

## Award Lectures Plenary Sessions

### Werner Prize 2024

«Monomers from Polymer»

September 5, 2024, 09.30–10.00h

**Prof. Athina Anastasaki**, ETH Zurich, received the prize for her excellence in research spanning across the broad areas of polymer synthesis, polymer self-assembly and chemical recycling, also referred to as depolymerization.



### Sandmeyer Award 2024

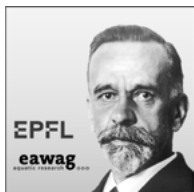
«Advanced wastewater treatment by ozonation for abatement of micropollutants from municipal wastewater effluents»

September 5, 2024, 10.00–10.30h

Speakers: Urs von Gunten, Christa S. McArdell

*The Eawag team “Advanced wastewater treatment”*, namely Prof. Urs von Gunten, EPFL Lausanne/Eawag, Prof. Juliane Hollender, ETH Zurich, Dr. Christa McArdell, Dr. Adriano Joss, Marc Böhler and Dr. Christian Abegglen, Eawag, and Prof. em. Hansruedi Siegrist, ETH Zurich,

is awarded in recognition of the team’s outstanding achievements in using chemistry to address a challenge of large societal importance: securing clean water.



### Green & Sustainable Chemistry Award 2023

«Porous Materials for Energy and Environmental Applications»

September 5, 2024, 16.30–17.00h

**Prof. Ali Coskun**, University of Fribourg, received the prize for his outstanding contributions towards the development of sustainable polymers for catalysis, energy and environmental applications.



### SCS Industrial Science Award 2024

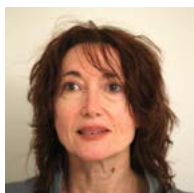
«Small Molecules Gamma Secretase Modulators for the treatment of Alzheimer’s Disease»

September 5, 2024, 17.00–17.30h

**Dr. Rosa Maria Rodriguez Sarmiento**,

F. Hoffmann-La Roche Ltd,

is awarded for her impactful contributions to numerous research initiatives in various therapeutic areas such as CNS and rare diseases, as well as cardiovascular and metabolic diseases coupled with her influence on the scientific community both within and outside the company.



## THEMATIC PARALLEL SESSIONS

Analytical Sciences [AS]  
Morning Session – PER 21, E120



Chair: Ralf Kaegi, Eawag

Session Endowment: Metrohm

- 10:45 **Highest precision radiocarbon measurements for accurate dating and tracer studies [AS-011]**  
Lukas Wacker, ETH Zurich
- 11:15 **The central role of oxo clusters in zirconium and hafnium-based esterification catalysis. [AS-013]**  
Jikson Mathew, University of Basel  
C. Seno, M. Jaiswal, C. Simms, N. Reichholf, D. Van den Eynden, T. Parac-Vogt, J. De Roo\*
- 11:30 **Retrospective Verification of Exposure of Human Blood Serum to Sesquimustard via Semi-Targeted Proteomic Analysis [AS-014]**  
Gianin Thomann, Spiez Laboratory/University of Fribourg  
M. Brackmann, C. G. Bochet, C. Curty\*
- 11:45 **Oxygen Isotope Analyses of Phosphate and Organophosphorus Compounds by Orbitrap High-Resolution Mass Spectrometry [AS-015]**  
Nora Bernet, Eawag / ETH Zurich  
F. Tamburini, T. B. Hofstetter\*
- 12:00 **Conformational Analysis with High-Resolution mid-IR Laser Absorption Spectroscopy [AS-016]**  
Miloš Selaković, Empa  
L. Emmenegger, R. Zenobi, B. Tuzson\*
- 12:15 **OctoChemDB: A Web Service for Efficient Dereplication of Natural Products using High-Resolution Mass Spectra [AS-017]**  
Ricardo Silvestre, HEIA Fribourg  
R. Martinet, V. Mutel, C. Portmann, L. Menin, L. Patiny

Afternoon Session – PER 21, E120

Chair: Chan Cao, University of Geneva

- 14:30 **Mitigating Bottlenecks in NIR Model Development [AS-021]**  
Christoph Jansen, Metrohm Switzerland
- 15:00 **Label free identification of full-length proteins and protein modifications using a nanopore [AS-023]**  
Verena Rukes, EPFL Lausanne  
E. Norkute, G. Barnikol, J. Gao, C. Cao\*
- 15:15 **Quantification of laser generated aerosols via microdroplet calibration using a downwards pointing ICP-TOFMS [AS-024]**  
Tobias Schöberl, ETH Zurich  
M. Bachmann, D. Günther\*
- 15:30 **The potential of ultra-trace lanthanide impurities in nuclear forensic evidence [AS-025]**  
Michael Hofstetter, ETH Zurich  
S. Röllin, P. Steinegger
- 15:45 **Detection of nanoplastics using SERS tags at environmentally relevant concentrations [AS-026]**  
Moritz Häffner, Adolphe Merkle Institute, Fribourg  
B. Rothen-Rutishauser, P. Taladriz-Blanco, A. Perti-Fink\*
- 16:00 **Capacitive displays as direct signal transducers for potentiometric measurements [AS-027]**  
Yaotian Wu, University of Geneva  
E. Bakker\*

**Catalysis Sciences & Engineering [CE]**
**Morning Session – PER 21, C140**

Chair: Vladimir Paunovic, ETH Zurich


 CARBOGEN  
AMCIS  
A Dahnson Group Company

Session Endowment: Carbogen Amcis

- 10:45 **Minimalistic Models of Oxotransferases as Catalysts for Site and Enantioselective Oxidation of Strong C-H Bonds [CE-011]**  
Miquel Costas, Universitat de Girona
- 11:15 **Developemnt of a self-optimizing platform for flow-based peptide synthesis [CE-013]**  
Bálint Tamás, University of Zurich  
P. L. Willi, H. Bürgisser, N. Hartrampf\*
- 11:30 **Tracking Active Site Formation in Cu-Exchanged Zeolites for Partial CH<sub>4</sub> Oxidation [CE-014]**  
Andreas Brenig, ETH Zurich/PSI  
J. W. Fischer, D. Klose, G. Jeschke, J. A. van Bokhoven\*, V. L. Sushkevich\*
- 11:45 **CO<sub>2</sub> electroreduction to long-chain hydrocarbons on cobalt catalysts [CE-015]**  
Phil Preikschas, ETH Zurich  
J. Zhang, R. R. Seemakurthi, Z. Lian, A. J. Martín, S. Xi, N. López, B. Yeo, J. Pérez-Ramírez\*
- 12:00 **Decoding the Promotional Effect of Iron in Bimetallic Pt-Fe-Nanoparticles for the Low Temperature Reverse Water-Gas Shift Reaction [CE-016]**  
Colin Hansen, ETH Zurich; W. Zhou, C. Copéret\*
- 12:15 **Accelerating transfer hydrogenation of sterically hindered ketones with a novel mono-substituted amino-carbene (MAC) ruthenium complex [CE-017]**  
Giacommo Rigoni, University of Bern  
M. Casciotti, T. Belderrain, P. Pérez\*, M. Albrecht\*

**Afternoon Session – PER 21, C140**

Chair: Cecilia Mondelli, Sulzer

- 14:30 **First Industrial (Total) Synthesis of Amanitin Derivatives [CE-021]**  
Emad El Sayed, Carbogen Amcis AG  
A. Krotz, K. Williams, L. Shapely, P. Brown, J. Bowen, I. Sulaiman, E. Lauterbach, J. Kovacs, S. Ruppenthal, B. Vivant, L. Mannocci, M. Doll, A. Osypenko, W. Simon, C. Lutz, C. Müller
- 15:00 **Operando XAS-XRD Reveals Structural Dynamics in CoPt Nanoparticles under Dry Reforming of Methane Conditions [CE-023]**  
David Niedbalka, ETH Zurich  
M. Janak, D. Piankova, N. Zimmerli, P. M. Abdala, C. R. Müller\*
- 15:15 **Engineering a Dual-Functionalized PolyHIPE Resin for Photobiocatalytic Flow Chemistry [CE-024]**  
Emmanouil Broumidis, University of Bern  
F. Paradisi\*
- 15:30 **Ruthenium-NHC complexes as precursors for highly active lignin hydrogenolysis catalysts [CE-025]**  
Lindsey Frederiksen, EPFL Lausanne  
P. Dyson\*
- 15:45 **Multi-origin and topology-dependent selectivity in the methanol-to-olefins process from transient operando DRIFTS-GC [CE-026]**  
Luca Maggiulli, PSI  
J. A. Van Bokhoven, D. Ferri\*
- 16:00 **Design and Characterisation of a de novo Gold Artificial Metalloenzyme [CE-027]**  
Elinor Morris, University of Basel  
J. Uhrhan, B. Lozhkin, S. Basler, I. Kalvet, T. R. Ward\*, D. Baker\*

**Computational Chemistry [CC]**
**Morning Session – PER 21, C120**

Chair: Sandra Luber, University of Zurich

 Johnson&Johnson  
Innovative Medicine

Session Endowment: Johnson&amp;Johnson Innovative Medicine

- 10:45 **Simulating non-adiabatic dynamics in molecules: methodological aspects and attochemical applications [CC-011]**  
Morgane Vacher, Nantes Université
- 11:15 **From capture to catalysis: Insights from atomistic simulations into MOF and COF host-guest interactions and guest dynamics [CC-013]**  
Michelle Ernst, University of Zurich  
J. Hutter\*
- 11:30 **Unravelling Tunnelling Effects in Photosensitization using Instanton Theory [CC-014]**  
Meghna Manae, ETH Zurich  
J. Richardson\*
- 11:45 **Ab initio simulation of single vibronic level fluorescence spectra using Hagedorn wavepacket [CC-015]**  
Zhan Tong Zhang, EPFL Lausanne  
J. Vanicek\*
- 12:00 **Accelerating Alchemical Free-Energy Calculation with the RE-EDS Multistate Method [CC-016]**  
Candide Champion, ETH Zurich  
R. Gall, B. Ries, S. Rieder, E. Pécora de Barros, P. Hünenberger\*, S. Riniker\*
- 12:15 **Automated Chemical Reaction Network Exploration of Oxidative Water Treatment [CC-017]**  
Enric Petrus, Eawag, Dübendorf  
U. von Gunten, M. Reiher, T. B. Hofstetter\*

**Afternoon Session – PER 21, C120**

Chair: Kjell Jorner, ETH Zurich

- 14:30 **Computational approaches in pharma on chemical reactivity and affinity optimization [CC-021]**  
Herman Van Vlijmen, Johnson & Johnson Innovative Medicine R&D
- 15:00 **Applying a well-defined energy density for machine-learned density functionals [CC-023]**  
Elias Polak, University of Fribourg  
S. Vuckovic, H. Zhao
- 15:15 **Inverse Design of Singlet Fission Materials with Uncertainty-Controlled Genetic Optimization [CC-024]**  
Luca Schaufelberger, ETH Zurich  
R. Laplaza, J. T. Blaskovits, C. Corminboeuf\*, K. Jorner\*
- 15:30 **Saturn: Sample-efficient Generative Molecular Design using Memory Manipulation [CC-025]**  
Jeff Guo, EPFL Lausanne  
P. Schwaller\*
- 15:45 **A Metadynamics Study of Water Oxidation Reactions at (001)-WO<sub>3</sub>/liquid-water Interface [CC-026]**  
Rangsiman Ketkaew, University of Zurich  
F. Creazzo, K. Sivula, S. Luber\*
- 16:00 **Global and Local Electrophilicity as Measure of Endocrine Disruptor Genotoxicity Potential [CC-027]**  
Sophia Johnson, EPFL Lausanne  
S. Guilbert, U. Rothlisberger\*

**Chemistry and the Environment [EV]** **Morning Session – PER 21, E140**

Chair: Thomas Bucheli, Thomas Bucheli GmbH


Session Endowment: Casale SA

- 10:45 **Chemistry Hacks: Tweaking Air Composition to Tackle Respiratory Virus Transmission [EV-011]**  
Tamar Kohn, EPFL Lausanne
- 11:15 **Effect of surfactants on inactivation of *Bacillus subtilis* spores by chlorine [EV-013]**  
Tianqi Zhang, EPFL Lausanne  
M. I. Villalba, R. Gao, S. Kasas, U. von Gunten\*
- 11:30 **In search of alternative herbicides to treat Swiss railway tracks [EV-014]**  
Valérian Zeender, Agroscope  
R. Kasteel, T. Poiger, I. Buerge
- 11:45 **Mining Actinomycetes' Metabolomes and Genomes for Anti-*Phytophthora infestans* Compounds [EV-015]**  
Ola Abdelrahman, University of Fribourg  
Q. Coxon, E. Abou-Mansour, F. L'Haridon, L. Falquet, P. Allard, L. Weisskopf\*
- 12:00 **Organic micropollutants in combined sewer overflows challenge sustainable water management [EV-016]**  
Viviane Furrer, Eawag, Dübendorf  
C. Ort, H. Singer, C. Ort\*, H. Singer\*
- 12:15 **Preserving the Biotransformation Potential of Activated Sludge in Time: Towards Reproducible Incubation Experiments for Persistence Assessment [EV-017]**  
Martina Kalt, Eawag, Dübendorf  
C. Udressy, Y. Yu, A. Colliquet, K. Fenner\*

**Afternoon Session – PER 21, E140**

Chair: Jutta Hellstern, Roche

- 14:30 **Environmental chemistry for a sustainable future [EV-021]**  
Pierdomenico Biasi, Casale SA
- 15:00 **Biochars from chlorine-rich feedstock are low in polychlorinated dibenzo-*p*-dioxins, -furans and -biphenyls [EV-023]**  
Jannis Grafmüller, Ithaka Institut  
D. Rathnayake, N. Hagemann, T. Bucheli, H. Schmidt
- 15:15 **Differentiating Olefins and Phenols using the Stable Oxygen Isotope Composition of H<sub>2</sub>O<sub>2</sub> Formed during Ozonation [EV-024]**  
Seok Kim, Eawag, Dübendorf  
T. B. Hofstetter, U. v. Gunten\*
- 15:30 **Indirect aquatic photolysis of polyethylene glycol influences the biodegradability in soil and sediment: Linking kinetic simulations to experimental observations [EV-025]**  
Kevin Kleemann, ETH Zurich  
M. Sander\*
- 15:45 **Extracellular Electron Transfer in *Geobacter Sulfurreducens* [EV-026]**  
Salem Majouri, University of Fribourg  
B. Giese, K. M. Fromm\*
- 16:00 **Comparative Study of Chelating Agents in the Treatment of Heavy Metal Poisoning on Early Zebrafish Embryo Development [EV-027]**  
Dib Chakif, University of Bern  
A. Elhelbawi, J. Imhof, I. Gjurroski, S. Leidel\*, J. Furrer\*

**Inorganic & Coordination Chemistry [IC]** **Morning Session – PER 21, G140**

Chair: Murielle Delley, University of Basel

Session Endowment: Chemspeed

- 10:45 **Inspired by Nitrogenase: Dihydride Complexes for the H<sub>2</sub>-Releasing Reductive Activation of Challenging Substrates [IC-011]**  
Franc Meyer, University of Göttingen
- 11:15 **Nano onions based on an amphiphilic gold(I) cyclic trinuclear complex [IC-013]**  
Atena B. Solea, EPFL Lausanne  
D. Dermutas, F. Fadaei Tirani, K. Severin\*
- 11:30 **Symmetry and Rigidity for Boosting Erbium-Based Molecular Light-Upconversion in Solution [IC-014]**  
Ines Taarit, University of Geneva  
S. Naseri, C. Piguet\*
- 11:45 **Gold(III)-hydrides stabilized by novel (P<sup>^</sup>N<sup>^</sup>C) pincer ligands [IC-015]**  
Jaime Martín, University of Zurich  
C. Nevado\*
- 12:00 **Cyclopentadienone Iron Complex-Catalyzed Hydrogenation of Ketones: The Influence of the Charge-Tag on Catalytic Performance [IC-016]**  
André Bütikofer, ETH Zurich  
V. Kesselring, P. Chen\*
- 12:15 **Non-classical azolyidene metal complexes as potential anticancer therapeutics [IC-017]**  
Jan Romano-deGea, EPFL Lausanne  
P. J. Dyson\*

**Afternoon Session – PER 21, G140**

Chair: Ross Milton, University of Geneva

- 14:30 **Enhancing Energy Research [IC-021]**  
Ahmed Mahmoud, Chemspeed
- 15:00 **The Influence of an ortho-methyl Group in Rhodium-PYA Complex Reactivity and Catalysis [IC-023]**  
Llorenç Benavent Benavent, University of Bern  
J. Race, L. Studer, M. Albrecht\*
- 15:15 **The Influence of SiO<sub>2</sub> Dehydroxylation on Offline Thermochromatography with <sup>202</sup>Tl [IC-024]**  
Jennifer Wilson, ETH Zurich/PSI  
C. Gut, R. Eichler, N. P. van der Meulen, P. V. Grundler, P. Steinegger\*
- 15:30 **Stabilization Effect of NH-S Hydrogen Bonds in Synthetic Iron-Sulfur and Iron-Selenium Clusters [IC-025]**  
Alessandro Walker, ETH Zurich  
M. Inoue, L. Grunwald, V. Mougel\*
- 15:45 **Re-Evaluation of the Air-Mediated Response in Bi-Based Perovskite X-Ray Detectors [IC-026]**  
Aditya Bhardwaj, ETH Zurich  
K. Sakhatskyi, M. J. Gebhard, M. Kotyrba, S. Yakunin, M. Kovalenko\*
- 16:00 **Tracking Ag<sup>+</sup> ions from the SilE protein to the silver efflux pump in *E.coli* [IC-027]**  
Chloé Morin-Payé, University of Fribourg  
K. M. Fromm\*

**Medicinal Chemistry & Chemical Biology [MC]****Morning Session – HEIA**

Chair: Fides Benfatti, Syngenta

**Lonza**

Session Endowment: Lonza

- 10:45 **Engineered Protein Cages for RNA Delivery [MC-011]**  
Angela Steinauer, EPFL Lausanne  
P. Oeser, G. Barnikol, A. Melgar, A. Steinauer\*
- 11:00 **Identification of a peripherally restricted MAGL inhibitor which shows promising activity in disease models of visceral pain and IBD [MC-012]**  
Fionn O'Hara, F. Hoffmann-La Roche Ltd.  
J. Benz, J. Blaising, U. Grether, M. Guerard, R. Koller, B. Kuhn, M. Reutlinger, W. Saal, M. Wittwer
- 11:15 **Expanding the Chemical Space of Lasso Peptides by Combining Flow Synthesis and Enzymatic Transformation [MC-013]**  
Kevin Schiefelbein, University of Zurich  
J. Lang, M. Schuster, C. E. Grigglesstone, R. Striga, L. Bigler, M. C. Schuman, O. Zerbe, Y. Li, N. Hartrampf\*
- 11:30 **Antimicrobial peptide-peptoid hybrids [MC-014]**  
Etienne Bonvin, University of Bern; M. Orsi, J. Raymond\*
- 11:45 **Two-for-One Biosynthesis: Functional Biosynthetic Stereodivergence in a Gene Cluster via a Dihydroxydnone N-oxide [MC-015]**  
Jiajun Ren, University of Zurich  
A. Mathew, M. Rodriguez Garcia, T. Kohler, O. Blacque, A. Linden, S. Sieber, L. Eberl\*, K. Gademann\*,
- 12:00 **Discovery of functional active low-molecular weight antagonists of IL-1B [MC-016]**  
Anna Vulpetti, Novartis Pharma AG
- 12:15 **Local environment in biomolecular condensates modulates enzymatic activity across length scales [MC-017]**  
Marcos Gil-Garcia, ETH Zurich; A. Benítez-Mateos, M. Papp, F. Stoffel, C. Morelli, K. Normak, K. Makasewicz, L. Faltova, F. Paradisi, P. Arosio\*

**Afternoon Session – HEIA, Big Lecture Hall**

Chair: Dennis Gillingham; University of Basel

- 14:30 **Development and Manufacture of highly potent products at Lonza Visp Development Services [MC-021]**  
Elisa González-Fernández, Lonza
- 14:45 **Semi-synthetic nucleosomes to probe sirtuin activity on chromatin [MC-022]**  
Carlos Moreno Yruela, EPFL Lausanne; B. E. Ekundayo, E. Calviño Sanlés, D. Ni, H. Stahlberg, B. Fierz\*
- 15:00 **A Far-Red Fluorescent Probe to Visualize Gram-Positive Bacteria in Patient Samples [MC-023]**  
Krittpas Jantarug, University of Zurich  
V. Tripathi, B. Morin, A. Lizuka, N. Khanna, D. Bumann, P. R. Fuentes\*
- 15:15 **AI-Enabled Synthesis Prediction in Modern Medicinal Chemistry [MC-024]**  
Kenneth Atz, F. Hoffmann-La Roche Ltd; D. F. Nippa, A. T. Müller, U. Grether, R. E. Martin, G. Schneider
- 15:45 **Discovery of NP3-562: a novel, orally bioavailable NLRP3-inhibitor [MC-026]**  
Juraj Velcicky, Novartis Pharma AG; P. Janser, N. Gommermann, J. Dawson, K. Beltz, C. Dekker, C. J. Farady, A. Mackay

- 16:00 **Trabectedin derails transcription-coupled nucleotide excision repair to induce DNA breaks in highly transcribed genes [MC-027]**

Vakil Takhaveev, ETH Zurich; K. Son, V. Mor, H. Yu, E. Dillier, N. Zilio, N. J. Püllen, D. Ivanov, H. Ulrich, S. J. Sturla\*, O. D. Schärer\*

**Organic Chemistry [OC]  
Morning Session – PER 22,  
Joseph Deiss (002)**

Chair: Francesca Paradisi, University of Bern

**syngenta**

Session Endowment: Syngenta

- 10:45 **Site-Selective Direct C–H Arylation [OC-011]**  
Ilija Čorić, University of Zurich
- 11:15 **Radical-mediated azidofunctionalization of alkenes [OC-013]**  
Pierre Palamini, EPFL Lausanne  
E. M. Allouche, J. Waser\*
- 11:30 **Photo- and Cobalt-Catalyzed Synthesis of Heterocycles via Cycloisomerization of Unactivated Olefins [OC-014]**  
Willi Amberg, ETH Zurich  
H. Lindner, T. Martini, D. M. Fischer, E. Moore, E. M. Carreira\*
- 11:45 **Asymmetric, Remote C(sp<sup>3</sup>)-H Arylation via Sulfinyl-Smiles Rearrangement [OC-015]**  
Yawen Hu, University of Zurich  
C. Hervieu, E. Merino\*, C. Nevado\*
- 12:00 **Flow Chemistry for the Synthesis of the Anesthetic Mepivacaine, a More Sustainable Approach [OC-016]**  
Pablo Díaz-Kruik, University of Bern  
F. Paradisi\*
- 12:15 **Total Synthesis of the Diterpenes (+)-Randainin D and (+)-Barekoxide via Photoredox-Catalyzed Deoxygenative Allylation [OC-017]**  
Oleksandr Vyhivskiy, University of Basel  
O. Baudoin\*

**Afternoon Session – PER 22, Joseph Deiss (002)**

Chair: Michal Juricek, University of Zurich

- 14:30 **Enabling technologies at Syngenta: electrochemistry as a case study [OC-021]**  
Andrei Iosub, Syngenta Crop Protection AG  
M. Lehmann, C. Scarborough
- 15:00 **Vicinal Nucleophilic Disubstitution Reactions of (Densely Substituted) Arenes via 1,2-Bis-Triazenylarenes [OC-023]**  
Christeena Mathew, EPFL Lausanne; K. Severin\*
- 15:15 **Catalyst-stereocontrolled synthesis of alkyne atropisomers [OC-024]**  
Lucía Reyes Méndez, University of Basel  
D. Pepe, J. Dong, N. Sidler, D. Häussinger, C. Sparr\*
- 15:30 **Electronic and Chiroptical Properties of Cations and Neutral Radicals of Enantiopure Diaza[4]helicenes [OC-025]**  
Bibiana Fabri, University of Geneva  
T. Funaioli, L. Frèdèric, C. Elsner, E. Bordignon, F. Zinna, L. Di Bari, G. Pescitelli, J. Lacour\*
- 15:45 **Photochromism in cyclic dipeptides: biocompatible switches and smart materials [OC-026]**  
Zbigniew Pianowski, Karlsruhe Institute of Technology  
Z. Pianowski\*
- 16:00 **Synthesis of curved Polycyclic aromatic macrocycles towards shape-assisted self-assembly [OC-027]**  
Ludmilla Sturm, University of Geneva; M. Rickhaus\*

**Physical Chemistry [PC]**  
**Morning Session – PER 21, A120**  
 Chair: Malte Oppermann, University of Basel

**METTLER TOLEDO**

Session Endowment: Mettler Toledo

- 10:45 **Chiroptical probes to track spin & light polarization in space & time in emerging semiconductors [PC-011]**  
 Sascha Feldmann, EPFL Lausanne
- 11:15 **Excited-State Symmetry Breaking and its Origins: Insights from Ultrafast Transient Two-Dimensional Infrared Spectroscopy [PC-013]**  
 Ricardo Fernández-Terán, University of Geneva  
 E. Balanikas, J. Kölbl, R. J. Fernández-Terán\*, E. Vauthey\*
- 11:30 **Real-time tracking of the ultrafast chirality and energy transfer in a chiral OLED complex with circularly-polarized luminescence [PC-014]**  
 Livia Müller, University of Basel  
 F. Zinna, G. Pescitelli, M. Puppini, M. Oppermann\*
- 11:45 **Capturing site-selective chemical dynamics via time-resolved X-ray photoelectron spectroscopy [PC-015]**  
 Andre Al Haddad, Paul Scherrer Institut PSI, Villigen  
 S. Oberli, J. Knurr, L. Paoloni, A. Sarracini, K. Schnorr, A. Picon, C. Bostedt\*
- 12:00 **Magnetic Deflection of Neutral Sodium Solvent Clusters:  $\text{Na}(\text{H}_2\text{O})_n$ ,  $\text{Na}(\text{NH}_3)_n$ ,  $\text{Na}(\text{MeOH})_n$ , and  $\text{Na}(\text{DME})_n$  [PC-016]**  
 D. Borgeaud dit Avocat, ETH Zurich  
 J. V. Barnes, E. Simmen, B. L. Yoder, R. Signorell
- 12:15 **Competition between product channels in ion-molecule reactions near 0 K:  $\text{D}_2^+ + \text{CH}_3\text{F}$  and  $\text{D}_2^+ + \text{H}_2\text{O}$  [PC-017]**  
 David Schlender, ETH Zurich; R. Hahn, F. Merkt\*
- 12:30 5x 3min poster pitches

**Afternoon Session – PER 21, A120**

Chair: Natalie Banerji, University of Bern

- 14:30 **Holographic Microscopy and Machine Learning – Transforming Cellular Assays [PC-021]**  
 Natalia Jarzębska, Mettler Toledo GmbH  
 A. Ferrer, H. Muhr\*
- 15:00 **Multifunctional hybrid systems via self-organization of Janus nanoparticles and polymersomes for bio-applications [PC-023]**  
 Voichita Mihali, University of Basel  
 M. Skowicki, P. Jasko, C. Palivan\*
- 15:15 **Innovative pH-Responsive Rhamnolipid Nanomaterials: Advanced Antimicrobial Solutions [PC-024]**  
 Parth Kadakia, University of Fribourg  
 J. Valentin, S. Salentinig\*
- 15:30 **Rational Design of Dinitroxide Polarizing Agents for Dynamic Nuclear Polarization to Enhance Overall NMR Sensitivity [PC-025]**  
 Ran Wei, EPFL Lausanne  
 A. Venkatesh, G. Casano, Y. Rao, H. Lingua, H. Karoui, M. Yulikov, O. Ouari\*, L. Emsley\*
- 15:45 **Improved super-resolution imaging with cucurbituril-encapsulated fluorophores [PC-026]**  
 Liza Briant, University of Geneva  
 A. Fürstenberg\*
- 16:00 **Insights into the Bonding Nature of Arsenic, Phosphorus, and Sulphur Ylides: an answer from quantum crystallography [PC-027]**  
 Yaser Balmohammadi, University of Bern  
 L. A. Malaspina, S. Grabowsky, M. Popov, S. Willitsch

**Materials Chemistry [Mat]**  
**Morning Session – PER 21, G120**  
 Chair: Fabian von Rohr, University of Geneva

**Vigor**

Session Endowment: Vigor

- 10:45 **Materials Chemistry and the Future of Human Civilization [Mat-011]**  
 Nicola Spaldin, ETH Zurich
- 11:15 **End-functionalized high dielectric permittivity polysiloxanes for solvent-free processing [Mat-013]**  
 Jana Wolf, EMPA  
 P. M. Danner, J. von Szczepanski, D. M. Opris\*
- 11:30 **A Dye-Sensitized Sensor for Oxygen Detection under Visible Light [Mat-014]**  
 Lionel Wettstein, ETH Zurich  
 J. Specht, V. Kesselring, L. Sieben, Y. Pan, D. Käch, F. Krumeich, D. Baster, M. El Kazzi, M. Bezdek\*
- 11:45 **Supramolecular Modulation for Hybrid Perovskite Photovoltaics [Mat-015]**  
 Ghewa AISabeh, EPFL Lausanne / AMI  
 M. Almalki, S. Kasemthaveechok, M. A. Ruiz-Preciado, P. Zimmermann, D. Dekker, M. Galerne, E. Moulin, F. T. Eickemeyer, M. Graetzel\*, J. V. Milic\*
- 12:00 **All-Perovskite Multicomponent Nanocrystal Superlattices [Mat-016]**  
 Taras Sekh, ETH Zurich/Empha  
 I. Cherniukh, G. Rainò, E. Kobiyama, T. Sheehan, W. A. Tisdale, T. Stöferle, R. Erni, G. Itskos, M. I. Bodnarchuk\*, M. V. Kovalenko\*
- 12:15 **hybrid hole-selective protection layer towards long-term stability of low-cost metal oxide in solar water oxidation [Mat-017]**  
 Sanghyun Bae, University of Zurich  
 D. Tilley\*

**Afternoon Session – PER 21, G120**

Chair: Bastian Brand, ZHAW Wädenswil

- 14:30 **Gloveboxes – Operation, Maintenance, and Common Misunderstandings [Mat-021]**  
 Martin Eck, Vigor Gas Purification Technologies
- 15:00 **Epitaxial Core/Shell Nanocrystals of (Europium-Doped) zirconia and hafnia [Mat-023]**  
 Carlotta Seno, University of Basel  
 N. Reichholf, F. Salutari, M. Spadaro, Y. P. Ivanov, G. Divitini, A. Gogos, I. Herrmann, J. Arbiol, P. F. Smet, J. De Roo
- 15:15 **Tetraoxa[8]circulenes - A Platform for Polymers and Frameworks [Mat-024]**  
 Patrick Fritz, University of Fribourg  
 A. Coskun\*
- 15:30 **Soft actuators based on stimuli-responsive composite hydrogels [Mat-025]**  
 Matilde Folkesson, Adolphe Merkle Institute, Fribourg  
 C. Weder\*, J. A. Berrocal\*
- 15:45 **Constructing Diverse Colloidal Suprastructures for Biomedical Advancements [Mat-026]**  
 Minghan Hu, ETH Zurich  
 S. Pané, B. Nelson, H. Thérien-Aubin, H. J. Butt, A. DeMello, L. Isa, M. Hu\*
- 16:00 **Crystal growth and anisotropic magnetic properties of incommensurately modulated  $\text{K}_{0.87}\text{CrSe}_2$  [Mat-027]**  
 Felix Eder, University of Geneva  
 C. Witteveen, J. F. Woods, R. Butti, P. Szwedziak, A. Vargas Jentzsch, M. Rickhaus, E. Giannini\*, F. O. von Rohr\*