

CMWS WATER DAYS 2025

Location, if not indicated differently: FLASH seminar room, building 28c, 2nd floor, DESY

Programme

Tuesday February 25

13:00 Registration

Welcome and General CMWS Session

Chair: Claudia Goy (DESY)

13:30	Franz Kärtner (DESY / UHH)	Welcome to DESY and Photon Science
13:50	Melanie Schnell (DESY / CAU Kiel)	Status & future of CMWS
14:10	Traugott Scheytt (TU BA Freiberg)	How molecular water research benefits from facilities and living labs at TUBAF
14:25	Ellen Adams (HZDR)	Molecular water science at Helmholtz-Zentrum Dresden-Rossendorf
14:40	Coffee break	

Science Session 1

Chair: Patrick Huber (DESY/ TUHH)

15:10	Olivier Vincent (CNRS / U Lyon 1)	Humidity-triggered phase change and transport of water and solutions in nanopores
15:50	Volkan Filiz	Membranes and Synchrotron
16:10	Max Rauscher (MU Loeben)	Flow-dependent capacitive water deionization: A time- and position-resolved synchrotron investigation
16:30	Randeer Pratap Gautam (DESY / U Siegen)	Investigation of protein diffusion in ferritin systems at low temperatures using XPCS
16:50	Estelle Becquevort (KU Leuven / DESY)	In situ NMR/dielectric spectroscopy unravelling water – ice dynamics in nanoconfined clathrate formation

17:30 Lab tours

18:30 Poster Session & Dinner
(Canteen extension, building 9a, 1st floor)

Wednesday February 26

Science Session 2

Chair: Iain Wilkinson (HZB)

08:50	Petr Slavicek (U Chemistry and Technology, Prague)	Electrons in water: birth, transport and reactivity
09:30	Anthony Ferté (DESY)	Electron impact excitation and ionization of liquid water
09:50	Nicolas Velasquez (FHI)	Ultrafast charge transfer in aqueous L-cysteine
10:10	Svenja Hövelmann (DESY / CAU Kiel)	X-ray scattering studies of light induced dynamics at liquid interfaces and biological membranes.
10:30	Coffee break	

11: 00 Career Workshop (FLASH seminar room, building 28c, 2nd floor)

Dedicated to students, Postdocs and young researchers
Max 20 participants - Interest to participate should be indicated during registration

12:30 Festive Signature of Declaration & Reception (CFEL foyer, building 99)

CMWS Inauguration Symposium (CFEL I-III, building 99)

Chair: B. Redlich (DESY)

14:00	Welcome notes	
14:45	Patrick Huber (DESY/ TUHH)	BlueMat: A research initiative on water-driven materials
15:05	Sakura Pascarelli (EuXFEL)	Molecular water research at European XFEL
15:25	Sören Jaspers (Beiersdorf AG)	Water and skin
15:45	Nönne Prisle (DESY/ UHH)	Keynote lecture: Water and aerosols: molecular interactions with impacts from personal to global
16:15	Closing remarks	
16:30	Coffee break	

Science Session 3

Chair: Simone Techert (DESY/ U Göttingen)

17:00	Donatella Loru (DESY)	Microsolvation of Polycyclic Aromatic Hydrocarbons in Water: Insights from Rotational Spectroscopy
17:40	Avinash Chettri (U Potsdam)	2D-IR Spectroscopy reveals structural heterogeneity in GLFG-rich hydrogels as models for the nuclear pore complex
18:00	Juliette Leroux (UHH)	Influence of a single water molecule on the X-ray absorption spectra of gas-phase phosphotyrosine

19:00 Public evening lecture in german language

(DESY Auditorium, building 5)

Robin Santra (DESY, CFEL)

“Die schnellsten molekularen Prozesse in Wasser”



Thursday February 27

Science Session 4

Chair: Jack Lin (U Oulu)

08:50	Sven Schroeder (U Leeds)	Precipitation and dissolution of solids in water: Kinetics beyond classical nucleation theory
09:30	Llorenç Cremonesi (U Milan)	Experimental multiparametric characterisation of aerosols through light scattering
09:50	Melanie Schnell (DESY/CAU)	A tiny droplet of acid: Hyperfine-resolved rotational spectroscopy reveals HCl dissociation upon microsolvation
10:10	Markus Osterhoff (U Göttingen)	Taming the bubbles: Cavitation dynamics revealed by XFEL pulses

10:30 *Coffee break*

Science Session 5

Chair: Sergio Speziale (GFZ)

11:00	Rachel Husband (DESY)	Phase transition kinetics in superionic ice
11:40	Divyanshu Ranjan (DESY/ U Rostock)	Probing ice giants Interiors with shock compression
12:00	Katrin Amann-Winkel (U Mainz)	Intrinsic dynamics in amorphous ices measured by XPCS
12:20	Kyung Hwan Kim (POSTECH, Korea)	Experimental studies of the liquid-liquid critical point and fragile-to-strong transition of liquid water using FELs
12:40	Matthias Sperl (DLR)	Glassy dynamics of water

14:00-16:00 Pillar Meetings

(Individual meeting rooms: FLASH, SR in Bld 94/3rd floor, CFEL IV, CFEL I, CFEL II, CFEL III)

Pillar 1	Pillar 2	Pillar 3	Pillar 4	Pillar 5
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18:30 Poster Session & Dinner
(Tuesday 25th, Canteen extension, building 9a, 1st floor)

Author (s)	Affiliation	Title
Abhirami Udayabanu	Physics of life Cluster of Excellence, TU DRESDEN	TBA
Artur Czajkowski	Physics of Life Cluster of Excellence, Technische Universität Dresden	Protein modifications and ionic strength show the difference between protein-mediated and solvent-mediated regulation of biomolecular condensation
Camilo Jose Zapata Segura	Physics of Life Cluster of Excellence, TU Dresden	TBA
Chen Shen	Deutsches Elektronen-Synchrotron DESY	Single-shot reflectivity acquisition from liquid surfaces by GISAXS
Dana Bloß		Intermolecular processes in core-hole decay of microsolvated organic molecules
Denis Tikhonov	CFEL-DESY	Simulating strong-field-induced and X-ray-probed dynamics of saline water
Florian Trinter	Fritz-Haber-Institut Berlin	Radiationless decay spectrum of O 1s double core holes in liquid water
Iason Andronis	Stockholm University	Supercritical density fluctuations and structural heterogeneity in supercooled water-glycerol microdroplets
Isabell Erdmann & Klara Holl	Johannes Gutenberg-Universität	Aqueous solutions under extreme conditions
Joana Valerio	European XFEL	Liquid sample delivery at European XFEL - new developments
Katinka Horn	ETH Zürich	RABBITT on large water clusters
Likhitha Chakra Priya Pulibandla		Exploring the thermodynamics of fus and its interactions with ATP
Lisa Nucke	Helmholtz-Zentrum Dresden-Rossendorf	Influence of different membrane mimetic systems on intra-membrane protein hydration and function
Louisa Kraft	Max Planck Institute for Polymer Research	Three-phase contact line dynamics on moving fibers measured by X-ray holography
Markus Osterhoff	Röntgenphysik, Uni Göttingen	Taming the bubbles: Cavitation dynamics revealed by XFEL pulses
Martin Andersson	King Fahd University of Petroleum and Minerals	The shape of water – how cluster formation provides a unifying explanation of water's anomalous properties and the hydrophobic effect
Nathaniel Okpara	DESY-CFEL Theory Group	Computational modelling of electron solvation in liquid water
Nele Striker	DESY	Phase behavior of aqueous silica-PNIPAm dispersions under high hydrostatic pressure
Niels Gießelmann	Johannes Gutenberg-Universität Mainz / MPI für Polymerforschung	The structure of water and ice under confinement in mesoporous organosilicas
Rahim Ullah	Deutsches Elektronen Synchrotron DESY	Liquid Flat-jet for ultrafast spectroscopy of molecules in aqueous solution at FELs
Robert Farla	FS-PETRA-D (FS-PET-D Fachgruppe P61 (Wiggler Bl.))	The role of H ₂ O at high pressures in the LVP at P61B

Shaoheng Wang	University of Hamburg	Water vapor sorption of the salt particles in nanopores
Siddhanth Shishodia	Max planck institute of polymer research	TBA
Tobias Eklund & Siddhanth Shishodia	Johannes Gutenberg Universität Mainz	Optical and X-ray studies on amorphous solid water
Wagner Ribeiro da Silva Neto	ISRR-Bessy II/HZB	Direct observation of symmetry breaking in the 3MLCT state of the N3 dye in water by X-Ray absorption spectroscopy
Yizhi Liu	Max Planck Institute for Polymer Research	Numerical simulation of heat transfer in nanoscale amorphous water
Yusaku Terao	University of Kassel	Multielectron spectroscopy of solvated iodide anion