microstructure and Phase Transformations

MM 33 10:30 — 13:00 HL 001

Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials IV

MM 34 11:45 — 12:45 H 0106

Nanomaterials

MM 35 11:45 — 13:00 H 0107

Interfaces

MM 36 11:45 — 13:00 TC 006

Topical Session (Symposium MM): Fundamentals of Fracture

MM 37 11:45 — 13:00 TC 010

Microstructure and Phase Transformations

MM 38 15:15 — 16:15 H 0106

Nanomaterials

MM 39 15:15 — 16:45 H 0107

Topical session (Symposium EPS and MM): Mechanical Properties at Small Scales

MM 40 15:15 — 16:45 TC 006
Topical Session (Symposium MM): Big Data in Materials Science - Managing and exploiting the raw material of the 21st century

MM 41 15:15 — 16:45 TC 010
Liquid and Amorphous Metals

MM 42 15:00 — 17:45 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials V

MM 43 17:00 — 18:00 H 0106
Nanomaterials

MM 44 17:00 — 18:15 H 0107
Topical Session (Symposium EPS and MM): Mechanical Properties at Small Scales

MM 45 17:00 — 18:30 TC 006
Topical Session (Symposium MM): Fundamentals of Fracture

MM 46 17:00 — 18:30 TC 010
Liquid and Amorphous Metals

MM 47 18:30 — 19:45 Poster C
Poster Session II

MM 48 19:45 — 20:45 TC 006
General Assembly of the Metal- and Materials Division

Surface Science Division (O)

Invited Talks

O 53.1 09:30 — 10:15 HE 101
Elementary steps in surface dynamics and reactivity at electrochemical interfaces
•Olaf Magnussen

O 54.1 10:30 — 11:00 MA 004
Molecularly functionalized surfaces and interfaces
•Adam Foster

O 55.8 12:15 — 12:45 MA 005
Growth and surface chemistry of rutile IrO2(110)
•*Jason Weaver*

O 57.1 10:30 — 11:00 MA 042
Hydrogen Atom Adsorption on Surfaces Studied in Inelastic Scattering Experiments
•*Oliver Buenermann*

O 61.1 10:30 — 11:00 HE 101
Bias-dependent local structure of water molecules at a metallic interface
•*Maria Victoria Fernandez-Serra*

O 61.2 11:00 — 11:30 HE 101
Optical imaging of surface chemistry and dynamics in confinement
•*Sylvie Roke*

O 61.5 12:00 — 12:30 HE 101
Charge Transfer at the Single Molecule Level with Metal and Semiconductor Electrodes
•*Richard Nichols, Andrea Vezzoli, Richard Brooke, Nicolò Ferri, Simon Higgins, Walther Schwarzacher*

O 62.1 10:30 — 11:00 HL 001
Correlating electrons via adiabatic connection approach: a general formalism, approximations, and applications
•*Katarzyna Pernal*

O 65.3 15:30 — 16:00 MA 005
Bulk-terminated surfaces of $KTaO_3$ and $SrTiO_3$ studied by combined STM/AFM
•*Martin Setvin*

O 67.1 15:00 — 15:30 MA 042
Ultrafast dynamics of two-dimensional electron systems probed by time- and angle-resolved two-photon photo\-emission
•*Jens Güdde*

O 71.3 15:30 — 16:00 HE 101
XPS of ionic liquids: from half-cell to in situ electrochemical measurements
•*Annette Foelske-Schmitz, Markus Sauer, Daniel Weingarth, Rüdiger Kötz*

O 71.4 16:15 — 16:45 HE 101
Single-Molecule Switching in 2D Materials at Solid-Liquid Interfaces
•Stijn F. L. Mertens

O 72.1 15:00 — 15:30 HL 001
Computational Approach to the Electronic Structure of Strongly Correlated Materials: Towards Theoretical Spectroscopy and Theory Assisted Material Design
•Gabriel Kotliar

Sessions

O 53 09:30 — 10:15 HE 101
Overview Talk: Olaf Magnussen

O 54 10:30 — 13:00 MA 004
Focus Session: Molecular Nanostructures on surfaces – New Concepts towards Complex Architectures III

O 55 10:30 — 13:00 MA 005
Focus Session: Structure and Chemistry of Metal-Oxide Surfaces II

O 56 10:30 — 11:45 MA 041
Plasmonics and nanooptics: Light-matter interaction, spectroscopy IV

O 57 10:30 — 12:45 MA 042
Electronic structure of surfaces: Spectroscopy, surface states II

O 58 10:30 — 13:00 MA 043
2D materials beyond graphene: TMDCs, silicene and relatives II

O 59 10:30 — 13:00 MA 141
Nanostructures at surfaces: 1D and 2D structures and networks I

O 60 10:30 — 11:45 MA 144
Solid-liquid interfaces: Structure, Spectroscopy II

O 61 10:30 — 13:00 HE 101
Focus Session: Nanoscale Insights into Interfacial Electrochemistry I

O 62 10:30 — 13:00 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials IV

O 63 12:00 — 13:00 MA 041
Plasmonics and nanooptics: Applications and other aspects I

O 64 15:00 — 18:15 MA 004
Focus Session: Molecular Nanostructures on surfaces – New Concepts towards Complex Architectures IV

O 65 15:00 — 16:45 MA 005
Focus Session: Structure and Chemistry of Metal-Oxide Surfaces III

O 66 15:00 — 17:45 MA 041
Plasmonics and nanooptics: Applications and other aspects II

O 67 15:00 — 18:00 MA 042
Electronic structure of surfaces: Spectroscopy, surface states III

O 68 15:00 — 16:30 MA 043
Surface dynamics: Reactions, elementary processes and phase transitions I

O 69 15:00 — 16:30 MA 141
Nanostructures at surfaces: 1D and 2D structures and networks II

O 70 15:00 — 16:15 MA 144
Solid-liquid interfaces: Reactions and electrochemisty III

O 71 15:00 — 17:15 HE 101
Focus Session: Nanoscale Insights into Interfacial Electrochemistry II

O 72 15:00 — 17:45 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials V

O 73 16:45 — 18:00 MA 043
Surface dynamics: Reactions, elementary processes and phase transitions II

O 74 16:45 — 18:30 MA 141
Nanostructures at surfaces: Other aspects

O 75 16:45 — 18:00 MA 144
Solid-liquid interfaces: Reactions and electrochemisty IV

O 76 17:30 — 18:30 MA 005
Ultrafast Electron and spin dynamics at interfaces III

O 77 18:15 — 20:30 Poster A
Poster: Plasmonics and Nanooptics

O 78 18:15 — 20:30 Poster A
Poster: Surface Dynamics – Reactions, Elementary Processes and Phase Transitions

O 79 18:15 — 20:30 Poster A
Poster: Ultrafast Electron and Spin Dynamics at Interfaces

O 80 18:15 — 20:30 Poster A
Poster: Scanning Probe Techniques – Method Development

O 81 18:15 — 20:30 Poster A
Poster Focus Session: Molecular Nanostructures on Surfaces – New Concepts towards Complex Architectures

O 82 18:15 — 20:30 Poster A
Poster Focus Session: Frontiers of Electronic-Structure Theory – Correlated Electron Materials

O 83 18:15 — 20:30 Poster A
Poster Focus Session: Structural Dynamics in Nanoscale Materials, Probed by Ultrafast Electron Pulses

O 84 18:15 — 20:30 Poster A
Poster Focus Session: Structure and Chemistry of Metal-Oxide Surfaces

O 85 18:15 — 20:30 Poster A
Poster: Tribology and Misc.

Physics of Socio-economic Systems Division (SOE)

Sessions

SOE 13 09:30 — 12:15 MA 001
Networks: From Topology to Dynamics

SOE 14 12:15 — 13:00 MA 001
Annual Member's Assembly

SOE 15 15:00 — 15:30 MA 001
Dynamics in Real-World Multiplex Networks (Invited Talk Vito Latora)

SOE 16 15:30 — 18:00 MA 001
Networks: From Topology to Dynamics

SOE 17 18:15 — 19:00 MA 001
Social Systems, Opinion and Group Dynamics II

Low Temperature Physics Division (TT)

Invited Talks

TT 49.1 09:30 — 10:00 H 2053
Parametric Amplification in Josephson Circuits with Non-Centrosymmetric Nonlinearity
•Alexander Zorin, Marat Khabipov, Judith Felgner, Ralf Dolata

TT 50.8 11:30 — 12:00 H 3005
Critical Phonon Softening Near a Structural Instability at T = 0
•Oliver Stockert

TT 51.1 09:30 — 10:00 H 3010
Electronic Squeezing of Pumped Phonons: Negative U and Transient Superconductivity
•Dante M. Kennes, Eli Y. Wilner, David R. Reichman, Andrew J. Millis

TT 60.1 15:00 — 15:30 H 0104
Stability and Emergent Electrodynamics of Skyrmions
•Christian Pfleiderer

TT 60.2 15:30 — 16:00 H 0104
Optical Manipulation of Single Flux Quanta
•Philippe Tamarat

TT 60.3 16:00 — 16:30 H 0104
Skyrmion Lattices in Random and Ordered Potential Landscapes
•Charles Reichhardt

TT 60.4 16:45 — 17:15 H 0104
Hedgehog Spin-Vortex Crystal Magnetic Order in Superconducting $CaK(Fe_{1-x}M_x)_4As_4$ (M=Co, Ni)
•Anna Böhmer

TT 60.5 17:15 — 17:45 H 0104
Geometric Frustration and Ratchet Effect of Vortices in an Artificial-Spin/Superconductor Hybrid
•Zhi-Li Xiao, Yong-Lei Wang, Xiaoyu Ma, Jing Xu, Boldizsar Janko, Wai-Kwong Kwok

TT 61.1 15:00 — 15:30 H 2053
Quantum Thermodynamics on Superconducting Qubits
•Jukka Pekola, Bayan Karimi, Alberto Ronzani, Jorden Senior, Yu-Cheng Chang, ChiiDong Chen, Joonas Peltonen

TT 62.1 15:00 — 15:30 H 3010
Efficient Simulation of Quantum Thermalization and Dynamics
•Frank Pollmann

Sessions

TT 47 09:30 — 12:45 H 0104
Frustrated Magnets – Iridates and Fe-based Materials

TT 48 09:30 — 12:15 H 1012
Focus Session: Exploiting Spintronics for Unconventional Computing

TT 49 09:30 — 13:00 H 2053
Superconductivity:
Superconducting Electronics I

TT 50 09:30 — 13:00 H 3005
Quantum-Critical Phenomena I

TT 51 09:30 — 13:00 H 3010
Nonequilibrium Quantum Many-Body Systems I

TT 52 09:30 — 13:00 HFT-FT 101
Superconductivity: Fe-based Superconductors - FeSe and LiFeAs

TT 53 09:30 — 11:15 HFT-FT 131
Quantum Impurities and Kondo Physics

TT 54 09:30 — 12:15 EB 107
Focus Session: Chaos and Correlation in Quantum Matter

TT 55 09:30 — 12:45 EMH 225
Multiferroic Oxide Thin Films and Heterostructures I

TT 56 09:30 — 13:15 EW 201
Focus Session: Quantum Nanophotonics in Solid State Systems II

TT 57 10:00 — 11:15 A 053
Topological Semimetals III

TT 58 10:30 — 13:00 HL 001
Frontiers of Electronic-Structure Theory: Correlated Electron Materials IV

TT 59 11:45 — 13:00 A 053
Topological Insulators I

TT 60 15:00 — 17:45 H 0104
Focus Session: Topological Defects in Superconductors and Magnets

TT 61 15:00 — 16:45 H 2053
Superconductivity: Superconducting Electronics II and Cryotechnique

TT 62 15:00 — 18:30 H 3010
Nonequilibrium Quantum Many-Body Systems II

TT 63 15:00 — 16:45 A 053
Topology: Quantum Hall Systems

TT 64 15:00 — 18:15 HFT-FT 101
Frustrated Magnets – α-$RuCl_3$ and Cu-based Materials

TT 65 15:00 — 18:30 HFT-FT 131
Quantum-Critical Phenomena II

TT 66 15:00 — 17:00 EB 202
Spintronics

TT 67 15:00 — 18:30 EB 301
Skyrmions III

TT 68 15:00 — 18:15 EB 407
Topological Insulators and Weyl Semimetals

TT 69 15:00 — 18:15 EMH 225
Multiferroic Oxide Thin Films and Heterostructures II

TT 70 15:00 — 17:45 HL 001
Frontiers of Electronic-Structure Theory: Correlated Electron Materials V

TT 71 15:00 — 17:30 EW 203
Quantum Information Systems

TT 72 15:00 — 19:00 Poster B
Poster Session: Correlated Electrons

TT 73 15:30 — 18:15 EB 107
Quantum Dynamics, Decoherence and Quantum Information

TT 74 16:00 — 18:30 H 3005
Molecular Electronics and Photonics

TT 75 17:00 — 18:30 H 2053
Superconductivity: Mesoscopic Superconductivity and Quantum Circuits

TT 76 17:00 — 18:30 A 053
Topology: Other Topics

Working Group on Equal Opportunities (AKC)

Session

AKC 1 15:00 — 19:00 E 020
Industry Day: One Idea Ahead

Working Group on Industry and Business (AIW)

Session

AIW 1 15:00 — 19:00 E 020
Industry Day: One Idea Ahead

Exhibition of Physical Equipment and Literature

09:00 — 17:00 Foyers EG, EG rechts, 1. OG, Lichthof, Zelt

Job Market

12:00 — 13:00 H 1035
Ritzenhoefer GmbH: „The Art of Transformation“

13:15 — 14:15 H 1035
Forschungszentrum Jülich GmbH:
„Karrierewege in der Physik – Forschungszentrum Jülich!“

14:30 — 15:30 H 1035
McKinsey & Company, Inc.:
„Warum McKinsey?”

Concert

18:00 — 19:00 UdK
„Apollo and Mercurius“
(Premiere of composition by Thomas Hennig for two pianos)

Public Evening Talk (Free Entrance)

PLV X 20:00 — 21:00 Urania
Kollektive Dynamik in Sozialen Systemen: Netzwerke, Emotionen und Big Data
•*Frank Schweitzer*

jDPG Pub Crawl

21:00 New Clocktower at Breitscheidplatz

Working Group "Young DPG" (AKjDPG)

Invited Talks

AKjDPG 5.1 15:00 — 15:30 E 020
Becoming Business Owner – an Example
•*Volker Türck*

AKjDPG 5.2 15:30 — 16:00 E 020
Cameras for the physical experiments of tomorrow
•*Roman Kemmler*

AKjDPG 5.3 16:15 — 16:45 E 020
From physics to adtech
•*Markus Düttmann*

AKjDPG 5.4 16:45 — 17:15 E 020
Medical applications of high power laser diodes
•*Tilmann Trebst*

Sessions

AKjDPG 4 09:30 — 12:40 E 124
Physics for everyone – Outreach activities for young researchers

AKjDPG 5 15:00 — 19:00 E 020
Industry Day: One Idea Ahead

Working Group on Philosophy of Physics (AGPhil)

Session

AGPhil 1 16:30 — 18:00 H 2033
Philosophie der Physik I

Thursday, March 15, 2018

Plenary talks (PLV)

Plenary Talks

PLV XI 08:30 — 09:15 H 0105
Emergent properties and functions of topological magnets
•Yoshinori Tokura

PLV XII 14:00 — 14:45 H 0105
From Atomistic Simulations into the Mouse: Learning how to exploit bacterial adhesives as nanoscale probes to map the mechanical strain of tissue fibers.
•Viola Vogel, Simon Arnoldini, Alessandra Moscaroli, Mamta Chabria, Manuel Hilbert, Samuel Heritig, Roger Schibli, Martin Behe

PLV XIII 14:00 — 14:45 H 0104
A significant raw material of the 21st century
•Claudia Draxl

Prize Talks (PRV)

Prize Talk

PRV IV 13:15 — 13:45 H 0105
Let's twist again – Magnetic Skyrmions
•Karin Everschor-Sitte
(Laureate of the Hertha-Sponer-Prize 2018)

Plenary Special Talks (PSV)

Lunch Talks

PSV VII 13:15 — 13:45 HE 101
Physicists in Consulting
•Rolf Loschek

PSV VIII 13:15 — 13:45 H 0104
Funding Opportunities Provided by the German Academic Exchange Service (DAAD)
•Holger Finken

Symposium 2D Materials (SYDM)

Invited Talks

SYDM 1.1 15:00 — 15:30 H 0105
Bending, pulling, and cutting wrinkled two-dimensional materials
•*Kirill Bolotin*

SYDM 1.2 15:30 — 16:00 H 0105
Ultrafast valley and spin dynamics in single-layer transition metal dichalcogenides
•*Alejandro Molina-Sanchez*

SYDM 1.3 16:00 — 16:30 H 0105
Interlayer excitons in layered semiconductor transition metal dichalcogenides
•*Steffen Michaelis de Vasconcellos*

SYDM 1.4 16:45 — 17:15 H 0105
Exploring exciton physics in liquid-exfoliated 2D materials
•*Claudia Backes*

SYDM 1.5 17:15 — 17:45 H 0105
A Progress Report on Electron Transport in MXenes; A New Family of 2D Materials
•*Michel Barsoum*

Session

SYDM 1 15:00 — 17:45 H 0105
2D Materials

Symposium Terahertz physics: toward probing and controlling of materials on the nanoscale (SYTH)

Invited Talks

SYTH 1.1 09:30 — 10:00 H 0105
Extracting the electrical properties of metal halide perovskite semiconductors using transient terahertz spectroscopy
•*Michael B. Johnston*

SYTH 1.2 10:00 — 10:30 H 0105
THz nanophotonics with 2D materials
•*Miriam SERENA Vitiello*

SYTH 1.3 10:30 — 11:00 H 0105
Nonlinear responses and 2D spectroscopy using THz electric and magnetic fields
•Keith A Nelson

SYTH 1.4 11:15 — 11:45 H 0105
Low energy electrodynamics of correlated spin systems.
•N. Peter Armitage

SYTH 1.5 11:45 — 12:15 H 0105
Lightwave scanning tunneling microscopy of single molecules
Dominik Peller, Tyler L. Cocker, Ping Yu, Rupert Huber, •Jascha Repp

Session

SYTH 1 09:30 — 12:15 H 0105
Terahertz Physics: Toward Probing and Controlling of Materials on the Nanoscale

Biological Physics Division (BP)

Invited Talks

BP 27.1 09:30 — 10:00 H 1028
Size and Mechanical Scaling of Blood Platelets
Aastha Mathur, Sandra Correia, Serge Dmitrieff, Romain Gibeaux, Iana Kalinina, Tooba Quidwai, Jonas Ries, •Francois Nedelec

BP 28.5 10:30 — 11:00 H 1058
Multiplexed Magnetic Tweezers: From DNA Mechanics to Retroviral Integration
•Jan Lipfert, Franziska Kriegel, Willem Vanderlinden, Philipp Walker

BP 29.7 11:15 — 11:45 H 2013
Protein Pattern Formation: Rethinking Nonlinear Dynamics
•Erwin Frey

BP 33.4 15:45 — 16:15 H 1028
Dynamics and instabilities of contractile actin networks in artificial cells
•Kinneret Keren

BP 34.1 15:00 — 15:30 H 1058
How do we learn? Synaptic Plasticity across multiple time scales
•*Wulfram Gerstner*

BP 35.6 16:15 — 16:45 H 2013
Out-of-equilibrium response of soft and biological matter to forces and deformation
•*Claus Heussinger*

Sessions

BP 27 09:30 — 12:45 H 1028
Cell Mechanics II

BP 28 09:30 — 13:00 H 1058
Single Molecule Biophysics

BP 29 09:30 — 13:00 H 2013
Statistical Physics of Biological Systems I

BP 30 09:30 — 13:15 MA 001
Focus Session:
Complex Contagion Phenomena I

BP 31 10:00 — 13:15 BH-N 243
Microswimmers DY II

BP 32 10:00 — 13:15 BH-N 334
Anomalous Diffusion

BP 33 15:00 — 17:15 H 1028
Cytoskeletal Filaments II

BP 34 15:00 — 17:30 H 1058
Neuroscience

BP 35 15:00 — 17:15 H 2013
Statistical Physics of Biological Systems II

Chemical and Polymer Physics Division (CPP)

Invited Talks, Topical Talks

CPP 61.1 09:30 — 10:00 C 130
Approaching the Shockley-Queisser Limit with Interface Control in Halide Perovskites
•*David Ginger*

CPP 61.6 11:15 — 11:45 C 130
Understanding Hysteresis in Perovskite Solar Cells
•Stefan A.L. Weber, Ilka M. Hermes, Niklas M. Budinger, Wolfgang Tress, Anders Hagfeldt, Michael Graetzel, Rüdiger Berger

CPP 69.1 15:00 — 15:30 C 130
Biomimetic functions of hydrophobic-hydrophilic random copolymers
•Monica Olvera de la Cruz, Trung Nguyen, Baofu Qiao, Ting Xu

CPP 69.6 16:45 — 17:15 C 130
Soft matters in one-phase mixed solvents
•Takeaki Araki

CPP 70.1 15:00 — 15:30 C 230
Crystallization in melts of semi-flexible hard polymer chains: An interplay of entropies and dimensions
•Wolfgang Paul, Timur Shakirov

CPP 72.1 15:00 — 15:30 C 264
Ionic (in)homogeneity in metal-halide perovskites
•Eva Unger

Sessions

CPP 61 09:30 — 13:00 C 130
Focus: Fundamental Physics of Perovskites II – organised by Lukas Schmidt-Mende and Vladimir Dyakonov

CPP 62 09:30 — 13:00 C 243
Charged Soft Matter, Polyelectrolytes and Ionic Liquids III

CPP 63 09:30 — 13:00 C 264
Polymer and Molecular Dynamics II

CPP 64 09:30 — 12:45 PC 203
Nanostructures, Nanostructuring and Nanosized Soft Matter II

CPP 65 10:00 — 13:00 BH-N 333
Granular Matter / Contact Dynamics

CPP 66 10:00 — 13:15 BH-N 243
Microswimmers II

CPP 67 10:30 — 12:45 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials VI

CPP 68 11:45 — 13:00 C 230
Crystallization, Nucleation and Self-Assembly I

CPP 69 15:00 — 18:30 C 130
Focus: Polymers in Multi-Compartment and Aqueous Solutions I – organised by Jens-Uwe Sommer and Debasish Mukheri

CPP 70 15:00 — 18:15 C 230
Crystallization, Nucleation and Self-Assembly II

CPP 71 15:00 — 18:00 C 243
Organic Electronics and Photovoltaics – OLEDs and Molecular Excitations

CPP 72 15:00 — 18:00 C 264
Hybrid and Perovskite Photovoltaics I

CPP 73 15:00 — 16:30 PC 203
Functional Polymer Hybrids and Composites

CPP 74 15:00 — 17:45 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials VII

CPP 75 18:45 — 19:45 C 130
Annual General Meeting of the CPP Division (CPP Mitgliederversammlung)

Thin Films Division (DS)

Invited Talks

DS 27.1 09:30 — 10:00 H 2032
Coupling RF-driven acoustic wave devices with nanocavity optomechanics
•Kartik Srinivasan, Marcelo Wu, Marcelo Davanco, Krishna Balram

DS 27.2 10:00 — 10:30 H 2032
Quantum Spin-Mechanics with Color Centers in Diamond
•Hailin Wang

DS 27.3 10:30 — 11:00 H 2032
Acoustic Traps and Lattices for Electrons in Semiconductors
Martin Schuetz, •Johannes Knörzer, Géza Giedke, Lieven Vandersypen, Mikhail Lukin, Ignacio Cirac

DS 27.4 11:00 — 11:30 H 2032
Manipulating single electrons on the fly using a sound wave
•Christopher Bauerle

Sessions

DS 27 09:30 — 13:15 H 2032
New Twists for Nanoquakes on a Chip – Emerging Applications of Surface Acoustic Waves in Condensed Matter Physics (Focussed Session): Session I

DS 28 09:30 — 13:15 A 151
2D materials: Chalcogenides II

DS 29 09:30 — 12:50 EMH 025
Lithography III: Lithography and Structuring

DS 30 10:30 — 12:45 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials VI

DS 31 11:15 — 13:15 Poster F
Poster Session II

DS 32 12:30 — 13:00 EW 201
Invited Talk: Michael Heuken

DS 33 15:00 — 15:45 H 2032
New Twists for Nanoquakes on a Chip - Emerging Applications of Surface Acoustic Waves in Condensed Matter Physics (Focussed Session): Session II

DS 34 15:00 — 17:45 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials VII

DS 35 15:00 — 18:10 EMH 025
Lithography IV: Lithography and Structuring

Dynamics and Statistical Physics Division (DY)

Invited Talks

DY 55.1 09:30 — 10:00 EB 107
Nuclear and electronic dynamics in ultrafast photoinduced charge separation
•*Carlo Andrea Rozzi*

DY 55.2 10:00 — 10:30 EB 107
Theory of pump-probe spectroscopy: Ultrafast laser engineering of ordered phases and microscopic couplings
•*Michael Sentef*

DY 57.1 09:30 — 10:00 BH-N 243
Anomalous Diffusion due to Crowding or External Potentials
•*Stefan U. Egelhaaf*

DY 65.1 15:00 — 15:30 BH-N 243
Towards a thermodynamics of active particles
•*Thomas Speck*

Sessions

DY 54 09:30 — 13:00 H 2013
Statistical Physics of Biological Systems I

DY 55 09:30 — 11:30 EB 107
Focus: Emergent phenomena in driven quantum many-body systems

DY 56 09:30 — 13:15 MA 001
Complex Contagion Phenomena I
(Focus Session, joint SOE/DY/BP/SNPD)

DY 57 09:30 — 10:00 BH-N 243
Talk S. Egelhaaf

DY 58 10:00 — 13:00 BH-N 128
Chimera states: symmetry-breaking in dynamical networks

DY 59 10:00 — 13:15 BH-N 243
Microswimmers II

DY 60 10:00 — 13:15 BH-N 334
Anomalous Diffusion

DY 61 10:00 — 13:00 BH-N 333
Granular Matter / Contact Dynamics

DY 62 12:00 — 12:45 EB 107
Coherent Quantum Dynamics

DY 63 15:00 — 17:15 H 2013
Statistical Physics of Biological Systems II

DY 64 15:00 — 16:15 MA 001
Traffic Dynamics, Urban and Regional Systems

DY 65 15:00 — 15:30 BH-N 243
Talk T. Speck

DY 66 15:30 — 18:00 Poster A
Poster: Stat. Phys. (Gen., Critical Phen., Biol.)

DY 67 15:30 — 18:00 Poster A
Poster: Active Matter, Microswimmers

DY 68 15:30 — 18:00 Poster A
Poster: Complex Fluids, Glasses, Granular

DY 69 15:30 — 18:00 Poster A
Poster: Quantum Systems

DY 70 15:30 — 18:00 Poster A
Poster:
Flows, Patterns, Delay, Reaction Diffusion

DY 71 15:30 — 18:00 Poster A
Poster: Noneq. Stat. Phys., Stoch. Thermo, Brownian Dyn.

DY 72 15:30 — 18:00 Poster A
Poster: Stoch. and Nonl. Dy., Modeling, Compl. Sys.

DY 73 15:30 — 18:00 Poster A
Poster: Networks, Chimera, Energy Systems

DY 74 18:15 — 18:45 BH-N 243
Annual General Meeting of the Dynamics and Statistical Physics Division

Semiconductor Physics Division (HL)

Invited Talks

HL 36.1 09:30 — 10:00 EW 202
Semiconductor laser diodes: applications, trends and their technological challenges
•*Werner Bergbauer, Andre Somers, Teresa Wurm, Matthias Peter, Christoph Eichler, Sven Gerhard, Georg Bruederl, Soenke Tautz, Bernhard Stojetz, Andreas Loeffler, Martin Mueller, Harald Koenig, Uwe Strauss*

HL 36.2 10:00 — 10:30 EW 202
Recent progress on VCSELs for the near- to mid-infrared spectral region
•*Markus Amann*

HL 36.6 11:30 — 12:00 EW 202
Simplicity VCSELs
•*James A. Lott, Nasibeh Haghighi, Gunter Larisch, Ricardo Rosales, Martin Zorn*

HL 41.1 12:30 — 13:00 EW 201
Industrial Aspects of 2D Nanomaterials
•*Michael Heuken, Annika Grundmann, Matthias Marx, Holger Kalisch, Andrei Vescan*

HL 44.1 15:00 — 15:30 EW 202
Development of AlGaN based UV Laser Diodes
•*Ronny Kirste, Biplab Sarkar, Seiji Mita, Will Mecouch, James Tweedie, Qiang Guo, Andrew Klump, Ramon Collazo, Zlatko Sitar*

HL 44.2 15:30 — 16:00 EW 202
Semiconductor Nanolasers Based on 2D Monolayer of Transition Metal Dichalcogenides
•*Cun-Zheng Ning*

Sessions

HL 34 09:30 — 10:30 EW 015
Carbon: Diamond, nanotubes, Buckyballs

HL 35 09:30 — 10:45 EW 201
Focussed Session: Metasurfaces II

HL 36 09:30 — 13:00 EW 202
Focussed Session: Frontiers in Laser Diode Physics I

HL 37 09:30 — 13:00 EW 203
Oxide Semiconductors

HL 38 09:30 — 13:15 A 151
2D materials: Chalcogenides II

HL 39 11:00 — 13:00 EW 015
Group IV (other than C): Si/Ge/SiC

HL 40 11:00 — 12:15 EW 201
II-VI semiconductors

HL 41 12:30 — 13:00 EW 201
Invited Talk: Michael Heuken

HL 42 15:00 — 16:45 EW 015
Transport

HL 43 15:00 — 17:30 EW 201
Spintronics

HL 44 15:00 — 16:00 EW 202
Focussed Session: Frontiers in Laser Diode Physics II

HL 45 15:00 — 17:45 EW 203
Organic photovoltaics and electronics

HL 46 15:00 — 17:45 A 151
Quantum dots and wires: Optical properties III

HL 47 16:15 — 17:30 EW 202
Theory of electronic structure

HL 48 17:00 — 18:00 EW 015
Thermoelectricity

HL 49 18:00 — 19:00 EW 201
Annual General Meeting of the Semiconductor Physics Division

HL 50 19:00 — 21:00 Poster B
HL Poster IV

Crystalline Solids and their Microstructure Division (KFM)

Invited Talks

KFM 23.1 09:30 — 10:00 EMH 025
3D Nanoprinting via Focused Electron Beams
•Harald Plank, Robert Winkler, Jason Fowlkes, Philip Rack

KFM 23.5 11:20 — 11:50 EMH 025
Diffractive X-ray Optics for Synchrotrons and Free Electron Lasers – a challenge from the lithographer‘s point of view
•Christian David

KFM 24.1 09:30 — 10:00 E 124
Discovering Ancient Secrets in Aluminum Alloys – A New Combination of Analytical Techniques and ab-initio Calculations
•Torsten E.M. Staab, Danny Petschke, Frank Lotter, Elischa Bläss

KFM 26.1 15:00 — 15:30 EMH 025
Electron Beam Lithography and Ion Beam Patterning for Applications in Quantum Technology
•Jörg Stodolka, Michael Kahl, Axel Rudzinski, Sven Bauerdick

Sessions

KFM 23 09:30 — 12:50 EMH 025
Lithography III: Lithography and Structuring

KFM 24 09:30 — 12:20 E 124
Spectroscopy and Microscopy II with Positrons

KFM 25 09:30 — 13:30 EMH 225
Ferroics and Multiferroics

KFM 26 15:00 — 18:10 EMH 025
Lithography IV: Lithography and Structuring

KFM 27 15:00 — 17:00 Poster E
Postersession KFM

Magnetism Division (MA)

Invited Talks, Topical Talks

MA 38.1 09:30 — 10:00 H 0110
RKKY-induced Kondo breakdown near a magnetic quantum phase transiton
•*Johann Kroha*

MA 40.1 09:30 — 10:00 H 1012
Understanding Spin-Charge Conversion in Topological Insulators
•*Aurelien Manchon*

MA 40.5 11:15 — 11:45 H 1012
Interfacial spin-orbitronic: Rashba interfaces and topological insulators as efficient spin-charge current converters
•*Juan-Carlos Rojas-Sanchez*

MA 46.1 15:00 — 15:30 H 0110
Topological spin textures as spin-wave emitters
•*Sebastian Wintz*

MA 47.1 15:00 — 15:30 H 1012
Spin orbit fields at the Fe/GaAs(001) interface
•*Christian Back*

Sessions

MA 38 09:30 — 13:15 H 0110
Theory of strongly correlated systems

MA 39 09:30 — 11:15 H 0112
Micro- and nanostructured magnetic materials

MA 40 09:30 — 12:30 H 1012
Focus Session: Spinorbitronics – from efficient charge/spin conversion based on spin-orbit coupling to chiral magnetic skyrmions I

MA 41 09:30 — 12:45 EB 202
Surface magnetism I

MA 42 09:30 — 12:30 EB 301
Thin films – anisotropy

MA 43 09:30 — 12:15 EB 407
Magnetic textures I

MA 44 09:30 — 13:00 A 053
Topological Insulators II

MA 45 09:30 — 13:30 EMH 225
Ferroics and Multiferroics

MA 46 15:00 — 18:00 H 0110
Magnonics II

MA 47 15:00 — 18:00 H 1012
Focus Session: Spinorbitronics – from efficient charge/spin conversion based on spin-orbit coupling to chiral magnetic skyrmions II

MA 48 15:00 — 17:00 H 2053
Quantum Coherence and Quantum Information Systems

MA 49 15:00 — 16:30 EB 202
Terahertz dynamics

MA 50 15:00 — 16:45 EB 301
Soft and hard permanent magnets

MA 51 15:00 — 17:30 EB 407
Magnetic textures II

MA 52 15:00 — 18:00 Poster C
Poster II

MA 53 18:00 — 19:00 H 0110
General Assembly of the Magnetism Division (MA)

Metal and Material Physics Division (MM)

Invited Talks, Topical Talks

MM 49.1 09:30 — 10:00 TC 006
Analysis of amorphous structures by transmission electron microscopy
•*Martin Peterlechner*

MM 50.1 10:15 — 10:45 H 0106
New Insights into the Ductility of Freestanding Metallic Thin Films
•*Benoit Merle*

MM 55.1 11:45 — 12:15 H 0106
Deformation mechanism map of Cu/Nb nanoscale metallic multilayers as a function of temperature and layer thickness
•Jon Molina-Aldareguia, Jeromy Snel, Miguel Monclús, Nathan Mara, Irene Beyerlein, Javier Llorca

MM 56.1 11:45 — 12:15 H 0107
On the need for a digital representation of materials data along scientific and industrial processes
•Christoph Schweizer, Eva Augenstein, Heiner Oesterlin, Adham Hashibon

MM 59.1 15:00 — 15:30 TC 006
Dilatometric Techniques for Atomic Scale Analysis of Defects and Processes in Solids
•Wolfgang Sprengel

MM 61.1 15:45 — 16:15 H 0107
Big Data of Materials Science: Interpretability of Machine Learning
Luca M. Ghiringhelli, •Jan Vybiral, Sergey V. Levchenko, Claudia Draxl, Matthias Scheffler

MM 66.1 17:30 — 18:00 H 0107
Discovering Interpretable Patterns, Correlations, and Causality
•Jilles Vreeken

Sessions

MM 49 09:30 — 10:00 TC 006
Invited talk Peterlechner

MM 50 10:15 — 11:30 H 0106
Topical session (Symposium EPS and MM): Mechanical Properties at Small Scales

MM 51 10:15 — 11:45 H 0107
Topical Session (Symposium MM): Big Data in Materials Science – Managing and exploiting the raw material of the 21st century

MM 52 10:15 — 11:30 TC 006
Methods in Computational Materials Modelling (methodological aspecst, numerics)

MM 53 10:15 — 11:30 TC 010
Liquid and Amorphous Metals

MM 54 10:30 — 12:45 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials VI

MM 55 11:45 — 13:00 H 0106
Topical session (Symposium EPS and MM): Mechanical Properties at Small Scales

MM 56 11:45 — 13:15 H 0107
Topical Session (Symposium MM): Big Data in Materials Science – Managing and exploiting the raw material of the 21st century

MM 57 11:45 — 13:15 TC 006
Methods in Computational Materials Modelling (methodological aspects, numerics)

MM 58 11:45 — 13:15 TC 010
Liquid and Amorphous Metals

MM 59 15:00 — 15:30 TC 006
Invited talk Sprengel

MM 60 15:45 — 16:45 H 0106
Topical session (Symposium EPS and MM): Mechanical Properties at Small Scales

MM 61 15:45 — 17:15 H 0107
Topical Session (Symposium MM): Big Data in Materials Science – Managing and exploiting the raw material of the 21st century

MM 62 15:45 — 17:15 TC 006
Methods in Computational Materials Modelling (methodological aspecst, numerics)

MM 63 15:45 — 17:00 TC 010
Transport (Diffusion, conductivity, heat)

MM 64 15:00 — 17:45 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials VII

MM 65 17:30 — 19:00 H 0106
Functional Materials (Actuators, filters, sensors, shape memory)

MM 66 17:30 — 19:00 H 0107
Topical Session (Symposium MM): Big Data in Materials Science – Managing and exploiting the raw material of the 21st century

MM 67 17:30 — 19:00 TC 006
Methods in Computational Materials Modelling (methodological aspecst, numerics)

MM 68 17:30 — 18:30 TC 010
Transport (Diffusion, conductivity, heat)

Surface Science Division (O)

Invited Talks

O 86.1 09:30 — 10:15 HE 101
Weyl Semimetals and beyond!
•Claudia Felser

O 87.1 10:30 — 11:00 MA 004
Molecular structures for conductance measurements
•Richard Berndt

O 88.1 10:30 — 11:00 MA 005
Syngas reactions on metal surfaces studied using scaling-relation-based kinetic Monte Carlo
•Mie Andersen

O 88.2 11:00 — 11:30 MA 005
Catalytic reactivity of binary alloys studied by field emission techniques
•Cédric Barroo, Yannick De Decker, Luc Jacobs, Thierry Visart de Bocarmé

O 88.3 11:30 — 12:00 MA 005
Imaging spin polarization and orbital character at surfaces: from the Rashba effect to topological Fermi arcs
•H. Bentmann, H. Maass, C.-H. Min, F. Reinert

O 88.4 12:00 — 12:30 MA 005
Tuning optoelectronic properties of silicon quantum dots via surface chemistry
•Mita Dasog, Jonathan G. C. Veinot, Nathan S. Lewis

O 88.5 12:30 — 13:00 MA 005
Carbon Dioxide Activation at Metal-Oxide Surfaces: A Compressed-Sensing Analysis
•Aliaksei Mazheika, Yanggang Wang, Rosendo Valero, Francesc Illas, Runhai Ouyang, Luca M. Ghiringhelli, Sergey V. Levchenko, Matthias Scheffler

O 92.1 10:30 — 11:00 MA 141
0-D and 1-D heterostructure mediated material properties of 2-D Transition Metal Dichalcogenides
•Alexander Weber-Bargioni

O 93.1 10:30 — 11:00 HE 101
Ultrafast Electron Diffuse Scattering: Mapping Momentum Dependent Electron-Phonon Coupling and Nonequilibrium Phonon Dynamics in 2D Materials
•Bradley Siwick, Martin Otto, Laurent Rene de Cotret, Mark Stern, Mark Sutton

O 93.2 11:00 — 11:30 HE 101
Beyond Debye-Waller Effects in Ultrafast Electron Diffraction
•Xijie Wang

O 100.1 15:00 — 15:30 MA 141
Suitably functionalized molecules on surface: from self-assembly to chemical reactions
•Shi-Xia Liu, Jascha Repp, Ernst Meyer, Silvio Decurtins

O 101.1 15:00 — 15:30 HE 101
Ultrafast Structural Dynamics in Organic Molecular Solids
•Heinrich Schwoerer

O 101.2 15:30 — 16:00 HE 101
Ultrafast Electronic Band Gap Control and Self-Protection from a Photoinduced Phase Transition in an Excitonic Insulator
•Julia Stähler

O 102.1 15:00 — 15:30 HL 001
Recent developments in FCIQMC: real-time propagation and improved convergence with walker number
•Ali Alavi

Sessions

O 86	09:30 — 10:15	HE 101
	Overview Talk: Claudia Felser	
O 87	10:30 — 13:00	MA 004
	Focus Session: Molecular Nanostructures on surfaces – New Concepts towards Complex Architectures V	
O 88	10:30 — 13:00	MA 005
	Gerhard Ertl Young Investigator Award	
O 89	10:30 — 13:00	MA 041
	Oxide and Insulator Surfaces: Structure, Epitaxy and Growth I	
O 90	10:30 — 13:00	MA 042
	Electronic structure of surfaces: Spectroscopy, surface states IV	
O 91	10:30 — 13:00	MA 043
	2D materials beyond graphene: TMDCs, silicene and relatives III	
O 92	10:30 — 13:00	MA 141
	Nanostructures at surfaces: Dots, particles, clusters I	
O 93	10:30 — 13:00	HE 101
	Focus Session: Structural Dynamics in Nanoscale Materials, Probed by Ultrafast Electron Pulses I	
O 94	10:30 — 12:45	HL 001
	Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials VI	
O 95	12:00 — 13:00	MA 144
	Other And Miscellaneous	
O 96	15:00 — 18:15	MA 004
	Focus Session: Molecular Nanostructures on surfaces – New Concepts towards Complex Architectures VI	
O 97	15:00 — 18:30	MA 005
	Scanning probe techniques: Method development II	

O 98 15:00 — 18:30 MA 042
Electronic structure: Surface magnetism and spin phenomena I

O 99 15:00 — 17:45 MA 043
2D materials beyond graphene: TMDCs, silicene and relatives IV

O 100 15:00 — 17:00 MA 141
Nanostructures at surfaces: Dots, particles, clusters II

O 101 15:00 — 17:30 HE 101
Focus Session: Structural Dynamics in Nanoscale Materials, Probed by Ultrafast Electron Pulses II

O 102 15:00 — 17:45 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials VII

O 103 15:45 — 16:30 MA 041
Oxide and Insulator Surfaces: Structure, Epitaxy and Growth II

O 104 16:45 — 18:15 MA 041
Oxides and Insulators: Adsorption I

O 105 17:15 — 18:15 MA 141
Nanostructures at surfaces: 1D and 2D structures and networks III

O 106 19:00 — 19:30 H 0105
Annual Meeting of the Surface Science Division

O 107 19:30 — 20:30 H 0105
Post-Deadline Session

Physics of Socio-economic Systems Division (SOE)

Invited Talks

SOE 18.1 09:30 — 10:00 MA 001
Epidemic threshold on temporal networks
•*Vittoria Colizza*

SOE 18.2 10:00 — 10:30 MA 001
Critical regimes driven by recurrent mobility patterns of reaction-diffusion processes in networks
•Jesus Gomez-Gardenes

SOE 18.3 10:30 — 11:00 MA 001
Phase Transitions in Cooperative Coinfections
•Peter Grassberger, Li Chen, Fakhteh Ghanbarnejad, Weiran Cai

SOE 18.4 11:15 — 11:45 MA 001
Linear and nonlinear scenarios of societal change
•Andrzej Nowak

SOE 18.5 11:45 — 12:15 MA 001
Collective Sensing and Decision-Making in Animal Groups: From Fish Schools to Primate Societies
•Iain Couzin

Sessions

SOE 18 09:30 — 13:15 MA 001
Complex Contagion Phenomena I (Focus Session with EPS-SNPD)

SOE 19 10:00 — 13:00 BH-N 128
Chimera states: symmetry-breaking in dynamical networks

SOE 20 15:00 — 18:00 H 2033
Reduction and Emergence in Econophysics

SOE 21 15:00 — 16:15 MA 001
Traffic Dynamics, Urban and Regional Systems

SOE 22 16:15 — 18:00 MA 001
Focus Session: Computational Social Science

Low Temperature Physics Division (TT)

Invited Talks

TT 77.1 09:30 — 10:00 H 0104
Quantum Turbulence: New Aspects of an Old Problem
•Carlo F. Barenghi

TT 77.2 10:00 — 10:30 H 0104
Numerical Simulation of Quantum Turbulence
•*Makoto Tsubota*

TT 77.3 10:30 — 11:00 H 0104
Visualising Pure Quantum Turbulence in Fermionic Superfluid
•*Viktor Tsepelin*

TT 77.4 11:15 — 11:45 H 0104
Experimental Exploration of Intense Quantum Turbulence with He-II
•*Philippe-E. Roche*

TT 77.5 11:45 — 12:15 H 0104
Visualization of Superfluid Helium Flows
•*Marco La Mantia*

TT 93.1 15:00 — 15:30 H 2053
Non-Markovian Quantum Thermodynamics: Second Law and Fluctuation Theorems
•*Robert S Whitney*

TT 94.6 16:30 — 17:00 H 3010
Discrete Time Crystals
•*Roderich Moessner*

TT 103.1 17:15 — 17:45 H 2053
From Fundamental Principles to Applications: Cryogenic Micro-Calorimeters
•*Christian Enss, Sebastian Kempf, Loredana Gastaldo, Andreas Fleischmann*

Sessions

TT 77 09:30 — 12:15 H 0104
Focus Session: Quantum Turbulence and Imaging of Quantum Flow of Superfluids

TT 78 09:30 — 12:30 H 1012
Focus Session: Spinorbitronics – From Efficient Charge/Spin Conversion Based on Spin-Orbit Coupling to Chiral Magnetic Skyrmions I

TT 79 09:30 — 12:45 H 2053
Superconductivity: Superconducting Electronics – Circuit QED

TT 80 09:30 — 13:00 H 3005
Graphene

TT 81 09:30 — 11:15 H 3010
Nonequilibrium Quantum Many-Body Systems III

TT 82 09:30 — 13:00 A 053
Topological Insulators II

TT 83 09:30 — 12:45 HFT-FT 101
Superconductivity: (General) Theory

TT 84 09:30 — 11:15 HFT-FT 131
Fluctuations and Noise

TT 85 09:30 — 11:30 EB 107
Focus Session: Emergent Phenomena in Driven Quantum Many-Body Systems

TT 86 09:30 — 13:30 EMH 225
Ferroics and Multiferroics

TT 87 10:30 — 12:45 HL 001
Frontiers of Electronic-Structure Theory: Correlated Electron Materials VI

TT 88 11:30 — 13:00 H 3010
Quantum-Critical Phenomena III

TT 89 11:30 — 12:45 HFT-FT 131
Disordered Quantum Systems

TT 90 12:00 — 12:45 EB 107
Coherent Quantum Dynamics

TT 91 15:00 — 18:15 H 0104
Correlated Electrons: Method Development

TT 92 15:00 — 18:00 H 1012
Focus Session: Spinorbitronics – From Efficient Charge/Spin Conversion Based on Spin-Orbit Coupling to Chiral Magnetic Skyrmions II

TT 93 15:00 — 17:00 H 2053
Quantum Coherence and Quantum Information Systems

TT 94 15:00 — 18:30 H 3010
Correlated Electrons: Other Theoretical Topics

TT 95 15:00 — 17:45 HFT-FT 131
Cold Atomic Gases, Superfluids, Quantum Fluids and Solids

TT 96 15:00 — 17:45 HL 001
Frontiers of Electronic-Structure Theory: Correlated Electron Materials VII

TT 97 15:00 — 17:30 EW 201
Spintronics

TT 98 15:00 — 19:00 Poster B
Poster Session: Superconductivity

TT 99 15:00 — 19:00 Poster B
Poster Session: Transport

TT 100 15:30 — 18:00 H 3005
Frustrated Magnets – Pyrochlore Oxides

TT 101 15:30 — 18:15 HFT-FT 101
Correlated Electrons: Other Materials

TT 102 16:00 — 18:30 A 053
Topology: Majorana Fermions

TT 103 17:15 — 18:30 H 2053
Superconductivity: Cryogenic Particle Detectors

TT 104 18:45 — 20:00 H 3005
Annual General Meeting of the Low Temperature Physics Division

Working Group "Young DPG" (AKjDPG)

Sessions

AKjDPG 6 09:30 — 11:00 E 020
Careers in Physics: inside Academia

AKjDPG 7 11:15 — 12:45 E 020
Careers in Physics: outside Academia

Working Group on Philosophy of Physics (AGPhil)

Invited Talks

AGPhil 4.1 15:00 — 15:45 H 2033
Reduction, emergence and mechanisms in magnets and markets
•Meinard Kuhlmann

AGPhil 4.2 15:45 — 16:30 H 2033
Ising models of financial markets? Are we serious?
•Stefan Bornholdt

AGPhil 4.3 16:30 — 17:15 H 2033
Emergent phenomena in physics and econophysics
•Radin Dardashti

AGPhil 4.4 17:15 — 18:00 H 2033
Stock market crashes as critical phenomena? Explanation, idealization, and universality in econophysics
•Patricia Palacios

Sessions

AGPhil 2 10:00 — 11:30 H 2033
Philosophie der Physik II

AGPhil 3 12:45 — 14:45 H 2033
Philosophie der Physik III

AGPhil 4 15:00 — 18:00 H 2033
Reduction and Emergence in Econophysics

Exhibition of Physical Equipment and Literature

09:00 — 17:00 Foyers EG, EG rechts, 1. OG, Lichthof, Zelt

Job Market

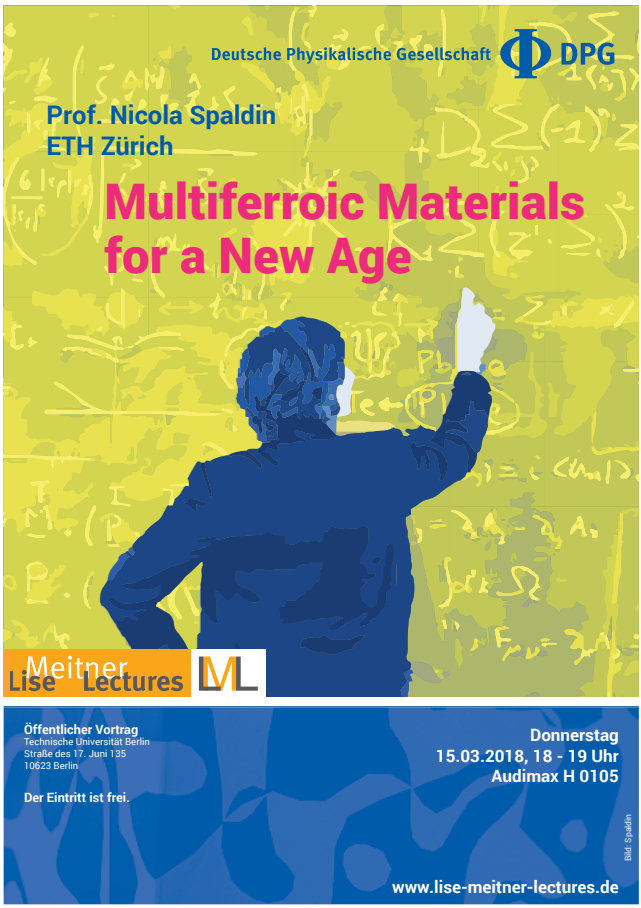
12:00 — 13:00 H 1035
Basycon Unternehmensberatung GmbH: "Hypothesen, Modelle, Experimente – Was Forschung und Unternehmensberatung gemeinsam haben"

13:15 — 14:15 H 1035
d-fine GmbH: “Physiker (m/w) im Bereich Risiko und Finanzen – Vorstellung d-fine”

14:30 — 15:30 H 1035
Senacor Technologies GmbH: “Physiker (m/w) in der IT-Beratung – Erfahrungsbericht eines Senacor Physikers”

Lise Meitner Lecture (Free Entrance)

PLV XIV 18:00 — 19:00 H 0105
Multiferroic Materials for a New Age
•*Nicola Spaldin*



Friday, March 16, 2018

Plenary talks (PLV)

Plenary Talk

PLV XV 08:30 — 09:15 H 0105
How photons change the properties of matter. QED-TDDFT an ab initio framework for modeling Light-Matter interaction
•Angel Rubio
(Laureate of the Max-Born-Prize 2018)

Symposium Physics of Ancient Materials (SYAM)

Invited Talks

SYAM 1.1 09:30 — 10:00 H 0105
Bringing Dino-Birds to life – Synchrotron X-ray fluorescence and Raman imaging of ancient materials
•Uwe Bergmann

SYAM 1.2 10:00 — 10:30 H 0105
Linear and Nonlinear Optical Properties of Cultural Heritage Materials
•Marta Castillejo

SYAM 1.3 10:30 — 11:00 H 0105
Morphology and topology of multiscale pore networks: Imaging structural alteration and hydric invasion
•Pierre Levitz

SYAM 1.4 11:15 — 11:45 H 0105
Painting cracks: a way to reveal physical properties of matter
•Ludovic Pauchard

SYAM 1.5 11:45 — 12:15 H 0105
Finite element analysis and biomechanical interpretation of fossil material properties
•Emily Rayfield

Session

SYAM 1 09:30 — 12:15 H 0105
Physics of Ancient Materials

Biological Physics Division (BP)

Invited Talks

BP 36.1 09:30 — 10:00 H 1028
Physical forces driving migration, division and folding in epithelial sheets
•Xavier Trepat

BP 38.3 10:00 — 10:30 H 2013
The role of dynamic twist in membrane fission
Martina Pannuzzo, Zachary A. McDargh, •Markus Deserno

Sessions

BP 36 09:30 — 12:00 H 1028
Cell Adhesion and Migration, Multicellular Systems II

BP 37 09:30 — 12:00 H 1058
Active Matter

BP 38 09:30 — 12:00 H 2013
Membranes and Vesicles II

BP 39 09:30 — 13:15 MA 001
Focus Session: Complex Contagion Phenomena II

Chemical and Polymer Physics Division (CPP)

Invited Talk, Topical Talks

CPP 76.1 09:30 — 10:00 C 130
Optimal inhibition and spatial organization of irreversible protein aggregation using liquid compartments
•Christoph A. Weber, Thomas Michaels, L. Mahadevan

CPP 76.6 11:00 — 11:30 C 130
Diffusion of proteins in bicontinuous microemulsions: controlled soft nano-confinement
•Thomas Hellweg, Oliver Wrede, Ralph Neubauer

CPP 77.1 09:30 — 10:00 C 243
High-Performance Organic Transistors
•Karl Leo

Sessions

CPP 76 09:30 — 11:30 C 130
Focus: Polymers in Multi-Compartment and Aqueous Solutions II – organised by Jens-Uwe Sommer and Debasish Mukheri

CPP 77 09:30 — 13:00 C 243
Organic Electronics and Photovoltaics – Transport and Doping

CPP 78 09:30 — 12:45 C 264
Hybrid and Perovskite Photovoltaics II

CPP 79 09:30 — 11:30 PC 203
Wetting, Microfluidics and Confined Liquids II

CPP 80 09:30 — 11:00 H 0111
Organic Thin Films, Organic-Inorganic Interfaces: Session II

CPP 81 09:30 — 12:00 H 1058
Active Matter

CPP 82 09:30 — 12:00 H 2013
Membranes and Vesicles II

CPP 83 09:30 — 12:30 H 2032
2D Materials (Symposium and Joint Session with HL and O): Session III

CPP 84 10:00 — 12:45 BH-N 334
Glasses and Glas transition

CPP 85 10:30 — 11:30 MA 144
Molecular films: Photovoltaics, electronics and morphology

CPP 86 10:30 — 12:45 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials VIII

Thin Films Division (DS)

Invited Talk

DS 37.1 09:30 — 10:00 H 2032
Tunable Electronic Structures, Magnetism, and Axis-Dependent Conduction Polarity in Ge and Sn-based 2D Materials
•Joshua Goldberger

Sessions

DS 36 09:30 — 11:00 H 0111
Organic Thin Films, Organic-Inorganic Interfaces: Session II

DS 37 09:30 — 12:30 H 2032
2D Materials: Session III

DS 38 10:30 — 12:45 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials VIII

Dynamics and Statistical Physics Division (DY)

Invited Talks

DY 77.1 09:30 — 10:00 BH-N 243
Mean field theory of ride sharing systems
•Stephan Herminghaus

DY 78.1 09:30 — 10:00 BH-N 334
Emergence of long-ranged stress correlations at the liquid to glass transition
Manuel Maier, Annette Zippelius, •Matthias Fuchs

Sessions

DY 75 09:30 — 12:00 H 1058
Active Matter

DY 76 09:30 — 13:15 MA 001
Complex Contagion Phenomena II (Focus Session, joint SOE/DY/BP/SNPD)

DY 77 09:30 — 10:00 BH-N 243
Talk S. Herminghaus

DY 78 09:30 — 10:00 BH-N 334
Talk M. Fuchs

DY 79 10:00 — 12:15 EB 107
The Physics of Power-Grids – Fluctuations, Synchronization and Network Structures

DY 80 10:00 — 11:15 BH-N 128
Brownian Motion and Transport

DY 81 10:00 — 12:30 BH-N 243
Nonlinear Dynamics, Synchronization, Chaos II

DY 82 10:00 — 12:45 BH-N 334
Glasses and Glass Transition

DY 83 10:00 — 12:15 BH-N 333
Pattern Formation II

Semiconductor Physics Division (HL)

Sessions

HL 51 09:30 — 12:30 H 2032
2D Materials: Session III

HL 52 09:30 — 12:45 EW 201
Optical properties & Photonic crystals

HL 53 09:30 — 11:00 EW 202
Energy materials (other than photovoltaics)

HL 54 09:30 — 12:15 EW 203
Organic semiconductors

HL 55 09:30 — 12:45 A 151
Quantum dots and wires: Preparation and characterization

HL 56 11:15 — 12:30 EW 202
New materials and concepts

Crystalline Solids and their Microstructure Division (KFM)

Session

KFM 28 09:30 — 13:00 H 0110
Complex Oxides: Bulk Properties, Surfaces and Interfaces

Magnetism Division (MA)

Invited Talks

MA 57.1 09:30 — 10:00 H 1012
Manipulation of interface-induced Skyrmions studied with STM
•*Kirsten von Bergmann*

MA 57.6 11:30 — 12:00 H 1012
Magnonics in skyrmion-hosting chiral magnetic materials
•*Markus Garst*

Sessions

MA 54 08:00 — 10:00 EB 301
Spin-dependent transport phenomena

MA 55 09:30 — 13:00 H 0110
Complex Oxides – Bulk Properties, Surfaces and Interfaces

MA 56 09:30 — 11:15 H 0112
Spin-Hall effects

MA 57 09:30 — 12:45 H 1012
Focus Session: Spinorbitronics – from efficient charge/spin conversion based on spin-orbit coupling to chiral magnetic skyrmions III

MA 58 09:30 — 11:00 EB 202
Surface magnetism II

Metal and Material Physics Division (MM)

Topical Talks

MM 70.1 09:30 — 10:00 H 0107
Transmission Electron Microscopes as a tool generating Big Data: challenges ans opportunities
•*Cécile Hébert*

MM 75.1 11:15 — 11:45 H 0107
Higher-dimensional synchrotron-based tomography for nanostructure characterization
•*Manuel Guizar-Sicairos*

Sessions

MM 69 09:30 — 10:45 H 0106
Structural Materials (Steels, light-weight materials, high-temperature materials)

MM 70 09:30 — 11:00 H 0107
Topical Session (Symposium MM): Big Data in Materials Science – Managing and exploiting the raw material of the 21st century

MM 71 09:30 — 11:00 TC 006
Methods in Computational Materials Modelling (methodological aspects, numerics)

MM 72 09:30 — 10:30 TC 010
Magnetic Shape Memory Alloys (joint with MA)

MM 73 10:30 — 12:45 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials VIII

MM 74 11:15 — 12:15 H 0106
Structural Materials (Steels, light-weight materials, high-temperature materials)

MM 75 11:15 — 12:45 H 0107
Topical Session (Symposium MM): Big Data in Materials Science – Managing and exploiting the raw material of the 21st century

MM 76 11:15 — 12:30 TC 006
Methods in Computational Materials Modelling (methodological aspects, numerics)

Surface Science Division (O)

Invited Talks

O 108.1 09:30 — 10:15 HE 101
Electronic structure of two-dimensional materials revealed by angle-resolved photoemission spectroscopy (ARPES) and Nano-ARPES
•*Shuyun Zhou*

O 116.1 10:30 — 11:00 HE 101
Imaging Coherent, Nanoscale Acoustic-Phonon Dynamics with Ultrafast Electron Microscopy
•David Flannigan, Daniel Cremons, Daniel Du, Dayne Plemmons, Spencer Reisbick

O 121.1 13:15 — 14:00 HE 101
A look through the operando glass: First-principles based multiscale modeling of working catalysts
•Karsten Reuter

Sessions

O 108 09:30 — 10:15 HE 101
Overview Talk: Shuyun Zhou

O 109 10:30 — 11:45 MA 004
Focus Session: Molecular Nanostructures on surfaces – New Concepts towards Complex Architectures VII

O 110 10:30 — 10:45 MA 005
New Methods: Theory

O 111 10:30 — 12:30 MA 041
Oxides and Insulators: Adsorption II

O 112 10:30 — 13:00 MA 042
Electronic structure: Surface magnetism and spin phenomena II

O 113 10:30 — 13:00 MA 043
2D materials beyond graphene: TMDCs, silicene and relatives V

O 114 10:30 — 11:30 MA 141
Nanostructures at surfaces: 1D and 2D structures and networks IV

O 115 10:30 — 11:30 MA 144
Molecular films: Photovoltaics, electronics and morphology

O 116 10:30 — 12:45 HE 101
Focus Session: Structural Dynamics in Nanoscale Materials, Probed by Ultrafast Electron Pulses III

O 117 10:30 — 12:45 HL 001
Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials VIII

O 118 11:00 — 13:00 MA 005
Metal substrates: Structure, epitaxy and growth

O 119 11:30 — 13:00 MA 141
Non-Equilibrium Daynamics in Light-Driven Materials: Theory Meets Experiment

O 120 11:30 — 13:00 MA 144
Tribology: Surfaces and nanostructures

O 121 13:15 — 14:00 HE 101
Overview Talk: Karsten Reuter

Physics of Socio-economic Systems Division (SOE)

Topical Talk

SOE 23.1 09:30 — 10:00 MA 001
Network reconstruction for the prediction of spreading processes
•Diego Garlaschelli

Sessions

SOE 23 09:30 — 13:15 MA 001
Complex Contagion Phenomena II (Focus Session with EPS-SNPD)

SOE 24 10:00 — 12:15 EB 107
The Physics of Power-Grids – Fluctuations, Synchronization and Network Structures

Low Temperature Physics Division (TT)

Invited Talks

TT 105.1 09:30 — 10:00 H 0104
New Hardware Components for Scalable Quantum Computers
•David DiVincenzo

TT 105.2 10:00 — 10:30 H 0104
Quantum Communcation with Propagating Microwaves
•Frank Deppe

TT 105.3 10:30 — 11:00 H 0104
Dynamics of a Qubit While Simultaneously Monitoring its Relaxation and Dephasing
Quentin Ficheux, Sebastien Jezouin, Zaki Leghtas, •Benjamin Huard

TT 105.4 11:15 — 11:45 H 0104
Estimating the Error of an Analog Quantum Simulator by Additional Measurements
•Michael Marthaler

TT 105.5 11:45 — 12:15 H 0104
On-demand distribution of quantum information between superconducting cavity quantum memories
•Wolfgang Pfaff

TT 105.6 12:15 — 12:35 H 0104
Quantum Simulation of Light-Matter Interaction
•Jochen Braumüller, Michael Marthaler, Andre Schneider, Alexander Stehli, Hannes Rotzinger, Martin Weides, Alexey V. Ustinov

Sessions

TT 105 09:30 — 13:05 H 0104
Focus Session: Mesoscopic Superconductivity and Quantum Circuits

TT 106 09:30 — 13:00 H 0110
Complex Oxides: Bulk Properties, Surfaces and Interfaces

TT 107 09:30 — 12:45 H 1012
Focus Session: Spinorbitronics – From Efficient Charge/Spin Conversion Based on Spin-Orbit Coupling to Chiral Magnetic Skyrmions III

TT 108 09:30 — 12:00 H 2053
Topological Superconductors

TT 109 09:30 — 12:15 H 3005
Frustrated Magnets – (General) Theory

TT 110 09:30 — 11:45 H 3010
Superconductivity: Fe-based Superconductors – 111 and Others

TT 111 10:30 — 12:45 HL 001
Frontiers of Electronic-Structure Theory: Correlated Electron Materials VIII

Working Group on Philosophy of Physics (AGPhil)

Invited Talk

AGPhil 5.1 09:30 — 10:15 H 2033
Spacetime is as spacetime does
•Christian Wüthrich, Vincent Lam

Sessions

AGPhil 5 09:30 — 12:30 H 2033
Philosophie der Physik IV

AGPhil 6 12:45 — 13:30 H 2033
Mitgliederversammlung der Arbeitsgruppe Philosophie der Physik

Job Market

12:00 — 13:00 H 1035
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Exhibition areas:

Lichthof (atrium)	- LH
Foyer 1st floor	- F-1.OG
Foyer ground floor	- F-EG
Foyer ground floor right	- EG-r
Exhibition Tent	- Zelt

Company	Area	Stand No.

Academics GmbH **F-1.OG 07a**

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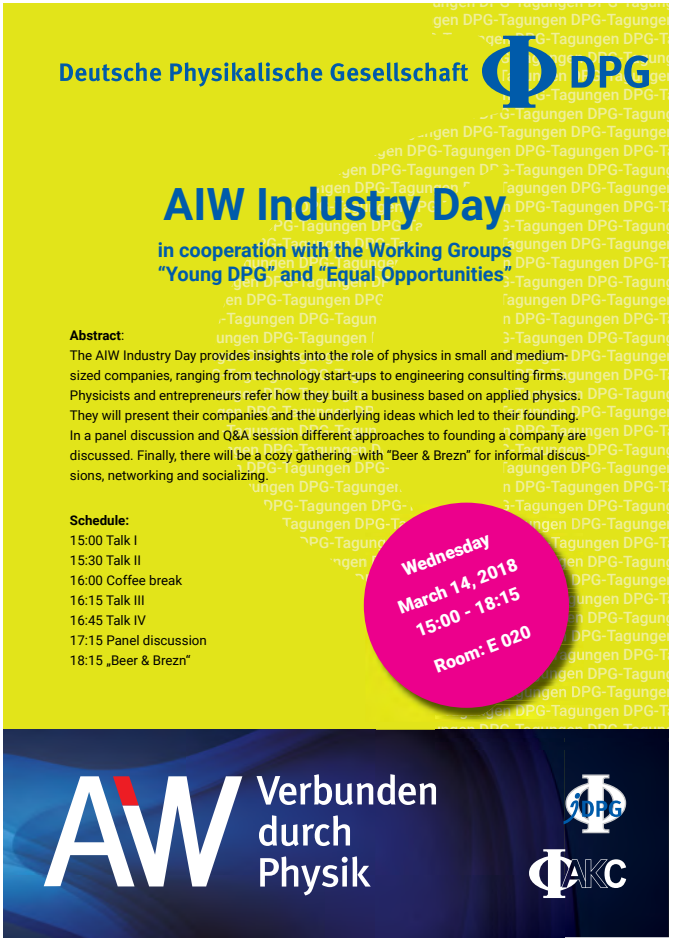
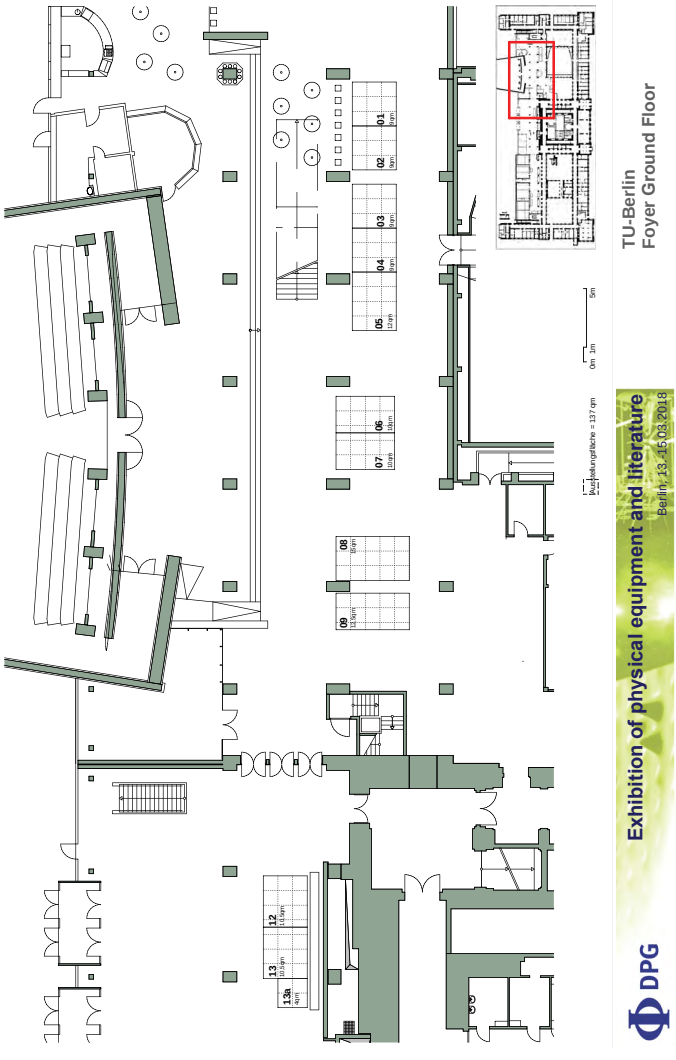


Exhibition Maps



Ausstellungsfläche = 114 qm

0m 1m 5m

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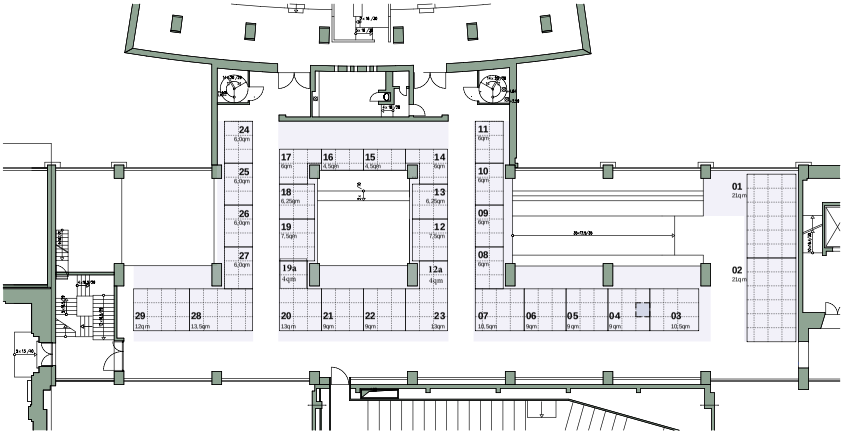

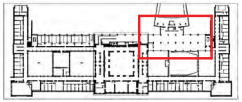

Ausstellungsfläche = 238 qm

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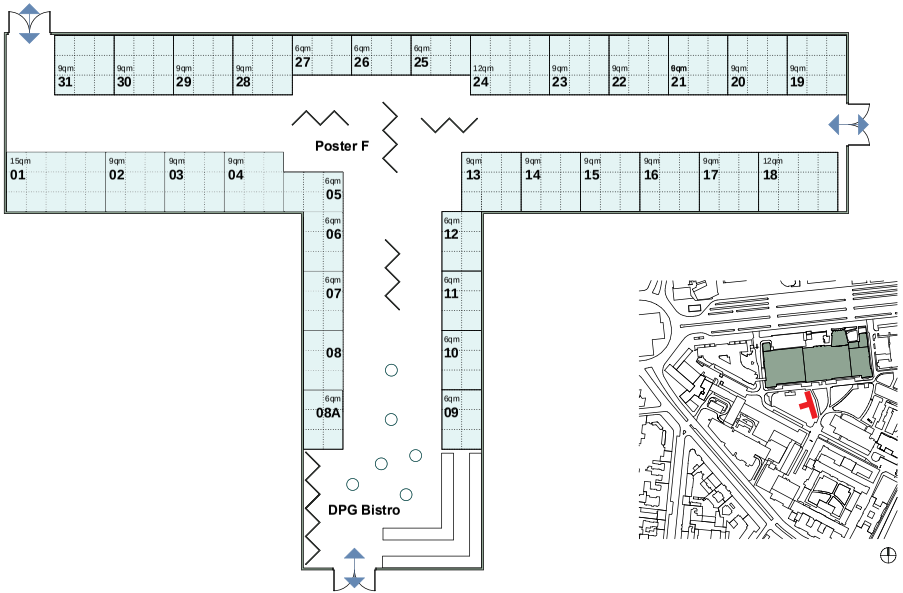

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TU-Berlin
Hauptgebäude, Pavilion

Exhibition

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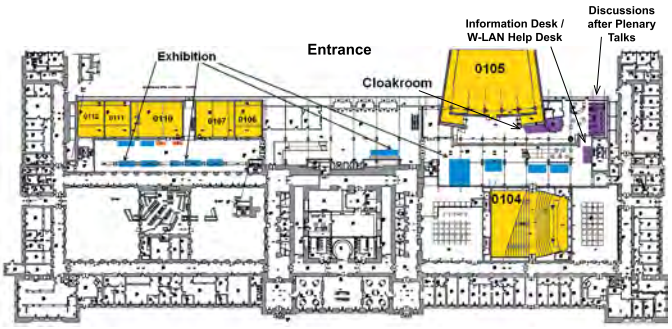
Straße des 17. Juni



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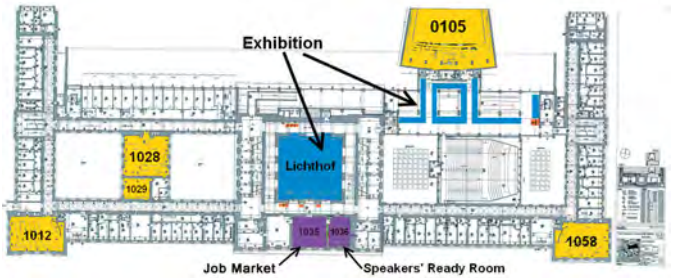

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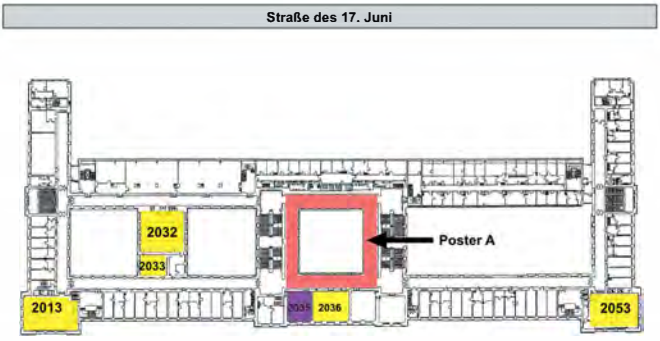

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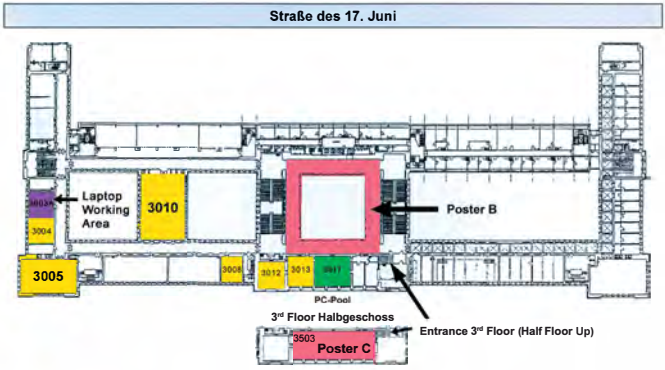

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Exhibition

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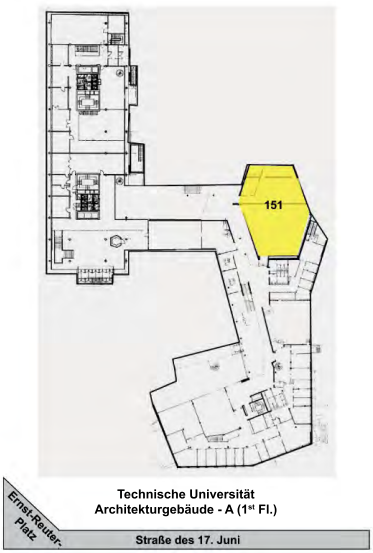
151
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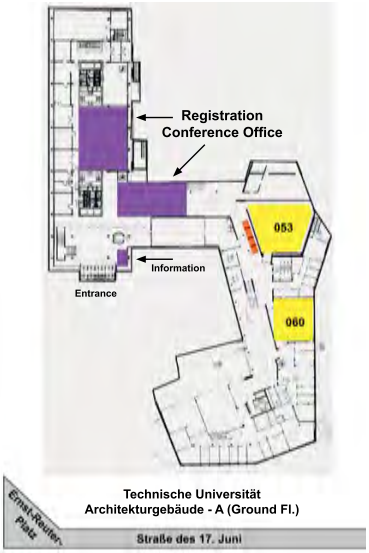
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Conference Office
053
Information
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060
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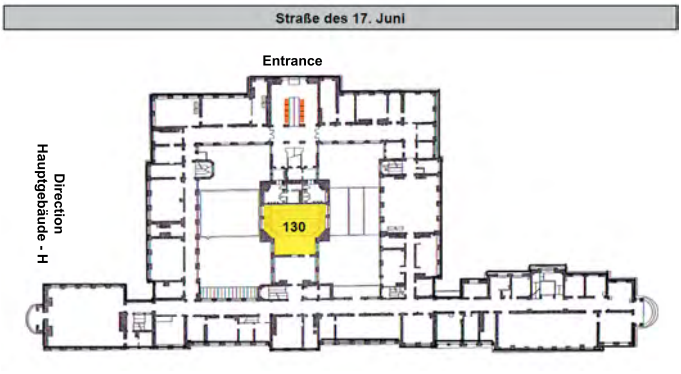

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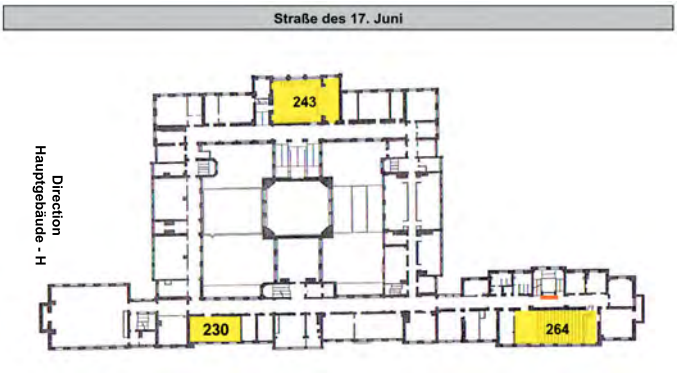

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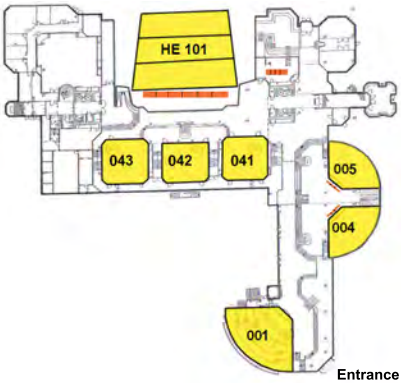

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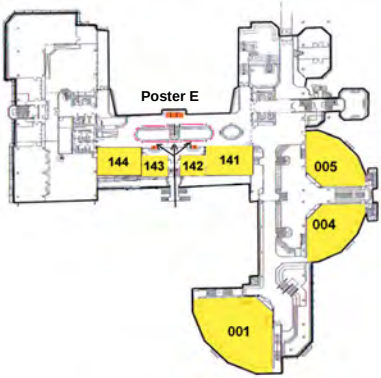

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334
333
Hardenbergstraße
Ernst-Reuter-
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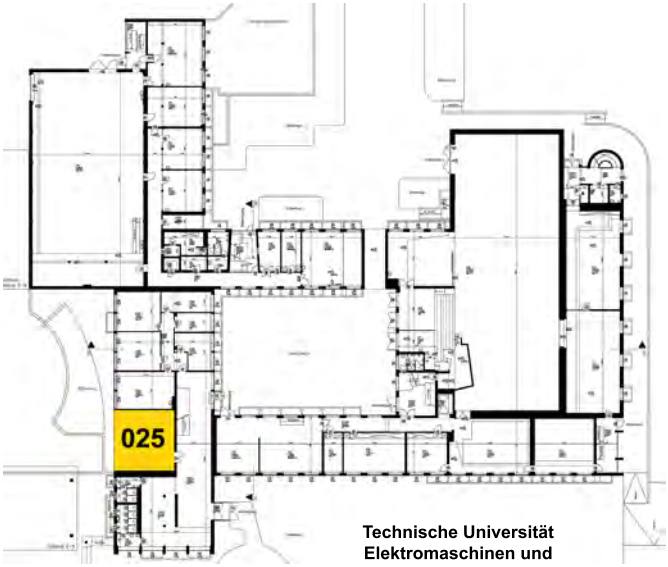

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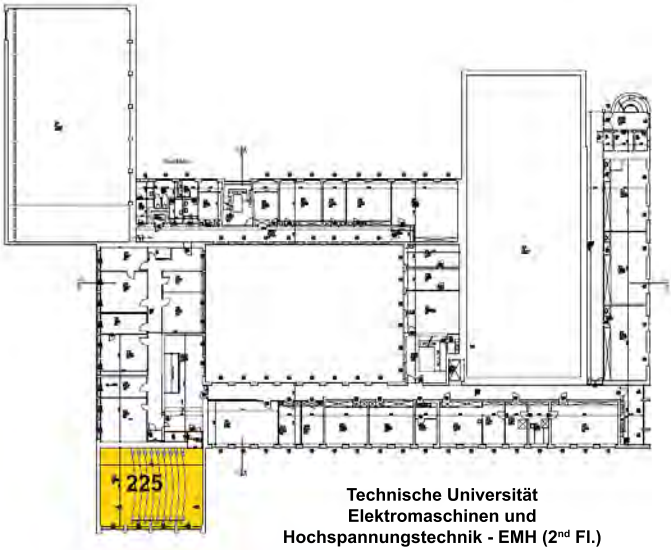

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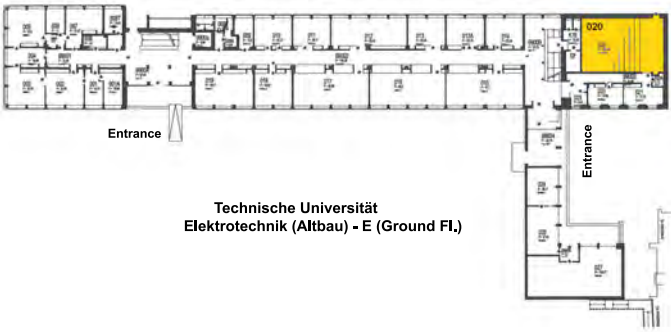

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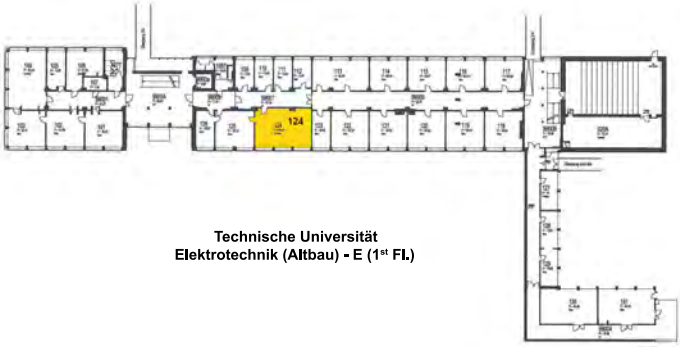

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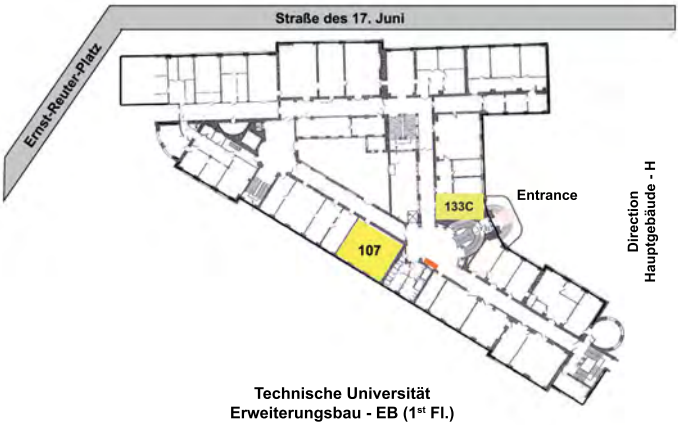

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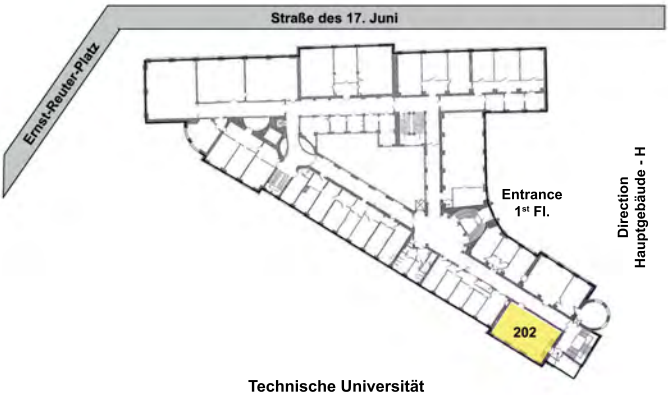

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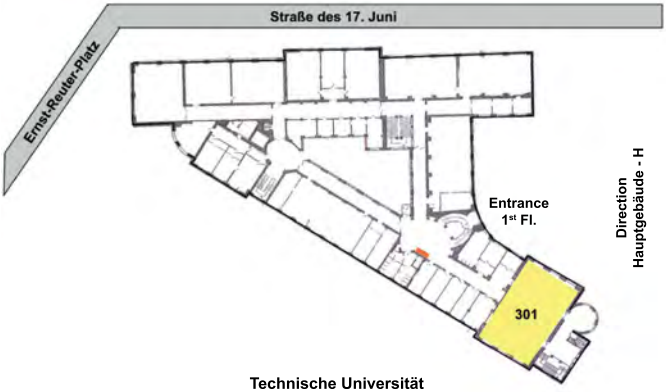

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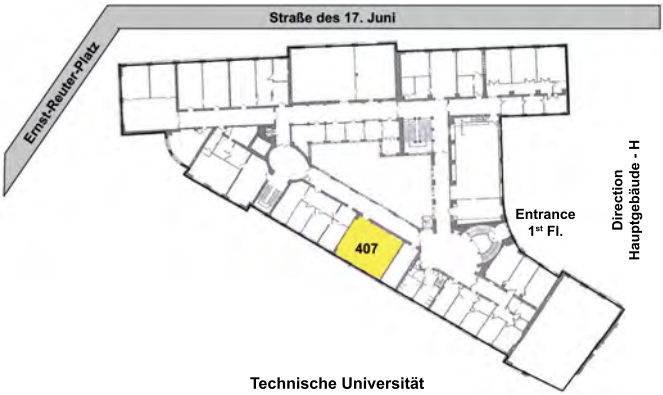

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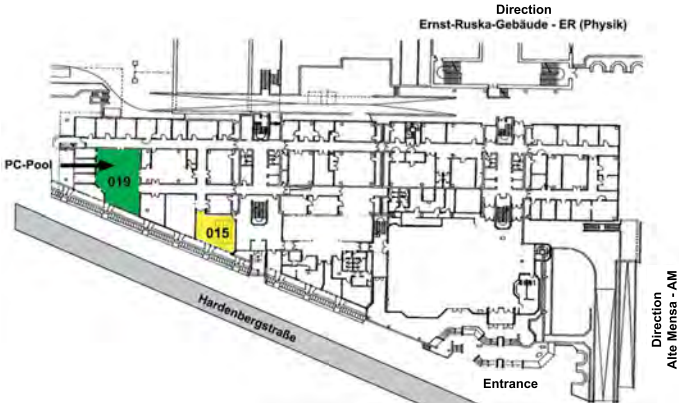

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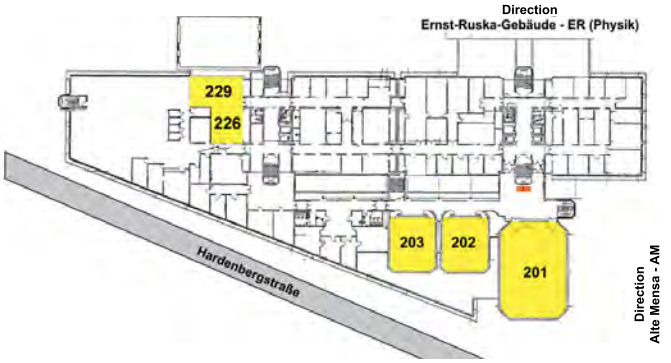

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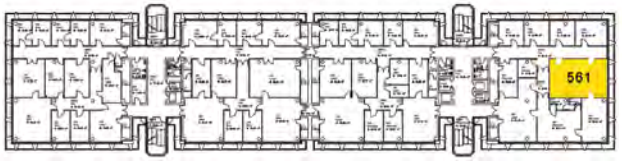

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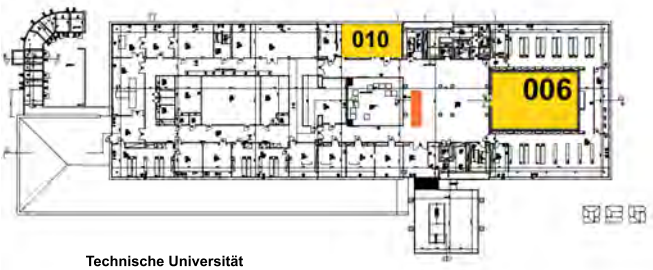

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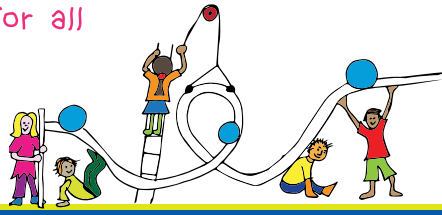

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Timetable of the Conference

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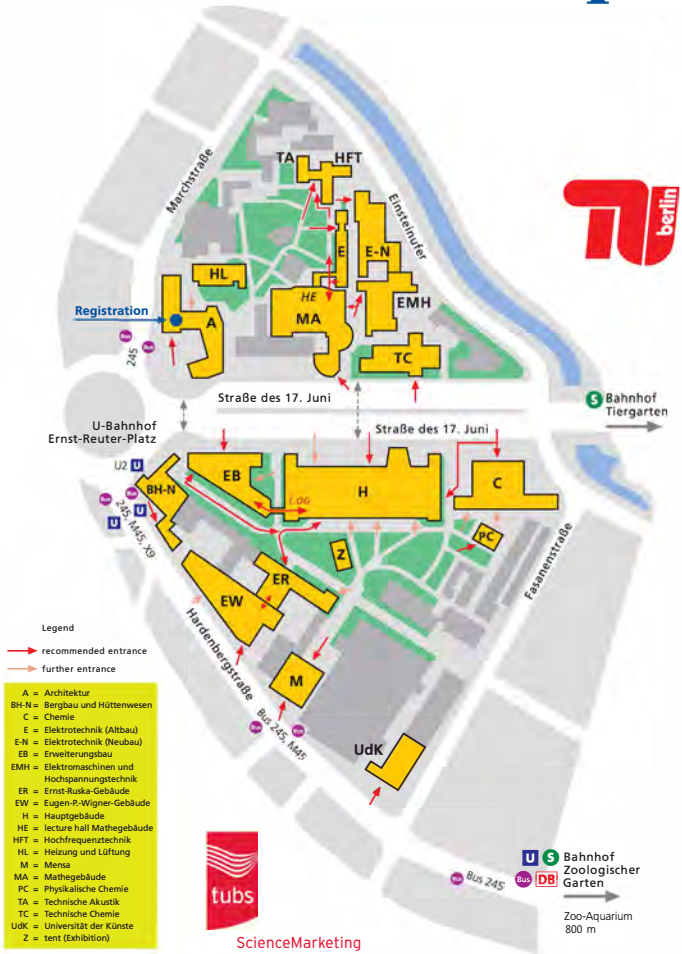

Cryophysics

TIEFTEMPERATURMESSTECHNIK

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KRYOSTATE – KÄLTEMASCHINEN

LHE/LN_2 | CRYOGEN-FREE | KÄLTEMASCHINEN



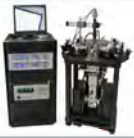
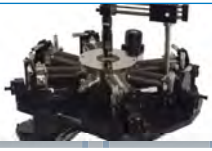
MAGNETFELD

MESSTECHNIK | ELEKTROMAGNETE | SUPRALEITENDE MAGNETE



TIEFTEMPERATUR-SPITZENMESSPLÄTZE

CRYOGEN-FREE | LHE/LN_2 | MAGNETFELD


MESSSYSTEME – STROMVERSORGUNGEN

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