

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

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### Overview of Invited Talks and Sessions

(Lecture rooms C 130, C 230, C 243, C 264, and PC 203; Poster A, B, and C)

#### Invited Talks

CPP 3.1	Mon	9:30–10:00	C 243	<b>Time-resolved in-situ x-ray scattering to resolve structure formation in thin film processing</b> — •EVA M. HERZIG
CPP 4.8	Mon	11:15–11:45	C 264	<b>Reconfigurable colloidal structures</b> — •DANIELA J. KRAFT
CPP 5.1	Mon	9:30–10:00	PC 203	<b>Strain-controlled criticality governs the nonlinear mechanics of fibre networks</b> — •ABHINAV SHARMA, ALBERT LICUP, KARIN JANSEN, ROBBIE RENS, MICHAEL SHEINMAN, JORDAN SHIVERS, JINGCHEN FENG, GIJSJE KOENDERINK, FRED MACKINTOSH
CPP 23.1	Tue	9:30–10:00	C 243	<b>Non-fullerene acceptors for commercially viable organic photovoltaics</b> — •DERYA BARAN
CPP 25.1	Tue	9:30–10:00	PC 203	<b>Understanding self-assembly in gyroid terpolymer films</b> — •ILJA GUNDEL
CPP 25.6	Tue	11:15–11:45	PC 203	<b>Soft Interfaces Studied with the Quartz Crystal Microbalance</b> — •DIETHELM JOHANNSMANN, ARNE LANGHOFF
CPP 30.1	Tue	11:45–12:15	C 264	<b>Novel hyphenated rheology techniques for the study of quiescent and flow-induced polymer crystallization</b> — VOLKER RÄNTZSCH, MÜRÜVVET BEGÜM ÖZEN, KARL-FRIEDRICH RATZSCH, GISELA GUTHAUSEN, •MANFRED WILHELM
CPP 31.1	Tue	14:00–14:30	PC 203	<b>The role of correlations in the collective behaviour of microswimmer suspensions</b> — •ALEXANDER MOROZOV
CPP 38.1	Wed	9:30–10:00	C 230	<b>The favorite polymer libations</b> — •CARLOS M. MARQUES, DEBASHISH MUKHERJI, KURT KREMER
CPP 39.1	Wed	9:30–10:00	C 243	<b>Charge generation and recombination in an organic BHJ solar cell with low energetic offsets</b> — •THUC-QUYEN NGUYEN
CPP 40.1	Wed	9:30–10:00	C 264	<b>Slippage over superhydrophobic surfaces: fundamentals and local phenomena</b> — •CLARISSA SCHÖNECKER, DAVID SCHÄFFEL, KALOIAN KOYNOV, DORIS VOLLMER, HANS-JÜRGEN BUTT
CPP 45.1	Wed	11:00–11:30	C 243	<b>Double-Semidilute Liquid and Gel Coacervates formed by Oppositely Charged Polyelectrolytes</b> — •MICHAEL RUBINSTEIN, SERGEY PANYUKOV, QI LIAO
CPP 70.1	Thu	15:00–15:30	C 230	<b>Crystallization in melts of semi-flexible hard polymer chains: An interplay of entropies and dimensions</b> — •WOLFGANG PAUL, TIMUR SHAKIROV
CPP 72.1	Thu	15:00–15:30	C 264	<b>Ionic (in)homogeneity in metal-halide perovskites</b> — •EVA UNGER
CPP 77.1	Fri	9:30–10:00	C 243	<b>High-Performance Organic Transistors</b> — •KARL LEO

#### Invited talks of the joint symposium SYMS

See SYMS for the full program of the symposium.

SYMS 1.1	Mon	15:00–15:30	H 0105	<b>Stochastic numerical algorithms: from molecular dynamics to big data analytics</b> — •BENEDICT LEIMKUHNER
SYMS 1.2	Mon	15:30–16:00	H 0105	<b>A Generally-Applicable Machine-Learning Scheme for Materials and Molecules</b> — •MICHELE CERIOTTI

SYMS 1.3	Mon	16:00–16:30	H 0105	<b>Girsanov reweighting for path ensembles and Markov state models</b> — ●BETTINA G. KELLER, LUCA DONATI, CARSTEN HARTMANN
SYMS 1.4	Mon	16:45–17:15	H 0105	<b>Liquid State Theory Meets Deep Learning and Molecular Informatics</b> — ●ALPHA LEE
SYMS 1.5	Mon	17:15–17:45	H 0105	<b>Computational high-throughput screening of drug-membrane thermodynamics</b> — ●TRISTAN BEREAU

### Invited talks of the joint symposium SYBS

See SYBS for the full program of the symposium.

SYBS 1.1	Tue	9:30–10:00	H 0105	<b>Bacterial collective behaviours</b> — ●KNUT DRESCHER
SYBS 1.2	Tue	10:00–10:30	H 0105	<b>Nonlinear dynamics of beating cilia and flagella: Swimming, steering, and synchronization</b> — ●BENJAMIN M. FRIEDRICH
SYBS 1.3	Tue	10:30–11:00	H 0105	<b>Learning to navigate in dynamic environments: animal behavior and artificial intelligence</b> — ●ANTONIO CELANI
SYBS 1.4	Tue	11:15–11:45	H 0105	<b>Suspensions of active colloids</b> — ●CECILE COTTIN-BIZONNE, FÉLIX GINOT, ISAAC THEURKAUFF, CHRISTOPHE YBERT
SYBS 1.5	Tue	11:45–12:15	H 0105	<b>Spontaneous chiral symmetry breaking in active fluids</b> — ●JÖRN DUNKEL

### Invited talks of the joint symposium SYVC

See SYVC for the full program of the symposium.

SYVC 1.1	Wed	15:00–15:30	H 0105	<b>Magneto-ionic control of interfacial magnetism</b> — ●GEOFFREY BEACH
SYVC 1.2	Wed	15:30–16:00	H 0105	<b>Ionic Control of Materials Beyond Interfaces</b> — ●DUSTIN GILBERT
SYVC 1.3	Wed	16:00–16:30	H 0105	<b>Microscopic Mechanisms of Memristive Switching in Metal Oxides</b> — ●RAINER WASER, STEPHAN MENZEL, REGINA DITTMANN
SYVC 1.4	Wed	17:00–17:30	H 0105	<b>In-situ and operando SQUID magnetometry under electrochemical control</b> — ●ROLAND WÜRSCHUM, MARKUS GÖSSLER, GREGOR KLINSER, EVA-MARIA STEYSKAL, HEINZ KRENN
SYVC 1.5	Wed	17:30–18:00	H 0105	<b>Reversible chemistry as a tool for dynamic control of physical properties</b> — ●ROBERT KRUK, SUBHO DASGUPTA, BIJOY DAS, HORST HAHN

### Invited talks of the joint symposium SYTH

See SYTH for the full program of the symposium.

SYTH 1.1	Thu	9:30–10:00	H 0105	<b>Extracting the electrical properties of metal halide perovskite semiconductors using transient terahertz spectroscopy</b> — ●MICHAEL B. JOHNSTON
SYTH 1.2	Thu	10:00–10:30	H 0105	<b>THz nanophotonics with 2D materials</b> — ●MIRIAM SERENA VITIELLO
SYTH 1.3	Thu	10:30–11:00	H 0105	<b>Nonlinear responses and 2D spectroscopy using THz electric and magnetic fields</b> — ●KEITH A NELSON
SYTH 1.4	Thu	11:15–11:45	H 0105	<b>Low energy electrodynamics of correlated spin systems.</b> — ●N. PETER ARMITAGE
SYTH 1.5	Thu	11:45–12:15	H 0105	<b>Lightwave scanning tunneling microscopy of single molecules</b> — DOMINIK PELLER, TYLER L. COCKER, PING YU, RUPERT HUBER, ●JASCHA REPP

### Invited talks of the joint symposium SYAM

See SYAM for the full program of the symposium.

SYAM 1.1	Fri	9:30–10:00	H 0105	<b>Bringing Dino-Birds to life – Synchrotron X-ray fluorescence and Raman imaging of ancient materials</b> — ●UWE BERGMANN
SYAM 1.2	Fri	10:00–10:30	H 0105	<b>Linear and Nonlinear Optical Properties of Cultural Heritage Materials</b> — ●MARTA CASTILLEJO
SYAM 1.3	Fri	10:30–11:00	H 0105	<b>Morphology and topology of multiscale pore networks: Imaging structural alteration and hydric invasion</b> — ●PIERRE LEVITZ

SYAM 1.4	Fri	11:15–11:45	H 0105	<b>Painting cracks: a way to reveal physical properties of matter —</b> •LUDOVIC PAUCHARD
SYAM 1.5	Fri	11:45–12:15	H 0105	<b>Finite element analysis and biomechanical interpretation of fossil material properties —</b> •EMILY RAYFIELD

## Sessions

CPP 1.1–1.11	Mon	9:30–13:00	C 130	<b>Focus: Molecularly Functionalized Low-Dimensional Systems I - organized by Antonio Setaro, Carola Meyer, Aravind Vijayaraghvan and Matteo Mannini</b>
CPP 2.1–2.6	Mon	9:30–11:00	C 230	<b>Electrical, Dielectrical and Optical Properties of Thin Films I</b>
CPP 3.1–3.12	Mon	9:30–13:00	C 243	<b>Organic Electronics and Photovoltaics - Layer Morphology and Molecular Aggregation</b>
CPP 4.1–4.13	Mon	9:30–13:00	C 264	<b>Complex Fluids and Colloids I (joint session CPP/DY)</b>
CPP 5.1–5.11	Mon	9:30–12:45	PC 203	<b>Polymer Networks and Elastomers I</b>
CPP 6.1–6.10	Mon	9:30–12:15	H 0112	<b>Magnetic nanoparticles (joint session MA/CPP)</b>
CPP 7.1–7.12	Mon	9:30–13:00	H 1058	<b>Biomaterials and Biopolymers (joint session BP/CPP)</b>
CPP 8.1–8.14	Mon	9:30–13:15	H 2032	<b>2D Materials (Symposium and Joint Session with HL and O): Session I (joint session DS/CPP/HL)</b>
CPP 9.1–9.12	Mon	10:00–13:15	BH-N 243	<b>Active Matter I (joint session DY/CPP/BP)</b>
CPP 10.1–10.10	Mon	10:30–13:00	HL 001	<b>Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials I (joint session O/MM/DS/TT/CPP)</b>
CPP 11.1–11.7	Mon	11:15–13:00	C 230	<b>Responsive and Adaptive Systems</b>
CPP 12.1–12.8	Mon	15:00–17:30	C 130	<b>Focus: Molecularly Functionalized Low-Dimensional Systems II - organized by Antonio Setaro, Carola Meyer, Aravind Vijayaraghvan and Matteo Mannini</b>
CPP 13.1–13.6	Mon	15:00–16:30	C 243	<b>Organic Electronics and Photovoltaics - Hybrid and Organic Layer Systems</b>
CPP 14.1–14.10	Mon	15:00–17:45	C 264	<b>Interfaces and Thin Films I</b>
CPP 15.1–15.6	Mon	15:00–16:30	MA 144	<b>Solid-liquid interfaces: Reactions and electrochemistry I (joint session O/CPP)</b>
CPP 16.1–16.9	Mon	15:00–17:15	HL 001	<b>Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials II (joint session O/MM/DS/TT/CPP)</b>
CPP 17.1–17.12	Mon	15:30–18:45	BH-N 243	<b>Active Matter II (joint session DY/CPP/BP)</b>
CPP 18.1–18.14	Mon	15:30–19:15	BH-N 334	<b>Focus: Droplets (joint session DY/CPP)</b>
CPP 19.1–19.6	Mon	16:45–18:15	MA 144	<b>Solid-liquid interfaces: Reactions and electrochemistry II (joint session O/CPP)</b>
CPP 20.1–20.62	Mon	17:30–19:30	Poster A	<b>Poster Session I</b>
CPP 21.1–21.12	Tue	9:30–13:00	C 130	<b>Focus: Smart Hydrogels and Hydrogel Based Devices I - organized by Gerald Gerlach, Walter Richtering and Thomas Hellweg</b>
CPP 22.1–22.4	Tue	9:30–10:30	C 230	<b>Data-driven Methods in Molecular Simulations of Soft-Matter Systems</b>
CPP 23.1–23.12	Tue	9:30–13:00	C 243	<b>Organic Photovoltaics I</b>
CPP 24.1–24.8	Tue	9:30–11:45	C 264	<b>Complex Fluids and Colloids II (joint session CPP/DY)</b>
CPP 25.1–25.11	Tue	9:30–13:00	PC 203	<b>Interfaces and Thin Films II</b>
CPP 26.1–26.14	Tue	9:30–13:15	H 2032	<b>2D Materials (Symposium and Joint Session with HL and O): Session II (joint session DS/CPP/HL)</b>
CPP 27.1–27.5	Tue	10:30–13:00	HL 001	<b>Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials III (joint session O/MM/DS/TT/CPP)</b>
CPP 28.1–28.6	Tue	11:00–12:30	BH-N 334	<b>Condensed Matter Simulations augmented by Advanced Statistical Methodologies I (joint session DY/CPP)</b>
CPP 29.1–29.7	Tue	11:15–13:00	C 230	<b>Nanostructures, Nanostructuring and Nanosized Soft Matter I</b>
CPP 30.1–30.4	Tue	11:45–13:00	C 264	<b>Friction and Rheology</b>
CPP 31.1–31.7	Tue	14:00–16:00	PC 203	<b>Modeling and Simulation of Soft Matter I (joint session CPP/DY)</b>

CPP 32.1–32.13	Tue	14:00–16:00	Poster B	<b>Poster Session II</b>
CPP 33.1–33.42	Tue	14:00–16:00	Poster C	<b>Poster Session III</b>
CPP 34.1–34.5	Tue	14:00–15:15	BH-N 128	<b>Condensed Matter Simulations augmented by Advanced Statistical Methodologies II (joint session DY/CPP)</b>
CPP 35.1–35.7	Tue	14:00–15:45	BH-N 243	<b>Microswimmers I (joint session DY/BP/CPP)</b>
CPP 36.1–36.7	Tue	14:00–15:45	EB 107	<b>Particulate Matter: From microscopic interactions to collective motion (joint session DY/CPP)</b>
CPP 37.1–37.11	Wed	9:30–13:00	C 130	<b>Focus: Smart Hydrogels and Hydrogel Based Devices II - organized by Gerald Gerlach, Walter Richtering and Thomas Hellweg</b>
CPP 38.1–38.8	Wed	9:30–12:00	C 230	<b>Modeling and Simulation of Soft Matter II (joint session CPP/DY)</b>
CPP 39.1–39.4	Wed	9:30–10:45	C 243	<b>Organic Photovoltaics II</b>
CPP 40.1–40.12	Wed	9:30–13:00	C 264	<b>Wetting, Microfluidics and Confined Liquids I (joint session CPP/DY)</b>
CPP 41.1–41.11	Wed	9:30–12:15	MA 001	<b>Networks (joint session SOE/DY/BP) (joint session SOE/CPP/BP/DY)</b>
CPP 42.1–42.7	Wed	9:30–12:30	EMH 025	<b>Materials for Energy Storage I (joint session KFM/CPP)</b>
CPP 43.1–43.12	Wed	9:30–13:00	H 1028	<b>Membranes and Vesicles I (joint session BP/CPP)</b>
CPP 44.1–44.9	Wed	10:30–13:00	HL 001	<b>Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials IV (joint session O/MM/DS/TT/CPP)</b>
CPP 45.1–45.7	Wed	11:00–13:00	C 243	<b>Charged Soft Matter, Polyelectrolytes and Ionic Liquids I</b>
CPP 46.1–46.58	Wed	11:00–13:00	Poster A	<b>Poster Session IV</b>
CPP 47.1–47.4	Wed	12:00–13:00	C 230	<b>Electrical, Dielectrical and Optical Properties of Thin Films II</b>
CPP 48.1–48.9	Wed	15:00–17:45	C 130	<b>Focus: Fundamental Physics of Perovskites I - organized by Lukas Schmidt-Mende and Vladimir Dyakonov</b>
CPP 49.1–49.10	Wed	15:00–17:45	C 230	<b>Soft Matter Physics: Emerging Topics, New Instruments and Methods</b>
CPP 50.1–50.8	Wed	15:00–17:15	C 243	<b>Charged Soft Matter, Polyelectrolytes and Ionic Liquids II</b>
CPP 51.1–51.7	Wed	15:00–17:00	C 264	<b>Hydrogels and Microgels</b>
CPP 52.1–52.6	Wed	15:00–16:30	PC 203	<b>Bioinspired Functional Materials, Biomaterials and Biopolymers (joint session CPP/BP)</b>
CPP 53.1–53.5	Wed	15:00–16:15	MA 144	<b>Solid-liquid interfaces: Reactions and electrochemistry III (joint session O/CPP)</b>
CPP 54.1–54.9	Wed	15:00–17:30	H 1028	<b>Microswimmers (joint session BP/CPP/DY)</b>
CPP 55.1–55.10	Wed	15:00–17:45	HL 001	<b>Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials V (joint session O/MM/DS/TT/CPP)</b>
CPP 56.1–56.7	Wed	15:00–17:50	EMH 025	<b>Materials for Energy Storage II (joint session KFM/CPP)</b>
CPP 57.1–57.12	Wed	15:30–18:45	BH-N 243	<b>Active Matter (joint session DY/CPP/BP)</b>
CPP 58.1–58.7	Wed	16:00–18:15	H 0111	<b>Organic Thin Films, Organic-Inorganic Interfaces: Session I (joint session DS/CPP)</b>
CPP 59.1–59.5	Wed	16:45–18:00	MA 144	<b>Solid-liquid interfaces: Reactions and electrochemistry IV (joint session O/CPP)</b>
CPP 60.1–60.2	Wed	17:00–17:30	C 264	<b>Polymer and Molecular Dynamics I</b>
CPP 61.1–61.11	Thu	9:30–13:00	C 130	<b>Focus: Fundamental Physics of Perovskites II - organized by Lukas Schmidt-Mende and Vladimir Dyakonov</b>
CPP 62.1–62.13	Thu	9:30–13:00	C 243	<b>Charged Soft Matter, Polyelectrolytes and Ionic Liquids III</b>
CPP 63.1–63.13	Thu	9:30–13:00	C 264	<b>Polymer and Molecular Dynamics II</b>
CPP 64.1–64.12	Thu	9:30–12:45	PC 203	<b>Nanostructures, Nanostructuring and Nanosized Soft Matter II</b>
CPP 65.1–65.11	Thu	10:00–13:00	BH-N 333	<b>Granular Matter / Contact Dynamics (joint session DY/CPP)</b>
CPP 66.1–66.12	Thu	10:00–13:15	BH-N 243	<b>Microswimmers II (joint session DY/CPP/BP)</b>
CPP 67.1–67.9	Thu	10:30–12:45	HL 001	<b>Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials VI (joint session O/MM/DS/TT/CPP)</b>
CPP 68.1–68.5	Thu	11:45–13:00	C 230	<b>Crystallization, Nucleation and Self-Assembly I</b>

CPP 69.1–69.11	Thu	15:00–18:30	C 130	<b>Focus: Polymers in Multi-Compartment and Aqueous Solutions I - organized by Jens-Uwe Sommer and Debasish Mukheri</b>
CPP 70.1–70.11	Thu	15:00–18:15	C 230	<b>Crystallization, Nucleation and Self-Assembly II</b>
CPP 71.1–71.11	Thu	15:00–18:00	C 243	<b>Organic Electronics and Photovoltaics - OLEDs and Molecular Excitations</b>
CPP 72.1–72.10	Thu	15:00–18:00	C 264	<b>Hybrid and Perovskite Photovoltaics I</b>
CPP 73.1–73.6	Thu	15:00–16:30	PC 203	<b>Functional Polymer Hybrids and Composites</b>
CPP 74.1–74.10	Thu	15:00–17:45	HL 001	<b>Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials VII (joint session O/TT/MM/DS/CPP)</b>
CPP 75	Thu	18:45–19:45	C 130	<b>Annual General Meeting of the CPP Division (CPP Mitgliederversammlung)</b>
CPP 76.1–76.6	Fri	9:30–11:30	C 130	<b>Focus: Polymers in Multi-Compartment and Aqueous Solutions II - organized by Jens-Uwe Sommer and Debasish Mukheri</b>
CPP 77.1–77.12	Fri	9:30–13:00	C 243	<b>Organic Electronics and Photovoltaics - Transport and Doping</b>
CPP 78.1–78.12	Fri	9:30–12:45	C 264	<b>Hybrid and Perovskite Photovoltaics II</b>
CPP 79.1–79.8	Fri	9:30–11:30	PC 203	<b>Wetting, Microfluidics and Confined Liquids II</b>
CPP 80.1–80.6	Fri	9:30–11:00	H 0111	<b>Organic Thin Films, Organic-Inorganic Interfaces: Session II (joint session DS/CPP)</b>
CPP 81.1–81.10	Fri	9:30–12:00	H 1058	<b>Active Matter (joint session BP/CPP/DY)</b>
CPP 82.1–82.9	Fri	9:30–12:00	H 2013	<b>Membranes and Vesicles II (joint session BP/CPP)</b>
CPP 83.1–83.10	Fri	9:30–12:30	H 2032	<b>2D Materials (Symposium and Joint Session with HL and O): Session III (joint session DS/CPP/HL)</b>
CPP 84.1–84.10	Fri	10:00–12:45	BH-N 334	<b>Glasses and Glas transition (joint session DY/CPP)</b>
CPP 85.1–85.4	Fri	10:30–11:30	MA 144	<b>Molecular films: Photovoltaics, electronics and morphology (joint session O/CPP)</b>
CPP 86.1–86.9	Fri	10:30–12:45	HL 001	<b>Focus Session: Frontiers of Electronic-Structure Theory: Correlated Electron Materials VIII (joint session O/TT/MM/DS/CPP)</b>

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

Thursday 18:45–19:45 C 130