

Programme

Sunday, October 6th, 2024

14h30 Registration

16h00 Opening Ceremony

Wild Duck

Chair: **Silvia Marchesan**

16h20 **PL1 Silvia Vignolini (Max Plank for Colloids and Interfaces
MPG, Potsdam DE)**

*" Colours with a twist: bio-inspired self-assembled chiral
architecture "*

17h05 **OC1 Lucia Gemma Delogu**

*"High-Dimensional Approaches for Immune Profiling of 2D
Materials"*

17h25 **OC2 David Gonzalez Rodriguez**

*"Molecular and Supramolecular Chemistry within Confined
Nanospaces"*

17h45 **OC3 Sarah Pike**

*"Solvent Controlled Self-Assembly of Lanthanide-Foldamer
Metallosupramolecular Architectures"*

18h05 **OC4 Ivan Aprahamian**

"A Molecular Anion Pump"

19h30 **Welcome Party**

Monday, October 7th, 2024

Parallel session 1

| | Wild Duck Chair: Silvia Giordani | Nautilus Chair: David Gonzalez Rodriguez | Astrea Chair: Veronica Dodero |
|-------|---|---|--|
| 8h50 | OC5 Karin Schillen | OC12 Nelsi Zaccheroni | OC19 Alexey Cherevan |
| 9h10 | OC6 Sergio Moya | OC13 Attilio Vargiu | OC20 Bartosz Szyszko |
| 9h30 | OC7 Urszula Bazylńska | OC14 Paola Posocco | OC21 Jorge Beltramini |
| 9h50 | OC8 Luciano Galantini | OC15 Frank Biederman | OC22 Shi-Zhang Qiao |
| 10h10 | OC9 Luigi Gentile | OC16 Paula Ferreira | OC23 Takayoshi Nakamura |
| 10h30 | OC10 Helena Mateos | OC17 Feng Li | OC24 Samantha Bodman |
| 10h45 | OC11 Claudia Contini | OC18 Valentina Mameli | OC25 Daniel Iglesias |

11h00 **Coffee break**

Wild Duck

Chair: **Vito Lippolis**

11h30 **PL2 Debora Berti (University of Florence)**

"NanoBio Interfaces: Engineering Hybrid Systems through Controlled Interactions and Properties"

Parallel session 2

| | Wild Duck Chair: Lihi Adler-Abramovich | Nautilus Chair: Enzo Menna | Astrea Chair: Michele Cacioppo |
|-------|---|---|---|
| 12h20 | OC26 Pol Besenius | OC29 Manuel Melle-Franco | OC32 Luigi Paduano |
| 12h40 | OC27 Yoichi Habata | OC30 Shintaro Ida | OC33 Jan J. Weigand |
| 13h00 | OC28 Ahu Gümrah Dumanli | OC31 Shinya Hayami | OC34 Buncha Pulpoka |

13h15 **Lunch**

Wild Duck

Chair: **Claudia Caltagirone**

14h30 PL3 **Silvia Giordani (Dublin City University)**

"Carbon nano-onions for targeted drug delivery"

Parallel session 3

| | Wild Duck Chair: Paula Ferreira | Nautilus Chair: Manuel Melle-Franco | Astrea Chair: Marco Paolantoni |
|--------------|--|--|---|
| 15h20 | OC35 Emmanuel Flahaut | OC37 Gili Bisker | OC39 Laura Fabris |
| 15h40 | OC36 Enzo Menna | OC38 Tell Tuttle | OC40 Barbara Rossi |

16h00 **Coffee break**

Parallel session 4

| | Wild Duck Chair: Antonella Accardo | Nautilus Chair: Luca Conti | Astrea Chair: Laura Fabris |
|--------------|---|---|---|
| 16h30 | OC41 Maritè Cardenas | OC45 Carmen Talotta | OC49 Gerardino D'Errico |
| 16h50 | OC42 Cecilia Menard-Moyon | OC46 Cristiano Zonta | OC50 Giovanni Maria Pavan |
| 17h10 | OC43 Luca Conti | OC47 Allegra Franchino | OC51 Volodymyr Sashuk |
| 17h25 | OC44 Andrea Pinto | OC48 Diego Venegas Yagizi | OC52 Claudia Pigliacelli |

Wild Duck

Chair: **Pol Besenius**

17h45 KN1 **Sophie Beeren (Technical University of Denmark)**

"Enzyme-mediated Dynamic Combinatorial Chemistry with Cyclodextrins"

18h30 **Poster Session at Wild Duck with Wine and Cheese**

20h00 **Dinner**

Tuesday, October 8th, 2024

Parallel session 5

| | Wild Duck Chair: Eugenio Vazquez | Nautilus Chair: Cristiano Zonta | Astrea Chair: Mauro Mocerino |
|--------------|---|--|---|
| 8h50 | OC53 Guillame Vives | OC60 Artur Stefankiewicz | Jack Harrowfield's Birthday: |
| 9h10 | OC54 Miriam Mba | OC61 Larissa Von Krbek | Leonard Lindoy Welcoming |
| 9h30 | OC55 Lihi Adler-Abramovich | OC62 Riccardo Montis | |
| 9h50 | OC56 Beatriu Escuder | OC63 Valeria Amendola | OC67 Murray Baker |
| 10h10 | OC57 Antonella Accardo | OC64 Jonathan Nitschke | OC68 Alessandro Casnati |
| 10h30 | OC58 Ivan Sasselli-Ramos | OC65 Ana Maria Garcia | OC69 Keisuke Ohto |
| 10h45 | OC59 Greta Bergamaschi | OC66 Salvatore Marullo | OC70 Annie Powell |
| | | | OC71 Mark Ogden |
| | | | Yang Kim Greetings |
| | | | Jack Harrowfield |
| | | | Acknowledgements |

11h00 **Coffee Break**

Parallel session 6

| | Wild Duck Chair: Beatriu Escuder | Nautilus Chair: Barbara Rossi | Astrea Chair: Miriam Mba |
|--------------|---|--|---|
| 11h30 | OC72 Veronica Dodero | OC74 Marco Paolantoni | OC76 Martino Di Serio |
| 11h50 | OC73 Eugenio Vasquez | OC75 Emma Sparr | OC77 Chengzhong Yu |

Wild Duck

Chair: **Sergio Murgia**

12h15 PL4 **Raffaele Mezzenga (ETH Zürich)**

"Amyloid-metal Supramolecular Hybrids for Health and Environmental Remediation Technologies"

13h00 **Lunch**

Wild Duck

Chair: **Giacomo Picci**

14h30 PL5 **Steve Goldup (University of Birmingham)**

"Mechanically Chiral Molecules: Synthesis and Applications"

15h15 **Short Oral Presentations Session 1**

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|------------------------------|--------------------------------|-----------------------------------|
| Flash1 Mykola Kravetz | Flash2 Martina La Manna | Flash 3 Paul Debes |
| Flash4 Jingjing Qu | Flash5 Haridas Kar | Flash6 Maksym Dekhtiarenko |
| Flash7 Moritz Nau | Flash8 Ok-Sang Jung | Flash9 Besma Mellah |

16h15 **Coffee Break**

Parallel session 7

| | Wild Duck Chair: Luca Conti | Nautilus Chair: Ana Maria Garcia | Astrea Chair: Daniel Iglesias |
|--------------|--|---|--|
| 16h45 | OC78 Hennie Valkenier | OC81 Feng Shi | OC84 Thomas Webster |
| 17h05 | OC79 Alessandro Porchetta | OC82 Daniela Kalafatovic | OC85 Gerardo Palazzo |
| 17h25 | OC80 Jacopo Movilli | OC83 Petr Kovaricek | OC86 Jacek K. Wychowaniec |

Wild Duck

Chair: **Silvia Marchesan**

17h45 PL6 **Tanja Weil (Max-Planck-Institute for Polymer Research)**

"Bioresponsive Chemistry to Control Supramolecular Assembly in Living Systems"

20h00 **Traditional Dinner**

Wednesday, October 9th, 2024

Wild Duck

Chair: **Mauro Mocerino**

8h45 **PL7 Jack Harrowfield (University of Strasbourg)**
"Searching for Nothing: Molecules with Cavities"

9h30 **Short Oral Presentations Session 2**

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|--------------------------------|-------------------------------------|----------------------------|
| Flash10 Anton Muravev | Flash11 Lidon Pruñonosa Lara | Flash12 Subir Paul |
| Flash13 Nicoletta Rusta | Flash14 Gracjan Kurpik | Flash15 Ruby Morel |
| Flash16 Zohar Arnon | Flash17 James Cooper | Flash18 Caihong Lin |
| Flash19 Feng Shi | | |

10:30 **KN2 Charalampos G. Pappas (University of Freiburg)**
"Phosphate-Driven Systems Chemistry"

11h00 **Coffee Break**

Parallel session 8

| | Wild Duck Chair: Jonathan Nitschke | Nautilus Chair: Jacek Wychowaniec | Astrea Chair: Diego Venegas-Yagizi |
|--------------|---|--|---|
| 11h30 | OC87 Michał J. Chmielewski | OC91 Mengjiao Cheng | OC95 Emanuele Orgiu |
| 11h50 | OC88 Jan Romanski | OC92 Thomas Solomek | OC96 Jin Zou |
| 12h10 | OC89 Rob Elmes | OC94 Teresa Gatti | OC97 Peter Comba |
| 12h30 | OC90 Luis Martinez-Crespo | OC94 Paolo Della Sala | OC98 Veronica Paredes |

12h55 **Awards and Closing Ceremony**

List of oral contributions

- OC1 Lucia Gemma Delogu** "High-Dimensional Approaches for Immune Profiling of 2D Materials"
OC2 David Gonzalez Rodriguez "Molecular and Supramolecular Chemistry within Confined Nanospaces"
OC3 Sarah Pike "Solvent Controlled Self-Assembly of Lanthanide-Foldamer Metallosupramolecular Architectures"
OC4 Ivan Aprahamian "A Molecular Anion Pump"

OC5 Karin Schillén "Condensed supramolecular helices: The twisted sisters of DNA"

OC6 Sergio Moya "Self assembly and physico chemical properties of polyelectrolyte complexes with nucleic acids and anthocyanins"

OC7 Urszula Bazylińska "Hybrid colloidal nanoplatforms for enhanced photodynamic therapy and dual-targeted action in human melanoma"

OC8 Luciano Galantini to be announced

OC9 Luigi Gentile "Influence of Fatty Alcohols on Structural and Bulk Properties of Bio-Based Surfactants"

OC10 Helena Mateos "Accurate dual-marker detection on extracellular vesicles combining LFIA and LIBS"

OC11 Claudia Contini "Synthetic Cells: from Soft Matter to Cell-Like Behaviours"

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OC26 Pol Besenius
"Supramolecular Design of Synthetic Vaccines and Injectable Biomaterials"

OC27 Yoichi Habata "A Molecular Othello"

OC12 Nelsi Zaccheroni
"Fluorogenic nanogels detect micro- and nanoplastics in water"

OC13 Attilio Vargiu "Unravelling molecular drivers of peptides' self-assembly by atomistic simulations"

OC14 Paolo Posocco "Tiny titans: Exploring hybrid organic-inorganic nanoparticles through computational insights"

OC15 Frank Biederman
"Supramolecular Sensing Applications in Biofluids"

OC16 Paula Ferreira "Caffeic acid-modified reduced graphene oxide-based porous foams for water purification"

OC17 Feng Li "Metallo-supramolecular Materials: Cation Sensing, Optical and/or Magnetic Properties"

OC18 Valentina Mameli "Removal of As^V/As^{III} from aqueous solutions by nano iron oxi(hydroxi)des: pollutant uptake and changes in their magnetic properties"

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OC29 Manuel Melle-Franco "The Computational Microscope: a Versatile Tool to Understand and Design Nanomaterials"

OC30 Shintaro Ida "Preparation of Nanosheet-Stacked Proton-

OC19 Alexey Cherevan "Surface-anchored All-inorganic Molecular Clusters for Light-driven Water Splitting Reactions"

OC20 Bartosz Szyszko
"Iminopyrrole-based self-assembly: a route to dynamic supramolecular architectures"

OC21 Jorge Beltramini
"Nanocomposite Materials: Enabling Innovations for Sustainable Hydrogen Production from Waste Biomass"

OC22 Shi-Zhang Qiao
"Electrocatalysis for CO₂ Reduction and Direct Seawater Splitting"

OC23 Takayoshi Nakamura
"Supramolecular Strategy to Multiferroics"

OC24 Samantha Bodman "π-Conjugated Supramolecular Assemblies for Applications in Sensing and Organic Photovoltaics"

OC25 Daniel Iglesias
"Supramolecular approaches for the functionalization of 2D materials for electronic applications"

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OC32 Luigi Paduano "Hierarchical Nanoparticle Superlattices: Enhancing Optical Properties through Ordered Structures and Superlattice Substitution"

OC33 Jan J. Weigand "Enhancing Lithium Recovery: Integrating 4-

OC28 Ahu Gümrah Dumanli "Marangoni flow-driven vertical self-assembly of cellulose nanocrystals-tilted tactoids and folded domains"

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OC35 Emmanuel Flahaut "Modification of the surface chemistry of carbon nanomaterials as a Safer-by-design strategy to mitigate their potential impact on the environment"

OC36 Enzo Menna "Functionalization of carbon nanostructures with organic moieties affords composite scaffolds for tissue engineering and regenerative medicine"

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OC41 Maritè Cardenas "Title Lipoprotein structure and function – Implications in atherosclerosis development and COVID19 disease"

OC42 Cecilia Menard-Moyon "Self-Assembly of Aromatic Amino Acid Derivatives into Nanoparticles for Anticancer Therapy"

OC43 Luca Conti "Ruthenium polypyridyl complexes and their use into nanostructured formulations as light-responsive biomedical tools"

OC44 Andrea Pinto "Supramolecular gold(I) assemblies as singlet oxygen sensitizers"

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OC53 Guillaume Vives "Sequential and Time-Controlled Sol-Gel Transitions induced by the Mechanical Motion of Switchable Molecular Tweezers"

Conducting Electrolyte for Fuel Cells"

OC31 Shinya Hayami "Graphene oxide as a super material"

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OC13 Gili Bisker "Single-walled carbon nanotubes as fluorescent probes for supramolecular self-assembly complexes"

OC38 Tell Tuttle "An Active Machine Learning Discovery Platform for Pore-forming Peptides"

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OC45 Carmen Talotta "Supramolecular Chemistry and Catalysis Mediated by Hexameric Capsules"

OC46 Cristiano Zonta "One-Step Dynamic Synthesis of Hydrolytically Stable Chiral Architectures"

OC47 Allegra Franchino "Supramolecular chemistry at the service of homogeneous catalysis: Employing H-bond donors as metal-chloride bond activators"

OC48 Diego Venegas-Yagizi "Mixed-Valence Hexavanadate presenting Geometrical Spin Frustration"

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OC60 Artur Stefankiewicz "Amino Acid Based Self-Assembled Nanostructures"

Phosphoryl Pyrazolone Ligands for Sustainable Separation Processes"

OC34 Buncha Pulpoka "Porphyrin-Based Innovations: From Liquid Crystalline Materials to Advanced Optical Sensors for Thiol and Thiocyanate Detection"

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OC39 Laura Fabris "Tuning the Electric Field at Plasmonic Hot Spots through Morphology Modulation and Interface Engineering"

OC40 Barbara Rossi "Frontiers of UV Resonance Raman spectroscopy in supramolecular chemistry"

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OC49 Gerardino D'Errico "Molecular interactions of biosurfactants: At the roots of the complex self-aggregation, flow and functional behavior"

OC50 Giovanni Maria Pavan "Intrinsic dynamics & emerging complexity in self-organizing molecular systems"

OC51 Volodymyr Sashuk "Expanding the Horizons of Enzyme-Like Catalysis With Cucurbiturils"

OC52 Claudia Pigliacelli "Templated Self-Assembly of Transient Branched Au Nanoshells"

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OC67 Murray Baker "Porous PHEMA Hydrogels loaded with Nanoparticles of Coinage Metals"

OC54 Miriam Mba
"[1]benzothieno[3,2-b][1]-
benzothiophene (BTBT)-peptide
hybrid supramolecular gels

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OC55 Lihl Adler-Abramovich
"Bioinspired Materials for
Biomedical Applications"

OC56 Beatriu Escuder
"Multicomponent supramolecular
materials based on short peptides
and pseudopeptides"

OC57 Antonella Accardo "A ten-
year-long journey into the world of
peptide-based nanostructures and
materials"

OC58 Ivan Sasselli-Ramos
"Computational/Experimental
Symbiosis in Short Peptide Self-
assembly"

OC59 Greta Bergamaschi "Peptide-
based supramolecular hydrogels for
3D bioassays"

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OC72 Veronica Dodero
"Oligomerization of proteolysis-
resistant gluten peptides and
gluten-related disorders"

OC73 Eugenio Vasquez "Self-
Assembled Coiled Coil Nanowires"

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OC78 Hennie Valkenier
"Transmembrane transport of
phosphates by synthetic receptors"

OC79 Alessandro Porchetta
"CRISPR-powered nucleic acid
networks for sensing applications"

OC61 Larissa Von Krbek
"Switchable macrocycles and
cages"

OC62 Riccardo Montis "A Journey
to discover the Extraordinary World
of Fampridine Hydrochloride"

OC63 Valeria Amendola
"Molecular hosts in gas separation
applications"

OC64 Jonathan Nitschke
"Molecules in metal boxes"

OC65 Ana Maria Garcia
"Ultrashort peptide crystals as
optical waveguiding materials"

OC66 Salvatore Marullo "Covalent
Organic Frameworks for pollutant
removal from water"

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OC74 Marco Paolantoni "Amyloid
aggregation in self-crowded
conditions"

OC75 Emma Sparr "Tipping points
in α -synuclein - lipid co-assembly:
amyloid formation and membrane
remodelling"

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OC81 Feng Shi "Macroscopic
Supramolecular Assembly and Its
Applications"

OC82 Daniela Kalafatovic "Pushing
the boundaries of peptide discovery
using machine learning-guided
generative models"

OC68 Alessandro Casnati
"Calixarenes: from metal ion
complexation to ligands for
proteins, viruses and bacteria

**OC69 Keisuke Ohto To be
announced**

**OC70 Annie Powell To be
Announced**

OC71 Mark Ogden "Unreliable
Recollections from the Harrowfield
Laboratory @UWA"

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OC76 Martino Di Serio
"Heterogenous catalysis for
DPA/DPE synthesis"

OC77 Chengzhong Yu "Rational
Design of Nanostructured
Framework Catalysts"

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OC84 Thomas Webster "Novel
DNA-based Supramolecular
Chemistries: Fighting Viruses,
Growing Tissues and Everything in
Between"

OC85 Gerardo Palazzo
"Cooperative aggregation of gold
nanoparticles on phospholipid
vesicles is electrostatically driven"

OC80 Jacopo Movilli "Encoding life-like multimodal locomotion in photo-responsive microstructures"

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OC87 Michał J. Chmielewski "Synthetic anionophores as transmembrane drug transporters: studies in liposomes and bacteria"

OC88 Jan Romanski "Utilizing squaramides for the design of ion pair receptors, sensors, and functional materials"

OC89 Rob Elmes "Squaramides: From Receptors to Antimicrobials"

OC90 Luis Martinez-Crespo "Regulated transfer of chemical information using stimuli responsive squaramides"

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OC83 Petr Kovaricek "Microvilli-mimicking nano-bio-platform for T-cell activation studies by fluorescence microscopy"

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OC91 Mengjiao Cheng "Precise Supramolecular Self-Assembly of μm -to- mm Components for Advanced Manufacture"

OC92 Thomas Solomek "Topography and Topology: Unusual Playground for Chromophores"

OC93 Teresa Gatti "Exploring the flatland of bi-dimensional materials through chemical functionalization for energy and (opto)electronics"

OC94 Paolo Della Sala "Prismarenes: Novel Macrocyclic Hosts with Planar Chirality"

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OC86 Jacek K. Wychowaniec "Space ImmunoBioInks: Guiding Inflammatory Response of Macrophages by Self-Assembling Peptides Under Standard and Simulated Micro-Gravity"

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OC95 Emanuele Orgiu "Tuning Charge and Magnetotransport in Quantum Materials by Means of Supramolecular Lattices"

OC96 Jin Zou "Understanding the Structural Characteristics of Metal Chalcogenides using Advanced Electron Microscopy"

OC97 Peter Comba "Pathways of bispidine-iron(IV)-oxido and -iron(III)-peroxido oxidants"

OC98 Veronica Paredes "Chiral copper coordination polymers. Magnetic properties and electronic structure"

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List of flash oral contributions

Flash1 Mykola Kravetz "Attaining the Complete OFF State in Photoswitchable Catalysis"

Flash 3 Paul Debes "Understanding Structure-to-Property Relationships in Photo Switchable Carbon Nanodot-Azobenzene Covalent Hybrids"

Flash5 Haridas Kar "Local Self-Assembly of Dissipative Structures Sustained by Substrate Diffusion"

Flash2 Martina La Manna "Multicomponent hydrogel based on RGD-mimetic LMWGs as biocompatible material for biological applications"

Flash4 Jingjing Qu "Lysozyme as an innovative endosomal escape agent helps promote cellular immune response for oral administration"

Flash6 Maksym Dekhtiarenko "Out of equilibrium switching of molecular tweezers by a chemical fuel"

Flash7 Moritz Nau *“Conformationally Regulated Molecular Conductance Switching in Bis(Triarylaminines) Nanojunctions”*

Flash9 Besma Mellah *“Eco-friendly Approach to Wastewater Dephosphorization using Recovered Diatomaceous Earth from Brewer Waste”*

Flash11 Lidon Pruñonosa Lara *“Photoswitchable Metallo-Supramolecular Architectures”*

Flash13 Nicoletta Rusta *“Nanostructured CeO₂-Based Systems for the Direct Synthesis of Dimethyl Carbonate from CO₂”*

Flash15 Ruby Morel *“Ordered Porous Liquids”*

Flash17 James Cooper *“Conformational Dynamics of Membrane-bound Molecular Machines”*

Flash8 Ok-Sang Jung *“Construction and Chiral Recognition of Pairs of Chiral Coordination Cages”*

Flash10 Anton Muravev *“Data-driven and theory-driven modelling of molecular self-assembly”*

Flash12 Subir Paul *“Complex Pathways Drive Pluripotent Fmoc-Leucine Self-assemblies”*

Flash14 Gracjan Kurpik *“Multi-stimuli-responsive bio-inspired network of reactions under heteronuclear Pd^{II}/Pt^{II} cooperative catalysis”*

Flash16 Zohar Arnon *“Controlling Macroscale Morphology in DNA-based Assembly Using Acoustic Energy”*

Flash18 Caihong Lin *“Deuterated water as solvent enhances multivalent assembly to accelerate phase separation”*