ICMSE

Find the programme here!

18th-20th August

Preconference 17th-18th

2nd International Conference on Molecular Systems Engineering

Radboud University

info@icmse2019-nijmegen.nl

www.icmse2019-nijmegen.nl/

ICMSE 2019 would like to thank the following sponsors:

Research Center for Functional Molecular Systems

Gravitation Program - The Netherlands

NCCR Molecular Systems Engineering

Institute for Molecules and Materials

Radboud University

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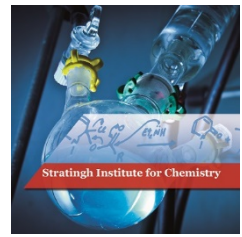

ICMS

INSTITUTE FOR COMPLEX MOLECULAR SYSTEMS

TU/e

GRK2062

Molecular Principles of Synthetic Biology

Synthon

digi .bio

Programmable biology

GILDEPRINT

DRUKKERIJEN

Content

Contact information

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Secretary:
Peter Korevaar
email: p.korevaar@science.ru.nl

Welcome

Dear participants,

We are happy to welcome you to Nijmegen for the 2nd International Conference on Molecular Systems Engineering (ICMSE 2019), dedicated to *Functional Molecular Systems.*

Creating functional molecular systems that rival the complexity of the molecular factories found in living cells has become one of the grand challenges for the chemical sciences. The successful construction of architectures with life-like properties will profoundly change the way we think about materials, devices, and synthetic systems in general. It is, therefore, that we aim to bring researchers together working in the areas of supramolecular chemistry, systems chemistry, molecular materials, and synthetic biology.

Two years ago, the first ICMSE was organized by the National Centre of Competence in Research (NCCR) in Basel, Switzerland. Inspired by the great success of this conference, we have again gathered world-leading researchers as well as up-and-coming stars in the field of molecular systems engineering, this time in Nijmegen.

Two speakers deserve special mention, namely Prof. Chad Mirkin and Prof. Helma Wennemers, who are the recipients of the 2019 Netherlands Award for Supramolecular Chemistry and the 2019 Netherlands Scholar Award for Supramolecular Chemistry, respectively. Both will receive their prize during our conference.

The ICMSE 2019 is organized by the Dutch Research Center for Functional Molecular Systems (FMS), and supported by the NCCR Molecular Systems Engineering. We wish you a good ICMSE 2019 and hope that the conference will inspire you and boost your science!

On behalf of the organizing committee,

Wilhelm Huck
Chairman ICMSE 2019

Organizing committee

WILHELM HUCK
Chairman

ROELAND NOLTE
Vice-Chairman

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MARIEKE REIJNEVELD
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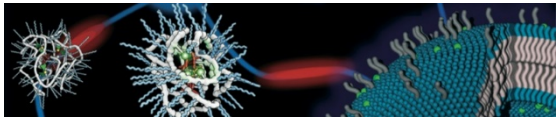
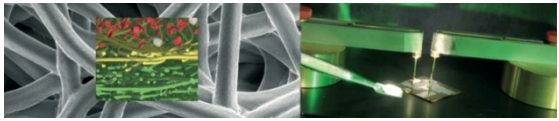
Dutch Research Center for Functional Molecular Systems

The FMS Research Center is a partnership of the organic and macromolecular chemistry teams of the Eindhoven University of Technology, Radboud University, and the University of Groningen, all located in The Netherlands. It is brought together to extend the frontiers of chemical self-assembly and to complete a single grand challenge: the construction of functional life-like molecular systems.

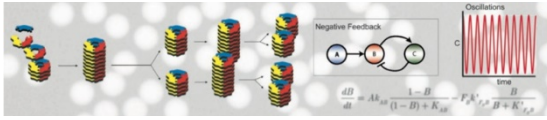
The research is organized around three main programs in which elements of the grand challenge are studied, based on the existing expertise within the participating groups:



Chemical Biology
'Organic Chemistry with Biological Relevance'



Materials for advanced applications
'Creating function out of hierarchical organization'



Adaptive – out-of-equilibrium – systems
'Discovering the complexity of living systems'

www.fmsresearch.nl

NCCR
Molecular Systems
Engineering

National Centre of Competence in Research

Molecular Systems Engineering is a National Centre of Competence in Research (NCCR) funded by the Swiss National Science Foundation, and headed by the University of Basel and the ETH Zurich. NCCR Molecular Systems Engineering combines expertise from chemistry, biology, physics, bioinformatics, and engineering. The overreaching aim is to develop tools and devices to monitor and manipulate off-equilibrium (bio)chemical systems. In this approach, complex dynamic phenomena emerge as the result of the integration of molecular modules (molecular- or biological prosthetics) designed to interact in a programmed way with their complex environment. In this manner, it should be possible to create molecular factories and cellular systems whose properties are more than sum of the attributes of the individual modules. These new system-level properties emerge through the interactions of chemical- and biological networks and may find applications in the synthesis of high added-value products, as innovative diagnostic tools and for the restoration of a desired cellular or organ function.

FNSNF
SWISS NATIONAL SCIENCE FOUNDATION

University of Basel

ETH zürich

The National Centres of Competence in Research (NCCR) are a Research instrument of the Swiss National Science Foundation

www.nccr-mse.ch

The Institute for Molecules and Materials

The Institute for Molecules and Materials (IMM) is an inter-disciplinary research institute in chemistry and physics at Radboud University. Our mission is to perform fundamental research and to train the next generation of leaders in science and entrepreneurship at the highest international standards. Our research focuses on the fundamental interactions between molecules, the chemistry of complex, life-like systems and the properties of matter emerging from quantum effects.

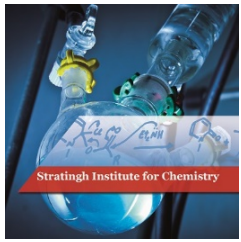
www.ru.nl/imm

Institute for Complex Molecular Systems

The Institute for Complex Molecular Systems (ICMS) at the Eindhoven University of Technology focuses on multidisciplinary science and education in the engineering of complex molecular systems. It brings students and scientists from different disciplines together to create small molecular factories based on novel insights in self-assembly, sophisticated engineering tools and modeling. The almost unlimited possibilities of nano-science and micro-technology will offer design rules for dynamic systems in which different time and length scales are integrated.

www.tue.nl/icms

The Stratingh Institute



The Stratingh Institute for Chemistry is a research institute at the Faculty of Science and Engineering of the University of Groningen. The mission of the Stratingh Institute for Chemistry is to perform excellent research and teaching in molecular and supramolecular chemistry. The research program is focused on synthesis, catalysis, functional materials, bio-organic chemistry/chemical biology and systems chemistry/complex molecular systems.

www.rug.nl/stratingh

Location

A: MAIN VENUE

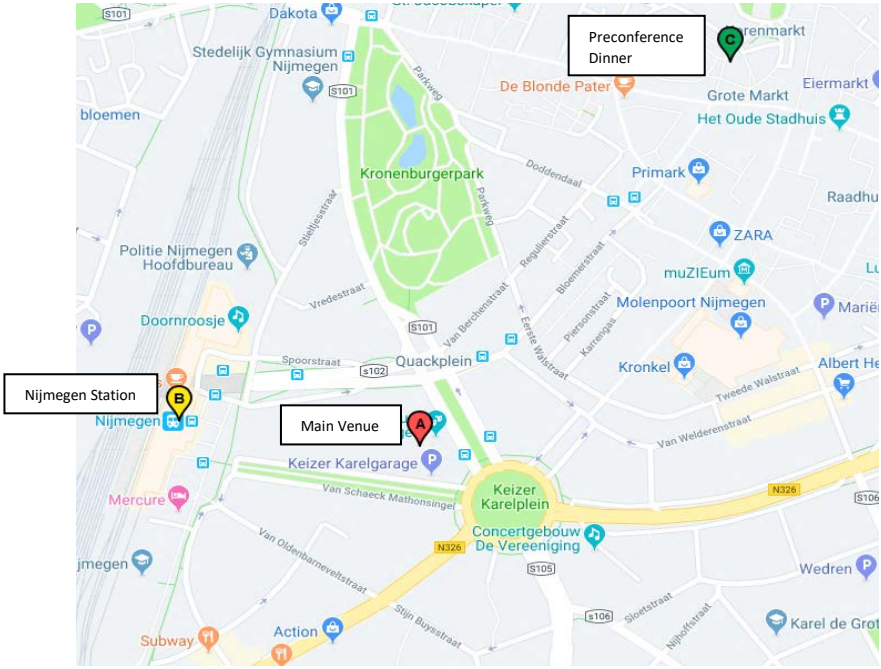
Stadsschouwburg Nijmegen
Keizer Karelplein 32H
6511 NH Nijmegen

B: TRAIN STATION

Stationsplein 6
6512 AB Nijmegen

C: PRECONFERENCE DINNER/PARTY

De Waagh
Grote Markt 26
6511 KB Nijmegen



Preconference program

SATURDAY 17 AUGUST 2019

13:00–13:30	**Registration, coffee and tea, install posters**
13:30–13:35	**Opening and general introduction**
13:35–14:20	**TUTORIAL LECTURE:** *Chair: Roel Maas* **Rein Ulijn – City University of New York** *"Design Principles for Minimalistic Peptide Materials with Life-Like Functions"*
14:20–15:20	**Session 1** *Chair: Roel Maas*
14:20–14:40	**Pascal A. Pieters – Eindhoven University of Technology** *"Characterization of a Noise-Reducing Genetic Circuit"*
14:40–15:00	**Jiawei Sun – Radboud University** *"Enzyme-Powered Nanomotors with Controlled Size for Biomedical Applications"*
15:00–15:20	**Johannes Rebelein – University of Basel** *"Whole-Cell Transfer Hydrogenation Using Carbonic Anhydrase as Host Protein for the Construction of Artificial Metalloenzymes"*
15:20–15:40	**Break and poster session**
15:40–17:30	**Speed dating and poster session**
17:30–18:15	**TUTORIAL LECTURE:** *Chair: Sjoerd Rijpkema* **Chad Mirkin – Northwestern University** *"MegaLibraries: Expanding and Exploring the Materials Genome Through High-Throughput Cantilever-free Scanning Probe Lithography"*
19:15	**Dinner, Science Slam and party** *at the Waagh, Grote Markt 26, Nijmegen*

SUNDAY 18 AUGUST 2019

09:20–10:20	**Session 2**	*Chair: Cristina Lía Fernández Regueiro*
09:20–09:40	**Noga Gal – Aarhus University** *"Nanoreactors with Intracellular Catalytic Activity"*	
09:40–10:00	**Guido Panzarasa – ETH Zürich** *"Why Materials Science needs Systems Chemistry"*	
10:00–10:20	**William E. Robinson – Radboud University** *"Understanding Complex Reaction Networks in Prebiotic Chemistry"*	
10:20–11:00	**Break and poster session**	

11:00–12:20	**Session 3**	*Chair: Elena Daines*
11:00–11:20	**Omer Markovitch – University of Groningen** *"Speciation-like Diversification in a System of Self–Replicating Macro-Cycles"*	
11:20–11:40	**Aleksandr Pogodaev – Radboud University** *"Exploring Modular Design of Enzymatic Reaction Networks"*	
11:40–12:00	**Guanglu Wu – University of Cambridge** *"Discrete Fluorophore Dimers Constrained by Multiple Cucurbit[8]uril Clampings"*	
12:00–12:20	**Dhanya Babu – University of Twente** *"Mutualism between Autocatalysis and Protocell Motion"*	
12:20–14:00	**Lunch and poster session**	
14:00–15:00	**Session 4**	*Chair: Sjoerd Rijpkema*
14:00–14:20	**Alessandro Castrogiovanni – University of Basel** *"Catalyst-Controlled Stereodivergent Synthesis of Atropisomeric Multiaxis Systems"*	
14:20–14:40	**Marcin Ślęczkowski – Eindhoven University of Technology** *"Rebellion and Dictatorship as Signs of Mirror Symmetry Breaking in Supramolecular Polymers"*	
14:40–15:00	**Nishant Singh – Strasbourg University** *"Pathway Dependency and Catalytic Control in Transient Non-Equilibrium Supramolecular Systems"*	
15:00–15:45	**TUTORIAL LECTURE:** **Helma Wennemers – ETH Zürich** *"Bioinspired Asymmetric Catalysis with Peptides"*	*Chair: Sjoerd Rijpkema*

Conference program

SUNDAY 18 AUGUST 2019

16:00–16:30	**Registration, coffee and tea, install posters**	
16:30–16:40	**Opening and general introduction**	*Wilhelm Huck*
16:40–17:45	**AWARD LECTURE:** *Chairs: Bert Meijer and Roeland Nolte* **Chad Mirkin – Northwestern University** *"Colloidal Crystal Engineering with DNA"* **2019 Netherlands Award for Supramolecular Chemistry**	
17:45–20:00	**Drinks, walking dinner and poster session** *Upstairs, theatre cafe*	

MONDAY 19 AUGUST 2019

08:15	**Registration, coffee and tea, install poster**	
08:45–10:25	**Session 1**	*Chair: Peter Korevaar*
08:45–09:15	**Leonard Prins – University of Padova** (Invited) *"Energy Consumption in Chemical-Fuel Driven Self-Assembly"*	
09:15–09:45	**Rein Ulijn – City University of New York** (Invited) *"Towards Metabolic Materials"*	
09:45–10:05	**Jens Gaitzsch – University of Basel** *"New pH Responsive Polymeric Nanoparticles for Asymmetric Nanoreactors and Biodegradable Drug Delivery Systems"*	
10:05–10:25	**Marieke Veenstra – University of Groningen** *"Rational Design of Cross-Catalytic Behaviour in a Small Molecule System"*	
10:25–10:40	**Break**	
10:40–12:45	**Session 2**	*Chair: Evan Spruijt*
10:40–11:10	**Joseph Moran – University of Strasbourg** (Invited) *"The Chemical Origins of Biological Metabolism"*	
11:10–11:40	**Annette Taylor – University of Sheffield** (Invited) *"Bioinspired Films from Active Particles: Role of Feedback"*	
11:40–12:45	**AWARD LECTURE:** **Helma Wennemers – ETH Zürich** *"Controlling Supramolecular Assemblies with Peptidic Scaffolds"* **2019 Netherlands Scholar Award for Supramolecular Chemistry**	*Chairs: Bert Meijer and Roeland Nolte*
12:45–14:00	**Lunch and poster session**	

14:00–15:30	**Session 3**	*Chair: Thomas Hermans*
14:00–14:20	**Jeroen Cornelissen – University of Twente** *"Protein Cages as New Tools for Nanomedicine"*	
14:20–14:40	**J. Krishnan – Imperial College London** *"Systems Engineering Analyses of Information Processing in Natural and Engineered Biological and Chemical Systems"*	
14:40–15:00	**Sergey Semenov – Weizmann Institute of Science** *"Thiolate-Based Autocatalytic Reaction Networks"*	
15:00–15:30	**Yaakov Benenson – ETH Zürich** (Invited) *"Apps for Cells: from Toys to Therapies"*	
15:30–16:00	**Break**	
16:00–18:00	**Session 4**	*Chairs: Hans Elemans/Jeroen Cornelissen*
16:00–16:15	**Shauni Keller – Radboud University** *"A Versatile Design for Soft Self-Assembled Micromotors"*	
16:15–16:30	**Elisabeth Weyandt – Eindhoven University of Technology** *"Structural Insights and Chain Length Modulation of Photo-Responsive Supramolecular (Co)Polymers"*	
16:30–16:45	**Pieter Gilissen – Radboud University** *"The Quest for Data Storage on Polymers: Light-controlled Catalysts and 'SEXSY' Host/Guest Chemistry"*	
16:45–17:00	**Andreas Thomas Rösch – Eindhoven University of Technology** *"Towards Spintronics-Aided Water Splitting: Chiral Triphenylamine and Squaraines Dyes as Photosensitizers and Directors for Solid State Materials"*	
17:00–17:30	**Job Boekhoven – Technical University of Munich** (Invited) *"Designing Dissipative Supramolecular Materials Inspired by Life"*	
17:30–18:00	**Sven Panke – ETH Zürich** (Invited) *"Complex In-Vitro Systems - between Design and Evolution"*	
18:00–19:30	**Dinner**	
19:30–21:00	**Drinks and poster session**	

TUESDAY 20 AUGUST 2019

08:15	**Coffee and tea**	
08:30–10:30	**Session 5**	*Chair: Ghislaine Vantomme*
08:30–08:50	**Jaana Vapaavuori – Aalto University** *"Supramolecular Photobreathing Zwitterionic Micelles"*	
08:50–09:10	**Motilal Mathesh – Radboud University** *"Light Driven Stomatocyte Nanomotors"*	
09:10–09:30	**Yoann Cotelle – University of Basel** *"Chemical Optimization of Whole-Cell Transfer Hydrogenation Using Carbonic Anhydrase as Host Protein"*	
09:30–10:00	**Friedrich Simmel – Technical University of Munich** (Invited) *"Utilizing Nucleic Acid Strand Displacement Reactions to Program RNA-Based In-Vitro Gene Circuits"*	
10:00–10:30	**Nathalie Katsonis – University of Twente** (Invited) *"How Molecular Chemistry Turns into Motion"*	
10:30–11:00	**Break and poster session**	
11:00–12:50	**Session 6**	*Chair: Roeland Nolte/Bert Meijer*
11:00–11:20	**Christopher Scheidler – Technical University of Munich** *"Establishing a Genetic Code Expansion System in Bacillus Subtilis"*	
11:20–11:50	**Thomas Hermans – University of Strasbourg** (Invited) *"Continuously Dissipative Supramolecular Systems and Materials"*	
11:50–12:10	**Kazushi Kinbara – Tokyo Institute of Technology** *"Synthetic Multiblock Molecules Mimicking Structure and Function of Membrane Proteins"*	
12:10–12:40	**Thomas R. Ward – University of Basel** (Invited) *"Artificial Metalloenzymes for In-Vivo Catalysis: Challenges and Opportunities"*	
12:40–13:10	**Giovanni Pavan – SUPSI** (Invited) *"The Beauty of Defects in Dynamic Supramolecular Polymers"*	

13:10–14:10	**Lunch**	
14:10–16:10	**Session 7**	*Chair: Wilhelm Huck*
14:10–14:30	**Karina Nakashima – Radboud University** *"Dynamic Artificial Organelles Fueled by ATP"*	
14:30–14:50	**Dietmar Appelhans – Leibniz Institute for Polymer Research Dresden** *"Probing PH-Switchable Enzymatic Nanoreactors by Light-Driven Proton Transfer"*	
14:50–15:10	**Ignacio Insua – Universidade de Santiago de Compostela** *"1D-to-2D Self-Assembly of Cyclic Peptides into Stimuli-Responsive Supramolecular Sheets"*	
15:10–15:40	**Christof Sparr – University of Basel** (Invited) *"Catalytic Cascade Reactions Inspired by Polyketide Biosynthesis"*	
15:40–16:10	**Tom de Greef – Eindhoven University of Technology** (Invited) *"A DNA-based Synthetic Apoptosome"*	
16:10–16:15	**Closing ceremony**	

Venue

STADSSCHOUWBURG

All lectures and poster sessions will take place in the Stadsschouwburg. Lunch and dinner will be served in the theatre café (upstairs).

CONFERENCE CHECK-IN

To receive your badge, the program booklet and your USB stick (featuring abstracts etc.) please present your printed registration confirmation for a speedy check-in. If you have not paid yet, major credit (Mastercard and Visa) and debit cards will be accepted on site.

MEALS, COFFEE & TEA

Please see the program on pages 10-17 for details. Water, coffee, and tea is available throughout the (pre)conference days at the counter next to the theatre hall entrance. No food and drinks, except water, are allowed into the theatre hall.

ICMSE CONFERENCE DESK

The ICMSE conference desk is located around the corner of the entrance of the Stadsschouwburg. It is open for your needs during registration times, and during coffee- and lunch breaks. For urgent inquiries, please call 0031-6-19220008.

CLOAKROOM

A guarded cloakroom to deposit coats, bags etc. is available in the Stadsschouwburg during conference hours. Please make sure to pick up your deposits after the end of each conference day. All other areas are not guarded.

WIFI

There is free wifi for the ICMSE participants during the conference in the Stadsschouwburg.

Name: Schouwburg_gast
Password: schouwburg

POSTERS

All posters can remain on display until the end of the conference.

Invited speakers

CHAD MIRKIN
Northwestern University (USA)

2019 Netherlands Award for Supramolecular Chemistry

HELMA WENNEMERS
ETH Zürich (CH)

2019 Netherlands Scholar Award for Supramolecular Chemistry

REIN ULIJN
City University of New York (USA)

THOMAS HERMANS
University of Strasbourg (FR)

THOMAS R. WARD
University of Basel (CH)

CHRISTOF SPARR
University of Basel (CH)

TOM DE GREEF
Eindhoven University of Technology and
Radboud University (NL)

LEONARD PRINS
University of Padova (IT)

JOB BOEKHOVEN
Technical University of Munich (DE)

JOSEPH MORAN
University of Strasbourg (FR)

NATHALIE KATSONIS
University of Twente (NL)

YAAKOV BENENSON
ETH Zürich (CH)

SVEN PANKE
ETH Zürich (CH)

ANNETTE TAYLOR

University of Sheffield (UK)

GIOVANNI PAVAN

SUPSI (CH)

FRIEDRICH SIMMEL

Technical University of Munich (DE)

Poster organization

THEME: ORIGIN OF LIFE/SYNTHETIC CELL

Pre-conference

Poster #	Name	*Title*
P-1	Marijn Hollander	*Using phosphatases to switch activity in multi-enzymatic reaction networks based on reversible and cleavable inhibitors.*
P-2	Thomas Lokkart	*A combined modelling and experimental approach to estimate parameters in a complex prebiotic reaction network*
P-3	Julien Smith	*Light-induced self-assembly of semiconducting nanoplatelets in a protocell confinement*
P-4	Iris Smokers	*Towards controlling prebiotic reactions using kinetically stable thermodynamically activated molecules*
P-5	Merlijn van Haren	*Actively growing ATP-based protocells*

Pre-conference and conference

Poster #	Name	*Title*
P-6	Elena Daines	*Understanding the dynamic behavior of a prebiotic reaction network*
P-7	Wojciech Lipiński	*Low-molecular-weight, coacervate-forming derivatives of the PhePhe peptide*
P-8	Tiemei Lu	*Hierarchical organization in multicomponent coacervate droplets*

Poster #	Name	*Title*
P-9	Oliver Maguire	*Dynamic environments enforce behavioral robustness and expand functional output in reaction networks*
P-10	Stefan Marchner	*Development of 3D printed sub-micron resolved functional hydrogels*
P-11	Mahesh Vibhute	*Join the crowd*

Conference

Poster #	Name	*Title*
P-12	Alexandr Novichkov	*Autocatalysis in prebiotic chemistry of hydrogen cyanide*
P-13	Ludo Schoenmakers	*Functionalizing synthetic cell membranes*
P-14	Hasnaa El Said El Sayed	*Light-reponsive ligand controlling bimetallic catalyst formation*
P-15	Matthijs Ter Harmse	*Controlled motion through catalysis*

THEME: MOLECULAR INTELLIGENCE

Conference

Poster #	Name	*Title*
P-16	Diederik Van Luijk	*Phosphate triesters in polymers for mechanochemical activation*
P-17	Irene Piergentili	*Organocatalyzed aldol reaction as a tool to control soft material formation*

THEME: SUPRAMOLECULAR SYSTEMS AND MATERIALS

Pre-conference

Poster #	Name	*Title*
P-18	Michelle van der Helm	*Organocatalytic control over a fuel-driven esterification network*
P-19	Jingyi Huang	*Cell delivery using an injectable and biofunctionalized supramolecular hydrogel*
P-20	M. Aref Khalily	*Bioinspired Supramolecular Catalytic Nanostructures: Impact of Morphology on Asymmetric Aldol Reaction*
P-21	Jinyu Sheng	*Enantiodifferitiation of stiff-stilbene switch induced by light and chiral phosphate*

Pre-conference and conference

Poster #	Name	*Title*
P-22	Annelore Aerts	*Damage reporting in polymers with ion-paired fluorescer-quencher complexes*
P-23	Jeroen Bruekers	*Allosteric Interactions in Covalently Linked Porphyrin Cages*
P-24	Christiaan Corbet	*Incorporation of Jacobsen's Catalyst in Single-Chain Polymeric Nanoparticles for Catalysis in Water*
P-25	Pieter Gilissen	*A light-driven processive porphyrin catalyst*
P-26	Qin Huang	*Initiating supramolecular polymer by synthetic polymer motors*

Poster #	Name	*Title*
P-27	Anamarija Knezevic	*Interfacing dynamic self-assembling tubules with solid surfaces: towards harnessing mechanical forces by assembly/disassembly*
P-28	Sjoerd Konings	*Taking control over speed and selectivity of porphyrin cage processive epoxidation of poly-alkenes using light switchable azo moieties*
P-29	Anne-Déborah Nguindjel	*Building hydrogel beads with quorum sensing properties*
P-30	Manee Patanapongpibul	*Molecular motors probe the stiffness of lipid membranes*
P-31	Serena De Piccoli	*Supramolecular reaction cycles with designed feedback*
P-32	Daisy Pooler	*Visible-light driven molecular motors based on oxindole*
P-33	Job Roodhuizen	*Counterion-Dependent Mechanisms of DNA Origami Nanostructure Stabilization Revealed by Atomistic Molecular Simulation*
P-34	Sandra Schoenmakers	*Hydrogen/Deuterium Exchange Mass Spectrometry as a Label-Free Technique to Study the Exchange Dynamics of Supramolecular Polymers*
P-35	Nishant Singh	*Pathway Dependency and Catalytic Control in Transient Non-Equilibrium Supramolecular Systems*
P-36	Cosima Staehler	*Self-Assembly of Molecular Motors on Surfaces via Bisurea Tapes*

Poster #	Name	*Title*
P-37	Anne Swartjes	*Excited SEXSY guests*
P-38	Paula Teeuwen	*Separation and Chiroptical Properties of Chiral Porphyrin Cages*
P-39	Jelle Toebes	*Enzyme driven supramolecular nanomotors from polymeric vesicles*
P-40	Mitch Winkens	*Reaction-diffusion systems with directional chemical signal delivery*
P-41	Alessandro Castrogiovanni	*Catalyst-Controlled Stereodivergent Synthesis of Atropisomeric Multiaxis Systems*
P-42	Shauni Keller	*A Versatile Design for Soft Self-Assembled Micromotors*
P-43	Hanneke Siebe	*Coatings from functionalised low molecular weight hydrogels*

Conference

Poster #	Name	*Title*
P-44	Silvia Varela Aramburu	*Exploring the interface between supramolecular polymers and cells in physiological environments*
P-45	Mohamed Benfriha	*Spectroscopic etude of activated carbon from brown algae and activated carbon from green algae*
P-46	Pongphak Chidchob	*Boron-Nitrogen Functional Supramolecular Polymers*

Poster #	Name	*Title*
P-47	Bowen Fan	*Fuel-Driven Transient Structural Switch of Gel Network*
P-48	Georges Formon	*Surface-Assisted Self-Assembly of a Hydrogel by Proton Diffusion*
P-49	Fabian Höglsperger	*Conversion of light into a microscopic force via osmotic pressure*
P-50	Katie King	*Exploiting Host-Guest Chemistry for the Non-Covalent Attachment of Peptide Drugs and Targeting Agents to Gold Nanoparticles for Intracellular Delivery*
P-51	Muhabbat Komil	*Anti-fouling zwitterionic coatings through surface-initiated atom transfer radical polymerization at supramolecular biomaterial surfaces*
P-52	Peter Korevaar	*Non-equilibrium approaches in adaptive and self-assembling life-like systems*
P-53	Brigitte Lamers	*Bridging the gap between solution and bulk assembly with oligoproline-oligodimethylsiloxane block co-oligomers*
P-54	Guotai Li	*Reversible control over catalytic activity through host-guest chemistry*
P-55	Jie Liu	*Supramolecular hydrogels for liver tissue engineering*
P-56	Giulia Morgese	*Dynamic and multicomponent hydrogels to mimic the extracellular matrix*

Poster #	Name	*Title*
P-57	Nawel Moussa	*Spectroscopic etude of activated carbon from brown algae and activated carbon from green algae*
P-58	Nicolai Nikishkin	*(Hydro)quinone-based redox-active macrocycles and their conformational, binding and electrochemical behavior*
P-59	Benedikt Nowak	*Self-assembling low molecular weight peptides for the fabrication of magneto- and lightresponsive hydrogels*
P-60	Jiangkun Ouyang	*Design and synthesis of chiral polymers for information storage*
P-61	Jorn Steen	*pH sensing in the diffuse region with SERS spectroscopy*
P-62	Ghislaine Vantomme	*Supramolecular copolymers: structure and composition revealed by theoretical modeling*
P-63	Lydia Zengerling	*ROS-Responsive Thiazolidine-Containing Collagen Mimetic Peptides*
P-64	Andreas Thomas Rösch	*Towards spintronics aided water splitting: chiral triphenylamine and squaraines dyes as photosensitizers and directors for solid state materials*
P-65	Elisabeth Weyandt	*Structural insights and chain length modulation of photo-responsive supramolecular (co)polymers*
P-66	Guanglu Wu	*Discrete Fluorophore Dimers Constrained by Multiple Cucurbit[8]uril Clampings*

Poster #	Name	*Title*
P-67	Giacinto Scoles	*A new non invasive tool for the molecular diagnostics of sporadic brain degenerative diseases*

THEME: BIOCATALYSIS/SYNTHETIC BIOLOGY

Pre-conference

Poster #	Name	*Title*
P-68	Jan Harm Westerdiep	*Performance comparison of in vitro synthetic gene network models as a method to study the mechanistic details of resource competition*

Pre-conference and conference

Poster #	Name	*Title*
P-69	Daniel Devlitsarov	*Regulation of motility in Vibrio cholerae by RNA-binding protein ProQ*
P-70	Cristina Lía Fernández Regueiro	*Exploring modular design of enzymatic reaction networks.*
P-71	Christian Gebhardt	*Where to mutate proteins and where to label fluorophores for single-molecules FRET?*
P-72	Franziska Koller	*Protein mono-rhamnosylation - a kingdom spanning post-translational modification*
P-73	Ralph Krafczyk	*Succumbing to sweetness - Switching the post-translational modification of translation elongation factor EF-P*
P-74	Roos van Lier	*Photoredox Catalysed Benzylation of Dehydroamino Acids in Proteins and Peptides*
P-75	Ardjan van der Linden	*The in vitro study of novel genetic networks*

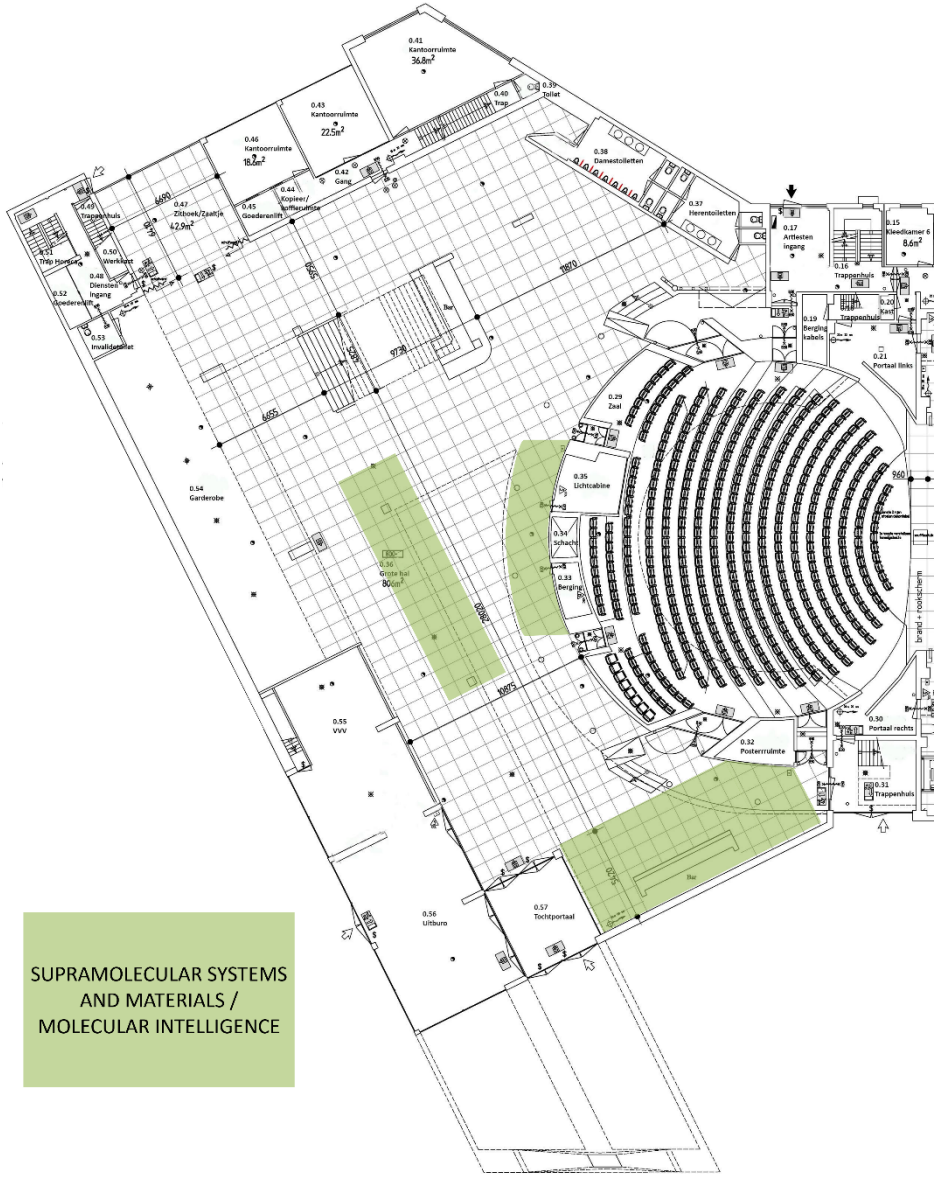
Poster #	Name	*Title*
P-76	Johannes Rebelein	*Whole-Cell Transfer Hydrogenation Using Carbonic Anhydrase as Host Protein for the Construction of Artificial Metalloenzymes*
P-77	Roel Maas	*In vitro reconstruction of in silico evolved genetic networks*
P-78	Alejandro Torrado	*Introduction of plant Photosystem II into the cyanobacterium Synechocystis*
P-79	Christopher Scheidler	*Establishing a genetic code expansion system in Bacillus subtilis*
P-80	Yoann Cotelle	*Chemical Optimization of Whole-Cell Transfer Hydrogenation Using Carbonic Anhydrase as Host Protein*
P-81	Pascal Pieters	*Characterization of a Noise-Reducing Genetic Circuit*
P-82	Irina Trotsenko	*One-pot cell-free assembly of armored RNA for applications in synthetic biology*
P-83	Jaicy Vallapurackal	*Development of a microfluidics-based assay for the evolution of artificial metalloenzymes using a cell surface display strategy*
P-84	Tianhe Wang	*Engineering riboregulators based on toehold-mediated strand displacement processes to control gene expression in Escherichia coli*

Conference

Poster #	Name	*Title*
P-85	Glenn Cremers	*Efficient small-scale conjugation of DNA to primary antibodies for multiplexed cellular targeting*
P-86	Sandra Michel-Souzy	*Encapsulins: a multivalent engineerable tool for medicine*

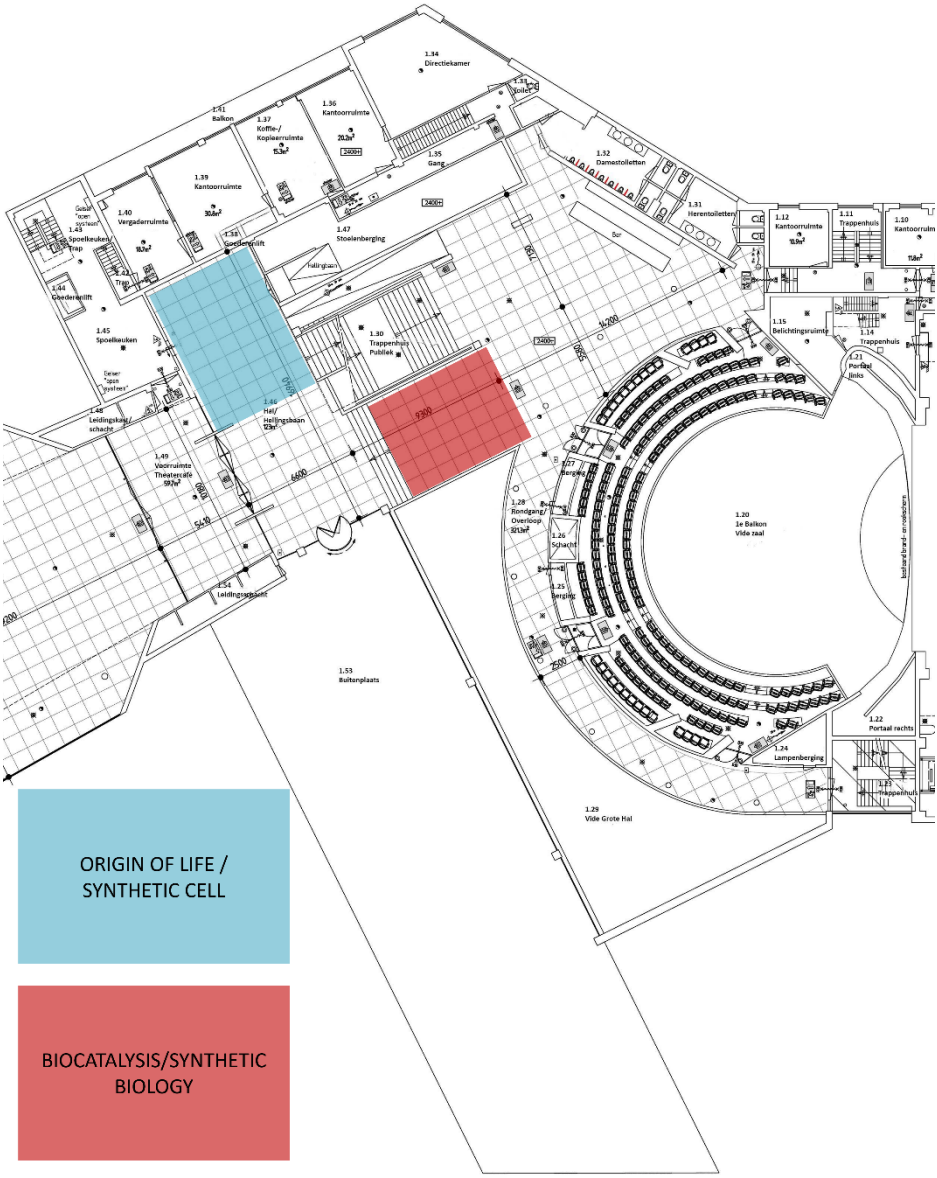
Floor plan

Ground floor



SUPRAMOLECULAR SYSTEMS AND MATERIALS / MOLECULAR INTELLIGENCE

First floor



ORIGIN OF LIFE / SYNTHETIC CELL

BIOCATALYSIS/SYNTHETIC BIOLOGY

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