

## Chemical and Polymer Physics Division Fachverband Chemische Physik und Polymerphysik (CPP)

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### Overview of Invited Talks and Sessions

(Lecture halls H1 and H3; Poster P)

#### Invited Talks

CPP 2.1	Mon	13:30–14:00	H1	<b>On the permeability of dense polymer membranes</b> — ●JOACHIM DZUBIELLA
CPP 3.1	Mon	13:30–14:00	H3	<b>Emulsion Templating: Unexpected Morphology of Monodisperse Macroporous Polystyrene</b> — ●COSIMA STUBENRAUCH, LUKAS KOCH, SOPHIA BOTSCH, WIEBKE DRENCKHAN
CPP 3.4	Mon	14:30–15:00	H3	<b>Structural Transitions of Molecules on Surfaces</b> — ●ANGELIKA KÜHNLE
CPP 4.1	Tue	10:00–10:30	H3	<b>Adaptable amphiphilic co-networks: structure and properties in relation with multi-quantum NMR</b> — ●MICHAEL LANG, REINHARD SCHOLZ, LUCAS LÖSER, CAROLIN BUNK, FRANK BÖHME, KAY SAALWÄCHTER
CPP 4.2	Tue	10:30–11:00	H3	<b>Adaptive networks through supramolecular interactions</b> — ●ILJA VOETS
CPP 4.5	Tue	11:45–12:15	H3	<b>Tunable self-assembled hydrogels from block copolymers with thermoresponsive and pH-responsive blocks</b> — ●CHRISTINE M. PAPADAKIS, FLORIAN A. JUNG, CONSTANTINOS TSITSILIANIS
CPP 7.1	Wed	10:00–10:30	H3	<b>Chemically Fueled Out-Of-Equilibrium Self-Assemblies and Autonomous Material Systems</b> — ●ANDREAS WALTHER
CPP 7.4	Wed	11:15–11:45	H3	<b>The quest for robust superhydrophobic surfaces</b> — ●ROBIN RAS
CPP 10.1	Thu	13:30–14:00	H3	<b>Nanophotonic structures by inkjet printing</b> — YIDENEKACHEW J. DONIE, QIAOSHUANG ZHANG, GUILLAUME GOMARD, ●ULI LEMMER
CPP 13.1	Fri	10:00–10:30	H3	<b>Electron-lattice relaxation effects in halide perovskites</b> — ●DAVID A. EGGER
CPP 13.6	Fri	11:45–12:15	H3	<b>Light-actuated colloidal nano- and microparticles</b> — ●CORNELIA DENZ, MATTHIAS RUESCHENBAUM, VALERIA BOBKOVA, JULIAN JEGGLE, RAPHAEL WITKOWSKI
CPP 15.1	Fri	13:30–14:00	H3	<b>Data-driven protein design and simulation</b> — ●ANDREW FERGUSON

#### Invited talks of the joint symposium Topological constraints in biological and synthetic soft matter (SYSM)

See SYSM for the full program of the symposium.

SYSM 1.1	Mon	10:00–10:30	Audimax 1	<b>Interphase Chromatin Undergoes a Local Sol-Gel Transition Upon Cell Differentiation</b> — ●ALEXANDRA ZIDOVSKA
SYSM 1.2	Mon	10:30–11:00	Audimax 1	<b>Topological Tuning of DNA Mobility in Entangled Solutions of Supercoiled Plasmids</b> — ●JAN SMREK, JONATHAN GARAMELLA, RAE ROBERTSON-ANDERSON, DAVIDE MICHIELETTA
SYSM 1.3	Mon	11:15–11:45	Audimax 1	<b>Dynamics of macromolecular networks under topological and environmental constraints: some outstanding challenges</b> — ●DIMITRIS VLASSOPOULOS
SYSM 1.4	Mon	11:45–12:15	Audimax 1	<b>Supercoiling in a Protein Increases its Stability</b> — ●JOANNA SULKOWSKA, SZYMON NIEWIECZERZAL
SYSM 1.5	Mon	12:15–12:45	Audimax 1	<b>Topology for soft matter photonics</b> — ●IGOR MUSEVIC

### Invited talks of the joint symposium SKM Dissertation Prize 2021 (SYSD)

See SYSD for the full program of the symposium.

SYSD 1.1	Mon	10:00–10:25	Audimax 2	<b>Avoided quasiparticle decay from strong quantum interactions</b> — •RUBEN VERRESEN, RODERICH MOESSNER, FRANK POLLMANN
SYSD 1.2	Mon	10:25–10:50	Audimax 2	<b>Co-evaporated Hybrid Metal-Halide Perovskite Thin-Films for Optoelectronic Applications</b> — •JULIANE BORCHERT
SYSD 1.3	Mon	10:55–11:20	Audimax 2	<b>Attosecond-fast electron dynamics in graphene and graphene-based interfaces</b> — •CHRISTIAN HEIDE
SYSD 1.4	Mon	11:20–11:45	Audimax 2	<b>The thermodynamics of stochastic systems with time delay</b> — •SARAH A.M. LOOS
SYSD 1.5	Mon	11:50–12:15	Audimax 2	<b>First Results on Atomically Resolved Spin-Wave Spectroscopy by TEM</b> — •BENJAMIN ZINGSEM

### Invited talks of the joint symposium Multidimensional coherent spectroscopy of functional nanostructures (SYCS)

See SYCS for the full program of the symposium.

SYCS 1.1	Tue	10:00–10:30	Audimax 1	<b>Multidimensional coherent spectroscopy of perovskite nanocrystals</b> — •STEVEN CUNDIFF, ALBERT LIU, DIOGO ALMEIDA, GABRIEL NAGAMINE, LAZARO PADILHA
SYCS 1.2	Tue	10:30–11:00	Audimax 1	<b>Coherent multidimensional techniques for the characterization of nanomaterials</b> — •ELISABETTA COLLINI
SYCS 1.3	Tue	11:00–11:30	Audimax 1	<b>Exciton Dynamics revealed by Multidimensional Coherent Spectroscopies applied to Light-Harvesting Systems</b> — •THOMAS L.C. JANSEN
SYCS 1.4	Tue	11:45–12:15	Audimax 1	<b>Revealing couplings with action-based 2D microscopy</b> — •TOBIAS BRIXNER
SYCS 1.5	Tue	12:15–12:45	Audimax 1	<b>Low-frequency phonons affect charge carrier dynamics in hybrid perovskites</b> — •MISCHA BONN

### Invited talks of the joint symposium Amorphous materials: structure, dynamics, properties (SYAM)

See SYAM for the full program of the symposium.

SYAM 1.1	Tue	13:30–14:00	Audimax 1	<b>Glassy dynamics of vitrimers</b> — •LIESBETH JANSSEN
SYAM 1.2	Tue	14:00–14:30	Audimax 1	<b>Liquid-Liquid Phase Transition in Thin Vapor-Deposited Glass Films</b> — •ZAHRA FAKHRAAI
SYAM 1.3	Tue	14:30–15:00	Audimax 1	<b>Connection between structural properties and atomic motion in ultraviscous metallic liquids close to the dynamical arrest</b> — •BEATRICE RUTA, NICO NEUBER, ISABELLA GALLINO, RALF BUSCH
SYAM 1.4	Tue	15:15–15:45	Audimax 1	<b>Signatures of the spatial extent of plastic events in the yielding transition in amorphous solids</b> — •CELINE RUSCHER, DANIEL KORCHINSKI, JOERG ROTTLER
SYAM 1.5	Tue	15:45–16:15	Audimax 1	<b>Constitutive law for dense agitated granular flows: from theoretical description to rheology experiment</b> — •OLFA D'ANGELO, W. TILL KRANZ

### Invited talks of the joint symposium Curvilinear condensed matter (SYCL)

See SYCL for the full program of the symposium.

SYCL 1.1	Wed	10:00–10:30	Audimax 2	<b>Curvature Effects and Topological Defects in Chiral Condensed and Soft Matter</b> — •AVADH SAXENA
SYCL 1.2	Wed	10:30–11:00	Audimax 2	<b>Topology and Transport in nanostructures with curved geometries</b> — •CARMINE ORTIX
SYCL 2.1	Wed	11:15–11:45	Audimax 2	<b>Superconductors and nanomagnets evolve into 3D</b> — •OLEKSANDR DOBROVOLSKIY
SYCL 2.2	Wed	11:45–12:15	Audimax 2	<b>Properties of domain walls and skyrmions in curved ferromagnets</b> — •VOLODYMYR KRAVCHUK

SYCL 2.3 Wed 12:15–12:45 Audimax 2 **X-ray three-dimensional magnetic imaging** — ●VALERIO SCAGNOLI

### Prize talks of the joint Awards Symposium (SYAW)

See SYAW for the full program of the symposium.

SYAW 1.1 Wed 13:30–14:00 Audimax 1 **Organic semiconductors - materials for today and tomorrow** — ●ANNA KÖHLER

SYAW 1.2 Wed 14:00–14:30 Audimax 1 **PbTe/CdTe nanocomposite as an attractive candidate for room-temperature infrared detectors** — ●GRZEGORZ KARCZEWSKI

SYAW 1.3 Wed 14:40–15:10 Audimax 1 **Fingerprints of correlation in electronic spectra of materials** — ●LUCIA REINING

SYAW 1.4 Wed 15:10–15:40 Audimax 1 **Artificial Spin Ice: From Correlations to Computation** — ●NAËMI LEO

SYAW 1.5 Wed 15:40–16:10 Audimax 1 **From microwave optomechanics to quantum transport – carbon nanotubes as highly versatile hybrid devices** — ●ANDREAS K. HÜTTEL

SYAW 1.6 Wed 16:20–16:50 Audimax 1 **Quantum spin dynamics of a spin-1/2 antiferromagnetic Heisenberg-Ising chain** — ●ZHE WANG

SYAW 1.7 Wed 16:50–17:20 Audimax 1 **Imaging the effect of electron transfer at the atomic scale** — ●LAERTE PATERA

### Invited talks of the joint symposium Spain as Guest of Honor (SYES)

See SYES for the full program of the symposium.

SYES 1.1 Wed 13:30–13:40 Audimax 2 **DFMC-GEFES** — ●JULIA HERRERO-ALBILLOS

SYES 1.2 Wed 13:40–14:10 Audimax 2 **Towards Phononic Circuits based on Optomechanics** — ●CLIVIA M. SOTOMAYOR TORRES

SYES 1.3 Wed 14:10–14:40 Audimax 2 **Adding magnetic functionalities to epitaxial graphene** — ●RODOLFO MIRANDA

SYES 1.4 Wed 14:45–15:15 Audimax 2 **Bringing nanophotonics to the atomic scale** — ●JAVIER AIZPURUA

SYES 1.5 Wed 15:15–15:45 Audimax 2 **Hydrodynamics of collective cell migration in epithelial tissues** — ●JAUME CASADEMUNT

SYES 1.6 Wed 15:45–16:15 Audimax 2 **Understanding the physical variables driving mechanosensing** — ●PERE ROCA-CUSACHS

### Invited talks of the joint symposium Diversity on the Device Scale (SYHN)

See SYHN for the full program of the symposium.

SYHN 1.1 Thu 10:00–10:30 Audimax 1 **Scaling behavior of stiffness and strength of hierarchical network nanomaterials** — ●SHAN SHI

SYHN 1.2 Thu 10:30–11:00 Audimax 1 **Functional and programmable DNA nanotechnology** — ●LAURA NA LIU

SYHN 1.3 Thu 11:15–11:45 Audimax 1 **Multivalent nanoparticles for targeted binding** — ●STEFANO ANGIOLETTI-UBERTI

SYHN 1.4 Thu 11:45–12:15 Audimax 1 **Programming Nanoscale Self-Assembly** — ●OLEG GANG

SYHN 1.5 Thu 12:15–12:45 Audimax 1 **Achieving Global Tunability via Local Programming of a Structure's Composition** — ●JOCHEN MUELLER

### Invited talks of the joint symposium Active nematics: From 2D to 3D (SYAN)

See SYAN for the full program of the symposium.

SYAN 1.1 Fri 10:00–10:30 Audimax 1 **Corrugated patterns made from an active nematic sheet** — ●ANIS SENOSSI, SHUNICHI KASHIDA, RAPHAËL VOITURIEZ, JEAN-CHRISTOPHE GALAS, ANANYO MAITRA, ESTEVEZ-TORRES ANDRÉ

SYAN 1.2 Fri 10:30–11:00 Audimax 1 **Wrinkling instability in 3D active nematics** — ●ISABELLA GUIDO

SYAN 1.3 Fri 11:15–11:45 Audimax 1 **Three-dimensional active nematic defects and their energetics** — ●MIHA RAVNIK

SYAN 1.4	Fri	11:45–12:15	Audimax 1	<b>Liquid-crystal organization of liver tissue</b> — •BENJAMIN M FRIEDRICH, HERNAN MORALES-NAVARRETE, ANDRE SCHOLICH, HIDE-NORI NONAKA, FABIAN SEGOVIA MIRANDA, STEFFEN LANGE, JENS KARSCHAU, YANNIS KALAZIDIS, FRANK JÜLICHER, MARINO ZERIAL
SYAN 1.5	Fri	12:15–12:45	Audimax 1	<b>Machine learning active nematic hydrodynamics</b> — •VINCENZO VITELLI

## Sessions

CPP 1.1–1.7	Mon	11:15–13:00	H3	<b>2D materials and their heterostructures (joint session DS/HL/CPP)</b>
CPP 2.1–2.3	Mon	13:30–14:30	H1	<b>Hydrogels and Microgels</b>
CPP 3.1–3.8	Mon	13:30–16:15	H3	<b>Polymer Physics</b>
CPP 4.1–4.7	Tue	10:00–12:45	H3	<b>Focus: The Physics of Adaptive Polymer Networks</b>
CPP 5.1–5.19	Tue	17:30–19:30	P	<b>Poster Session I</b>
CPP 6.1–6.26	Tue	17:30–19:30	P	<b>Poster Session II</b>
CPP 7.1–7.8	Wed	10:00–12:45	H3	<b>Soft Matter (joint session CPP/DY)</b>
CPP 8.1–8.32	Wed	17:30–19:30	P	<b>Poster Session III</b>
CPP 9.1–9.5	Thu	11:45–13:00	H2	<b>Active Matter (joint session DY/BP/CPP)</b>
CPP 10.1–10.9	Thu	13:30–16:15	H3	<b>Organic Electronics and Photovoltaics, Electrical and Optical Properties (joint session CPP/KFM)</b>
CPP 11.1–11.4	Thu	15:15–16:15	H5	<b>Thin Oxides and Organic Thin Films (joint session DS/CPP)</b>
CPP 12	Thu	17:30–18:30	MVCP	<b>Annual General Meeting of the CPP Division (CPP Mitgliederversammlung)</b>
CPP 13.1–13.8	Fri	10:00–12:45	H3	<b>Molecular Electronics, Hybrid and Perovskite Photovoltaics</b>
CPP 14.1–14.4	Fri	10:00–11:00	H2	<b>Condensed-Matter Simulations augmented by Advanced Statistical Methodologies (joint session DY/CPP)</b>
CPP 15.1–15.5	Fri	13:30–15:00	H3	<b>Theory and Simulation (joint session CPP/DY)</b>

## Annual General Meeting of the Chemical and Polymer Physics Division

Thursday 17:30–18:30 MVCP

- Report of the current speaker team
- Election of the second deputy speaker
- Miscellaneous