

NWO CHAINS 2022

The Element of Surprise

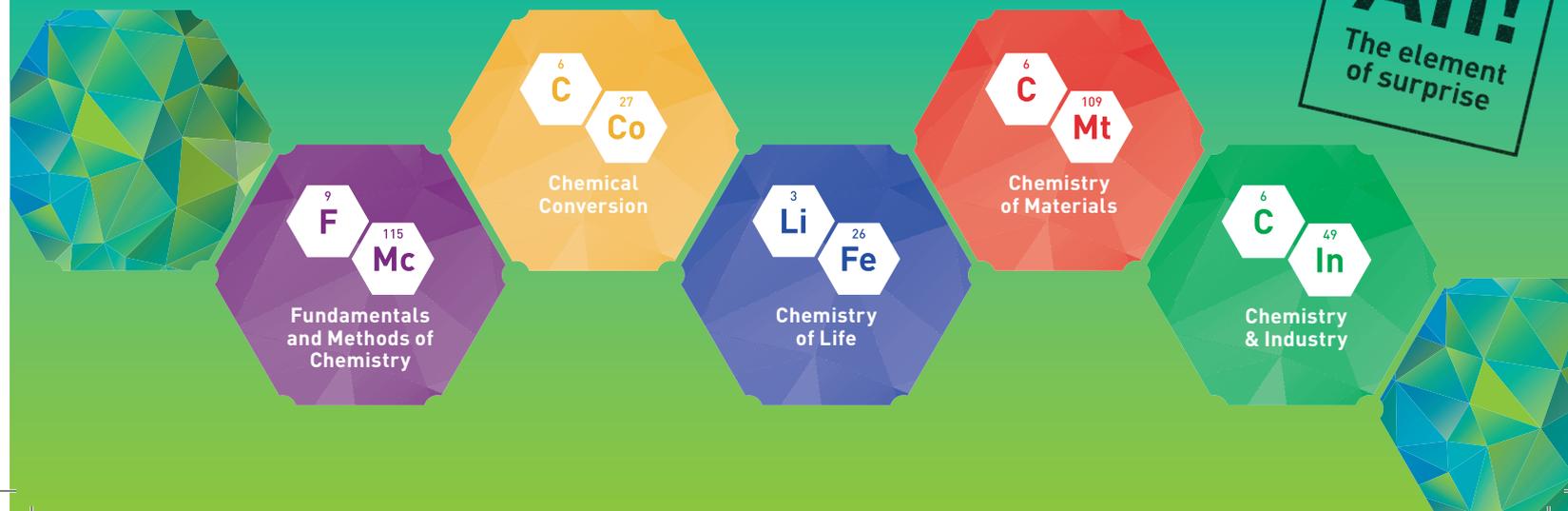
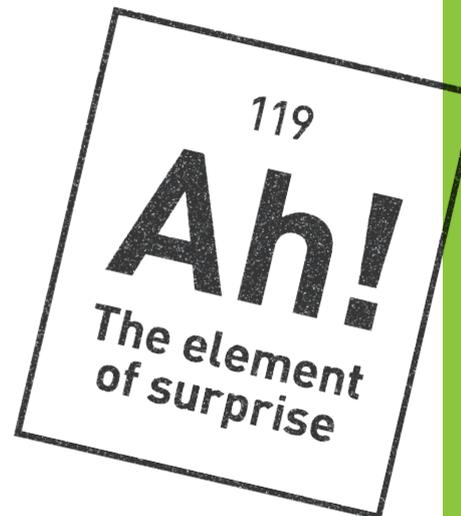


TABLE OF CONTENTS

03		Programme Wednesday 21 September
04		Plenary lectures / Keynotes
05		Interdisciplinary focus sessions
06		Parallel sessions
08		Parallel sessions
10		Programme Thursday 22 September
11		Keynotes / Plenary lecture
12		Parallel sessions
14		Parallel sessions
17		Interdisciplinary focus sessions
18		Parallel sessions
20		Floor plan
22		Partners and sponsors
23		Your notes / Colophon



PROGRAMME WEDNESDAY 21 SEPTEMBER

CHAIRMAN FERDINAND GROZEMA TUD, CHAIR PROGRAMME COMMITTEE

- ✔ 08.30 - 10.00 | Registration / Tea & coffee
- ✔ 10.00 - 10.15 | Opening and welcome by NWO @beneluxzaal
- ✔ 10.15 - 11.00 | Plenary speaker Robert Schlögl @beneluxzaal
- ✔ 11.00 - 11.30 | Element of Surprise by KNCV /
Announcement and lecture KNCV Gold Medal 2022 winner @beneluxzaal
- ✔ 11.30 - 11.50 | Break / Visit sponsors / Networking @the plaza
- ✔ 11.50 - 12.20 | Keynotes
- ✔ 12.20 - 13.20 | Lunch @theplaza
- ✔ 13.20 - 14.05 | Interdisciplinary focus sessions
- ✔ 14.10 - 15.10 | Parallel sessions
- ✔ 15.10 - 15.30 | Break / Visit sponsors / Networking @the plaza
- ✔ 15.30 - 16.30 | Posters
- ✔ 16.30 - 17.30 | Parallel sessions
- ✔ 17.30 - 18.00 | Break / Visit sponsors / Networking @the plaza
- ✔ 18.00 - 19.45 | Dinner @beneluxzaal
- ✔ 19.45 - 20.30 | Plenary speaker Joris Dik @beneluxzaal
- ✔ 20.30 - 00.00 | KNCV pubquiz @baroniezaal / Drinks & music @brabantzaal / NextGenChemNL meet-up @limburgfoyer



🕒 10.15 - 11.00
PLENARY LECTURE

BENELUXZAAL



Robert Schlögl
Max Planck Institute

Safe and sustainable energy
is the largest application
of catalytic chemistry

🕒 19.45 - 20.30
PLENARY LECTURE

BENELUXZAAL



Joris Dik
TUD

Chemistry in art

🕒 11.50 - 12.20 | KEYNOTES

PARKZAAL

BRABANTZAAL

AUDITORIUM

BENELUXZAAL



Sylvestre Bonnet
LEI



Henk Bolink
University of Valencia



Francesca Grisoni
TUE



Luc Brunsveld
TUE

Transmembrane
photoelectron transfer:
surprises for artificial
photosynthesis

CHAIR

Tati Fernández Ibáñez
UvA

Vapor phase deposited
perovskite solar cells

CHAIR

Loredana Protesescu
RUG

Harnessing artificial
intelligence for de
novo drug design

CHAIR

Harry Bitter
WUR

Supramolecular
Chemical Biology -
Where weak interactions
become strong

CHAIR

Jan van Hest
TUE

🕒 11.00 - 11.30
LECTURE

BENELUXZAAL



KNCV

Gold Medal winner
2022

✓ 13.20 - 14.05 | INTERDISCIPLINARY FOCUS SESSIONS

BRABANTZAAL	BENELUXZAAL	AUDITORIUM	ROOM 63/64	PARKZAAL
<p>CHAIR</p> <p>Roy van der Meel TUE</p>	<p>CHAIR</p> <p>Elias Vlieg RU</p>	<p>CHAIR</p> <p>Julieta Paez UT Rienk Eelkema TUD</p>	<p>CHAIR</p> <p>Esther Alarcon Llado AMOLF Eline Hutter UU</p>	<p>CHAIR </p> <p>Henk-Jan van Manen Nouryon</p>
<p>RNA: from fundamental insights to therapeutic applications</p>	<p>Dutch user organisation for accelerator-based light source: Kick-off</p>	<p>Water-based dynamic covalent chemistries: molecules, techniques, materials</p>	<p>Sensing catalytic reactions with light: chemistry meets physics</p>	<p>ChemistryNL: Sensing and digitalization for a sustainable chemical industry</p>
<p>Wim Veleva (RU)</p> <hr/> <p>Pieter Vader (UUMC)</p>	<p>Gema Martínez-Criado (ESRF)</p> <hr/> <p>Moniek Tromp (RUG)</p> <hr/> <p>Britta Redlich (RU)</p>	<p>Sophie Beeren (TU Denmark)</p> <hr/> <p>Hagan Bayley (University of Oxford)</p> <hr/> <p>Rienk Eelkema (TUD)</p>	<p>Atsushi Urakawa (TUD)</p> <hr/> <p>Charuseela Ramanan (VU)</p> <hr/> <p>Freddy Rabouw (UU)</p> <hr/> <p>Andrea Baldi (VU)</p>	<p>Jeroen Jansen (RU)</p> <hr/> <p>Martijn Franssen (Malvern Panalytical & MinacNed)</p>



 14.10 - 15.10 | PARALLEL SESSIONS

BRABANTZAAL	AUDITORIUM	ROOM 65	ROOM 80/81	ROOM 82/83
 Chemical Conversion CHAIR Sonja Pullen UvA	 Chemical Conversion CHAIR Monique van der Veen TUD	 Chemistry of Materials CHAIR Roel Dullens RU	 Chemistry of Materials CHAIR Emilia Olsson ARCNL	 Chemistry of Materials CHAIR Lisa Tran UU
Catalyst design	Catalysis & spectroscopy	Functional polymeric materials	Computational chemistry for materials	Biomaterials
Yunfei Guo (TUE) Cyclotrimerization mechanism using acetate anions as catalyst	Ruipeng Luo (RU) NMR study of electro-chemical lithium-mediated ammonia synthesis	Wouter van den Akker (TUE) Transient permeability switch of polymeric self-adaptive nanoreactors	Alberto Perez de Alba Ortiz (UU) Inverse design of self-assembling soft and porous materials	Elenora Hochreiner (UU) Designer drug delivery vehicles via polymerization-induced self-assembly (PISA)
Roel Bienenmann (UU) A dicopper(II)-hydride complex that reacts like a cluster	Diyu Zhang (LEI) RAIRS characterization of CO+O coadsorption on copper	Annemieke van Dam (WUR) Self-healing (non)-fluorinated antifouling polymer brushes	Jonathon Cottom (LEI) Defects, charge-trapping, and stability of amorphous Si ₃ N ₄	Merel Janssen (LEI) A strain-stiffening dynamic covalent hydrogel drives cardiomyocyte alignment
Fanshi Li (UU) Improved oxidation catalysis through ligand deuteration and sterics	Francesco Verdelli (TUE) Vibrational strong coupling with periodic particle arrays	Neshat Moslehi (UU) Super-cooperativity in binding of iron onto terpyridine-functionalized polymers	Willem Boon (UU) How surface charge affects reaction kinetics	Muhabbat Komil (TUE) Towards synthetic extra-cellular matrices using α -functionalized ureido-pyrimidinone-brush polymer
Suzanne Assen (LEI) Axiomatic design of solar to ethylene conversion	Laura Barberis (UU) On the nature of ZnOx and MnOx promotion	Diederik van Luijk (TUE) Exploring catch bonds in mechano-chemically active phosphate triesters	Raisa Biega (UT) Ab initio calculations of excitons in 2D perovskites	Tony Feliciano (UM) Non-covalent and supra-molecular hydrogels for ocular regeneration

✓ 14.10 - 15.10 | PARALLEL SESSIONS

PARKZAAL

ROOM 55/56

BOSZAAL

ROOM 57/58

ROOM 63/64



Fundamentals
and Methods of
Chemistry

CHAIR

Arnaud Thevenon
UU



Chemistry of Life

CHAIR

Frans Bianchi
RUG



Chemistry of Life

CHAIR

Marthe Walvoort
RUG



Chemistry of Life

CHAIR

Marc Baggelaar
UU



Industry

CHAIR

Maria Sovago
STALIA

Organic chemistry

Protein mechanisms

Chemistry and biology
of carbohydrates

Antibiotics

Shape your career
session

Daniel Verdoorn (UM)

Co (II) mediated synthesis of 2,5-substituted-1,3,4-oxadiazoles

Alyssa van den Boom (WUR)

Sulfur-phenolate exchange as next-generation click chemistry

Pamela Benzan Lantigua (UU)

Bond activation at a cage silanide: towards organocatalysis

Wouter Remmerswaal (LEI)

Bridged cations as reactive intermediates in glycosylation reactions

Harry Warner (RUG)

Inflammatory activation drives re-sculpting of dendritic cell nucleus

Bruna Eckhardt (Hubrecht Inst)

Mechanism of chromatin assembly during DNA replication

Valerie Betting (Radboudumc)

Mechanism of Piwi4-mediated gene silencing in mosquitoes

Laura Claessens (LUMC)

SUMO-chain protease SENP6 is required for genome stability

Michela Ferrari (RUG)

Generation of novel donors for trnglycosylation by glycosidases

Francesco Palmieri (UU)

Automated chemoenzymatic synthesis of heparan sulfate oligosaccharides

Jitske van Ede (TUD)

The diverse flagellin sugar modifications of *C. jejuni*

Mengying Liu (UU)

Influenza viruses bridge species differences by heteromultivalent interactions

Isabel Nunez Santiago (LEI)

Chemistry, enzymology and genomics of lugdunomycin biosynthesis

Michela Vargiu (RUG)

Chemical modification of Dha residues in antimicrobial peptides

Jaco Slingerland (LEI)

Semi-synthetic polymyxins antibiotics with reduced nephrotoxicity

Felix Paulussen (VU)

Covalent proteomimetic inhibitor of the bacterial FtsQB complex

Session with career advice and sponsors.

Contributions by:
Screening Devices, Hezelburcht, NWO, Shell, CAS.



 16.30 - 17.30 | PARALLEL SESSIONS

BRABANTZAAL	AUDITORIUM	ROOM 65	ROOM 80/81	ROOM 82/83
 Chemical Conversion CHAIR Evgeny Pidko TUD	 Chemistry of Materials CHAIR Ghislaine Vantomme TUE	 Chemistry of Materials CHAIR Peter Ngene UU	 Chemistry of Materials CHAIR Dina Maniar RUG	 Fundamentals and Methods of Chemistry CHAIR Antonija Grubisic Cabo RUG
Homogeneous catalysis	Supramolecular polymer chemistry	Energy & electronic materials	Sustainable polymer chemistry	Spectroscopy
Verena Sukowski (UvA) Meta-C-H arylation of anisoles via palladium/norbornene catalysis Ashok Ramakrishnan (LEI) Pd-catalyzed carbonylative synthesis of anhydrides from alkenes Esther Sinnema (RUG) From catalytic H-P bond activation to alpha-chiral olefins Eva Meeus (UvA) Radical-type aziridination with [Co ^{III} (TAML ^{red})] in water	Stefan Wijker (TUE) Capturing stable conformations of self-reporting aqueous polymeric nanoparticles Guillermo Monreal Santiago (Strasbourg) Bio-inspired peptide-containing coacervates as shear-responsive materials Roel Raak (TUE) Patterned and collective motion of liquid crystal cilia Marco Preuss (TUE) Chiral solvent mediated spin polarization in supramolecular polymers	Eda Yilmaz (UU) Towards a biophotovoltaic device powered by photosynthesis Winfried de Haas (TUE) Operando studies on NiFeS battery performance Xin Guan (TUE) Pb _{1-x} Sn _x Te nanowire growth via molecular beam epitaxy Weizhe Zhang (LEI) Proton conductive graphene membrane in methanol fuel cell	Tankut Türel (TUE) Closed-loop recyclable epoxy resins derived from renewable bioresources Laura Boetje (RUG) Fully biobased photocured starch oleate films Sofiya Vynnytska (UM) A green polyampholytes based on poly(aspartic acid) Bruno Bottega Pergher (UvA) Renewable polyesters to replace ABS LEGO bricks	Vesna Eric (RUG) The microscopic origin of the broadening in the optical spectra of chlorosomes Giulia Giubertoni (UvA) IR diffusion-ordered spectroscopy reveals molecular structure and size Han Mertens (TUD) Towards studying thermally induced processes with ultrafast spectroscopy Roderick Tas (TUE) Revealing the ice binding dynamics of antifreeze proteins



✓ 16.30 - 17.30 | PARALLEL SESSIONS

PARKZAAL

ROOM 55/56

BOSZAAL

ROOM 57/58

ROOM 63/64



Fundamentals
and Methods of
Chemistry

CHAIR

Ioana Ilie
UvA



Chemistry of Life

CHAIR

Evan Spruijt
RU



Chemistry of Life

CHAIR

Wim Velema
RU



Chemistry of Life

CHAIR

Matt Baker
UM



Chemistry of Life

CHAIR

Marta Artola
LEI

Theoretical chemistry I

Protein structure I

Photochemistry and
(bio)sensors

Materials and particles

Chemical biology

Titus de Haas (LEI)

Vibronic coupling in light driven water oxidation catalysis

Bauke Smits (LEI)

Quantum dynamical temperature effects of H₂ on Cu(111)

Hessel Poelman (UM)

Elementary interactions in protein structures: cation-pi

Seenivasan Hariharan (UvA)

Exploring water dissociation on oxides using quantum algorithms

Agnes Adler (UU)

An NMR view of the dynamic microtubule surface

Maria Hayder (UvA)

Native monoclonal antibody characterization using AF4-MS

Leonardo Passerini (LEI)

Intermediates of amyloid aggregation caught in the act

Tiemei Lu (RU)

Endocytosis of coacervate droplets into liposomes

Georgios Alachouzos (RUG)

The first NIR-activated photolabile protecting group for photopharmacology

Kefan Wu (UvA)

Upconversion nano-transducer for precisely positioned photochemistry in biology

Mathijs Pals (RU)

A fluorogenic sensor for error-prone polymerases

Nienke van Dongen (UT)

Digital single cancer biomarker detection by CRISPR/Cas sensing

Francisca Fernandes Gomes (UT)

Biomimicking lipid coatings enhance hemocompatibility of microparticles

Laura Schijven (WUR)

Fabrication rules for hollow and solid protein particles

Pushpa Rampratap (RUG)

Dynamics and structure in ECM-mimicking hyaluronic acid hydrogels

Martijn van Galen (WUR)

Microfluidic force spectroscopy: a rapid mechanotyping assay

David Perez Berrocal (LUMC)

Targeting Ub-Ligase activities en-route to new therapeutic strategies

Max Kloet (LUMC)

Synthesis of all arginine linked ADP-ribosylated ubiquitin proteins

Sophie Wintermans (LEI)

High-throughput screenings and development of RNA pseudoknots binders

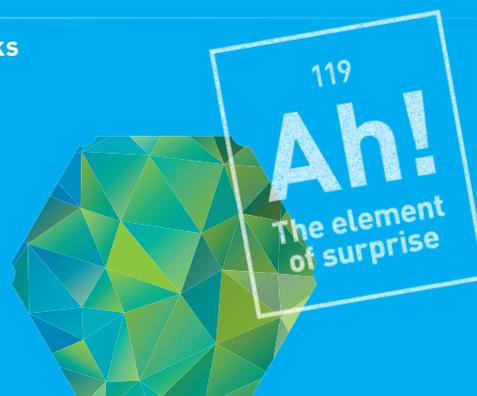
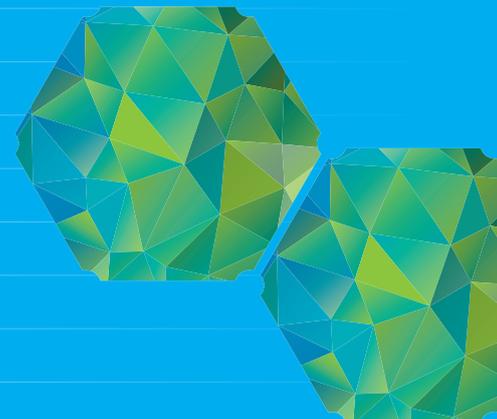
Samiksha Sardana (UU)

Profiling S-palmitoylation during neuronal differentiation

PROGRAMME THURSDAY 22 SEPTEMBER

CHAIRMAN FERDINAND GROZEMA TUD, CHAIR PROGRAMME COMMITTEE

- ✓ 07.00 - 09.00 | Breakfast / Tea & coffee
- ✓ 09.00 - 10.00 | Parallel sessions
- ✓ 10.00 - 10.20 | Break / Visit sponsors / Networking @the plaza
- ✓ 10.20 - 10.50 | Keynotes
- ✓ 10.55 - 11.40 | Parallel sessions
- ✓ 11.40 - 12.40 | Lunch @theplaza
- ✓ 12.40 - 13.40 | Posters
- ✓ 13.40 - 14.25 | Interdisciplinary focus sessions
- ✓ 14.25 - 14.45 | Break / Visit sponsors / Networking @the plaza
- ✓ 14.45 - 15.30 | Parallel sessions
- ✓ 15.35 - 16.20 | Plenary speaker Titia Sixma @beneluxzaal
- ✓ 16.20 - 16.35 | Posterprizes (sponsored by ACS) / Closing remarks



🕒 10.20 - 10.50 | KEYNOTES

🕒 15.35 - 16.20
PLENARY LECTURE

PARKZAAL

BRABANTZAAL

AUDITORIUM

BENELUXZAAL

BENELUXZAAL



Titia Sixma
NKI

Dub gymnastics:
allosteric regulation
of deubiquitination

Sophie Hermans
UCLouvain

Wim Noorduin
AMOLF/UvA

Silvia Bordiga
University of Torino

Gijsje Koenderink
TUD

Hybrid nanomaterials elaboration from carbon surface functionalization and applications in sensing and biomass valorization catalysis

Self-organization for shaping up materials

Spotlight on zeolites and MOFs as catalysts: similarities and differences; strengths and weaknesses

Cell morphogenesis: From polymer physics to synthetic cells

CHAIR

Yvonne van der Meer
MU

CHAIR

Andries Meijerink
UU

CHAIR

Jana Roithova
RU

CHAIR

Jan van Hest
TUE



 09.00 - 10.00 | PARALLEL SESSIONS

BRABANTZAAL	ROOM 63/64	ROOM 65	ROOM 80/81	ROOM 82/83
 Chemical Conversion CHAIR Fedor Miloserdov WUR	 Chemical Conversion CHAIR Ward van der Stam UU	 Chemistry of Materials CHAIR Marie Anne van de Haar Seaborough	 Chemistry of Materials CHAIR Giuseppe Portale RUG	 Chemistry of Materials CHAIR Tom Savenije TUD
Catalysis for synthesis	Electrocatalysis	Optical nanomaterials	Polymer chemistry & physics	Energy materials - perovskites
Damian Padin Santos (RUG) Turning enantiomers into diastereomers; the case of alfa-ureidophosphonates	Boaz Izelaar (TUD) Electrochemical N ₂ reduction performance of metal carbides	Reinout Ubbink (TUD) In-situ HF treatment of InP quantum dots	Marc Falandt (UU) Hybrid supramolecular / photoresponsive dynamic, volumetrically bioprintable cell culture matrices	Huygen Jöbsis (UU) Iron alloyed double perovskites for improved photochemical activity
Dennis Dam (LEI) Visible-light induced catalytic aziridination of alkenes	Dimitra Anastasiadou (TUE) Ammonia electrosynthesis from nitrate on preferentially oriented Cu ₂ O	Christiaan van Campenhout (AMOLF) Uniform layer formation in mechanically active materials	Aleksander Guzik (RUG) New amphiphilic polymers for controlling solution rheology	Zimu Wei (TUD) Functional molecules on the surface of 2D-perovskite nanoplatelets
Mark Kwakernaak (TUD) Room temperature synthesis of perylene diimides	Phebe van Langevelde (LEI) Sustainable & efficient H ₂ O ₂ production using molecular electrocatalysis	Mark Mangnus (UU) Finite-size effects on energy transfer within doped nanocrystals	Sophie van Lange (WUR) Compleximers: malleable and recyclable plastics with ionic interactions	Jiashang Zhao (TUD) Charge-carrier dynamics in co-evaporated MAPbI ₃ with gradient compositions
Benjamin Spitzbarth (TUD) Oxidation-driven Michael acceptor recovery in a reaction network	Matthijs van der Ham (WUR) Steering the performance of Pt/CNF electrocatalysts	Kushagra Gahlot (RUG) Dynamics and tunability for tin halide perovskites nanostructures	Soumabrata Majumdar (TUE) RNA inspired exchange reactions in covalent adaptable networks	Gianluca Grimaldi (AMOLF) Characterizing laser-induced degradation in 2D perovskite flakes

🕒 09.00 - 10.00 | PARALLEL SESSIONS

PARKZAAL	ROOM 55/56	BOSZAAL	ROOM 57/58	AUDITORIUM
 <p>Fundamentals and Methods of Chemistry</p> <p>CHAIR</p> <p>Daria Galimberti RU</p>	 <p>Chemistry of Life</p> <p>CHAIR</p> <p>Arjen Jakobi TUD</p>	 <p>Chemistry of Life</p> <p>CHAIR</p> <p>Paul Geurink LUMC</p>	 <p>Chemistry of Life</p> <p>CHAIR</p> <p>Bauke Albada WUR</p>	 <p>CHAIR</p> <p>Eveline Mezger NWO</p>
Theoretical chemistry II	Protein structure II	Medicinal chemistry	Protein modification and biocatalysis	Inclusion in chemistry

Elisa Palacino-González (RUG)

Modelling ultrafast charge-transfer and spectroscopy in OPV materials

Vivek Sundaram (TUE)

Electronic excitations from projector-based GW-BSE embeddings

Ravindra Shinde (UT)

High-performance software platform for quantum Monte Carlo calculations

Marijn Man (RU)

Using classical trajectories to study ultracold collision complexes

Raj Kumar (UU)

The molecular mechanism of the lipopeptide-antibiotic Daptomycin

Sourav Maity (RUG)

Unveiling antibiotic activity at the single molecule level

Lucas Santos (RUG)

Phosphate uptake pathway in *Xanthomonas citri*

Wenfei Song (UU)

Rubrerythrin encapsulates encapsulins in archaea

Auke Koops (TUE)

Cooperativity as chemical biology paradigm for nuclear receptor drug discovery

Yuqing Jia (LUMC)

Target oncogene PARK7 by small-molecule chemical toolbox

Bente Somsen (TUE)

Stabilization of protein-protein interactions of the 14-3-3/ERRgamma complex

Na Zhu (LEI)

Discovery of selective sn-1-diacylglycerol lipase-β inhibitors

Yiming Guo (RUG)

Engineering a biocatalysts for valorizing lignin

Alejandro Gran Scheuch (VU)

Expanding the enzyme universe: (re)designing a Michaelase

Jordi Keijzer (WUR)

Catalytic nanostructures for the modification of wild-type proteins

Aleksandra Chikunova (LEI)

The roles of conserved residues in β-lactamases

Sisters in Science By: Noor Abdulhussain, Lotte Schreuders, Mimi den Uijl (UvA)

Breaking stereotypes in chemistry

Carolyn Ossenkop (RU)

Assessing inclusively: Towards a more diverse and inclusive research community



 10.55 - 11.40 | PARALLEL SESSIONS

BRABANTZAAL	ROOM 57/58	ROOM 65	ROOM 80/81	ROOM 82/83
 Chemical Conversion CHAIR Paolo Pescarmona RUG	 Chemical Conversion CHAIR Atsushi Urakawa TUD	 Chemistry of Materials CHAIR Willem Mulder TUE	 Chemistry of Materials CHAIR Rik Mom LEI	 Chemistry of Materials CHAIR Sander Wezenberg LEI
Circular carbon I	Heterogeneous catalysis	Bio-nanomaterials	Electrochemical materials	Molecular sensors and switches
Tom Smak (UU) Thermo-oxidative degradation of polyethylene waste Salvador Bertran (RUG) Step-wise inflow fractionation of grassy biomass Ferdy Coumans (TUE) Optimized catalysts for biobased p-xylene from sugars	Luc Smulders (UU) Optimizing noble metal utilization in bifunctional catalysis Yujie Liu (TUE) Reactivity of Fe@ZSM-5 catalysts for methane dehydro-aromatization Oscar Brandt Corstius (UU) Colloidally prepared CuPd/C catalysts for selective hydrogenation	Panagiota Papadopoulou (LEI) Cell specific targeting of lipid nanoparticles Matt Timmers (UU) Using trityl for tuneable acid-sensitive drug release Henrik Siegel (UU) Membrane synthesis via nanoparticle stabilized liquid-liquid phase separation	Emma van der Minne (UT) Ferromagnetic perovskites as oxygen evolution electrocatalysts Taghi Moazzenzade (UT) Digital detection of ssDNA by blockade impact electrochemistry Renee van Limpt (TUE) On the Ni/Co ratio in Co _x Ni _{1-x} O _y as OER-electrocatalyst	Harith Gurunarayana (UU) Au nanorod supraparticles as tunable platform for SERS-sensing Begüm Demirkurt (UvA) Blinking of single fluorescent rotors at constrained interfaces Jorn de Jong (LEI) Photocontrol of anion binding using pseudo-rotaxanes

🕒 10.55 - 11.40 | PARALLEL SESSIONS

PARKZAAL

ROOM 55/56

BOSZAAL

AUDITORIUM

ROOM 63/64



Fundamentals
and Methods of
Chemistry

CHAIR

Evan Wenbo Zhao
RU



Fundamentals
and Methods of
Chemistry

CHAIR

Nikolay Kosinov
TUE



Chemistry of Life

CHAIR

Pascal Miesen
Radboudumc



Chemistry of Life

CHAIR

Eelco Ruijter
VU



Chemistry of Life

CHAIR

Sebastian Pomplun
LEI

NMR

Analytical methods

Transcription regulation

Natural product
synthesis

Targeted drug delivery

Sander Baas (WUR)

Improving NMR sensitivity
with microfluidic micro-
coil-based photo-CIDNP
hyperpolarization

Bono Jimmink (RU)

Expanding the NMR
portfolio with nuclear
singlet states

Angel Wong (RU)

Rapid quantification of
pharmaceuticals using
1H ssNMR spectroscopy

Iris Groeneveld (VU)

New versatile tool for
studying light-induced
degradation

Joren Vos (UU)

Electric potential inside
electrode micropores
from thermodynamic
measurements

Chris Vu (TUE)

Continuous monitoring
of small molecules with
single-molecule resolution

Jos Meeussen (NKI)

How transcription factor
clustering regulates
gene expression

**Ezgi Taşköprü
(Radboudumc)**

piRNA-mediated
transcriptional silencing
of LTR-retrotransposons
in Aedes mosquitoes

**Fatema Zahra M. Rashid
(LEI)**

Regulation of proVWX
transcription by local
chromatin remodelling

**Backerprize lecture
Mira Holzheimer (RUG)**

Total synthesis of archaeal
and mycobacterial natural
products

Daan Bunt (RUG)

Divergent total synthesis
of meroterpenoids from
ganoderma mushrooms

Nick Bergkamp (VU)

GPCR-targeting nano-
bodies: versatile research
tools and potential
therapeutics

Jeffrey Umotoy (AUMC)

Arming antibodies for
HIV-1 cure

Ada Annala (UU)

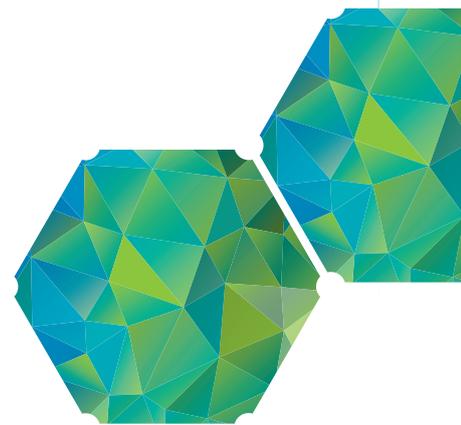
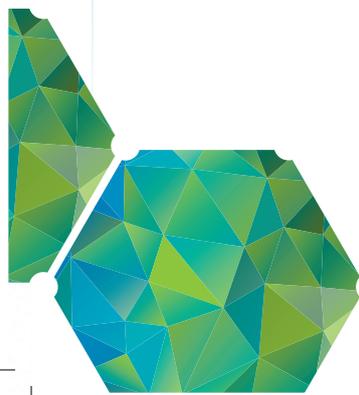
Sustained delivery of
dexamethasone for
ocular applications





✓ 13.40 - 14.25 | INTERDISCIPLINARY FOCUS SESSIONS

BRABANTZAAL	BENELUXZAAL	AUDITORIUM	ROOM 63/64	PARKZAAL
<p>CHAIR</p> <p>Matteo Monai UU Ward van der Stam UU</p>	<p>CHAIR</p> <p>Anastassis Perrakis NKI</p>	<p>CHAIR</p> <p>Lucas Visscher VU</p>	<p>CHAIR</p> <p>Sander van Kasteren LEI</p>	<p>CHAIR</p> <p>KNCV Katja Loos RUG</p>
<p>CO₂ capture and utilization</p>	<p>A new era in (structural) biology - Impact of structure prediction using AI methods</p>	<p>Quantum computing for quantum chemistry</p>	<p>Chemical immunotherapeutics</p>	<p>KNCV-Soft Matter: Chemistry of active coarcervate droplets, Van Arkel award</p>
<p>Ann-Sophie Farle (Skytree)</p> <hr/> <p>Paula Abdala Macarena (ETH Zurich)</p> <hr/> <p>Mariana Cecilio de Oliveira Monteiro (LEI)</p>	<p>Sameer Velankar (European Bioinformatics Institute)</p>	<p>Ariana Torres-Knoop (SURF)</p> <hr/> <p>Matthias de Groot (Boehringer Ingelheim)</p> <hr/> <p>Emiel Koridon (CWI)</p>	<p>Jorieke Weiden (EPFL)</p> <hr/> <p>Willem Mulder (RU)</p>	<p>Evan Spruijt (RU)</p> <hr/> <p>Karina Nakashima (RUG) Winner Van Arkel award</p>



 14.45 - 15.30 | PARALLEL SESSIONS

BRABANTZAAL	ROOM 57/58	ROOM 65	ROOM 80/81	ROOM 82/83
 Chemical Conversion CHAIR Guanna Li WUR	 Chemical Conversion CHAIR Lars Jeuken LEI	 Chemistry of Materials CHAIR Julieta Paez UT	 Chemistry of Materials CHAIR Ina Vollmer UU	 Chemistry of Materials CHAIR Stephan Eijt TUD
Circular carbon II	Enabling technologies	Soft matter inspired by biosystems	Materials for heterogeneous catalysis	Photo-active materials
Francesco Cannizzaro (TUE) CO ₂ hydrogenation over InNi clusters <hr/> Liliana Capulin Flores (RUG) CO ₂ reduction mediated by rhenium carbonyl formazan/ate complexes <hr/> Raghavendra Meena (WUR) Mechanism of butyric acid hydro-deoxygenation catalyzed by Mo ₂ C	Jesus Orduna (UvA) Continuous-flow photo-catalytic conversion of hydroalkanes with organic electrophiles <hr/> José Palomo Jiménez (TUD) Enhancing catalytic methane activation via microwave heating <hr/> Laura Opdam (LEI) Photo-activated water oxidation catalysis in an artificial metallo-protein	Minye Jin (UT) Firefly-inspired redox-responsive injectable hydrogels for cell encapsulation <hr/> Nick Oikonomeas (UvA) Intermittent motion of active colloidal swimmers <hr/> Paul Adamski (RUG) Catalysis of coacervate droplet formation by synthetic self-replicators	Kelly Brouwer (UU) Designing well-defined heterogeneous catalysts via self-assembly of nanoparticles <hr/> Elahe Motaei (LEI) Regular surface defects in catalyzing the Fischer-Tropsch reaction <hr/> Thimo Jacobs (UU) Nanoscale sensing of temperature during catalytic reactions	Emmanouil Archontakis (TUE) Spectral super-resolution microscopy to study single-chain polymeric nanoparticles <hr/> Patrick Baesjou (Hogeschool Utrecht) Engineering and preserving brilliant structural colour in bacteria <hr/> Ziying Wu (TUD) Positrons reveal metallic nano-domain formation in photochromic oxyhydrides



🕒 14.45 - 15.30 | PARALLEL SESSIONS

PARKZAAL	ROOM 55/56	BOSZAAL	AUDITORIUM	ROOM 63/64
 <p>Fundamentals and Methods of Chemistry</p> <p>CHAIR</p> <p>Roelant Hilgers WUR</p>	 <p>Fundamentals and Methods of Chemistry</p> <p>CHAIR</p> <p>Egon Willighagen UM</p>	 <p>Chemistry of Life</p> <p>CHAIR</p> <p>Sander van Kasteren LEI</p>	 <p>Chemistry of Life</p> <p>CHAIR</p> <p>Peter Korevaar RU</p>	 <p>Chemistry of Life</p> <p>CHAIR</p> <p>Anthe Janssen LEI</p>
Mass spectrometry	Chemometrics	Immunotherapy	Systems chemistry	In silico

Hany Majeed (VU)
Trapped ion mobility mass spectrometry of designer drugs

Kas Houthuijs (RU)
MS-based metabolite identification via an IR spectral library

Peiliang Han (UM)
MS/MS and IMS study of Nifedipine fragmentation pathways

Andrea Carnoli (RU)
Accounting for dependence in modeling chemical data

Rick van den Hurk (UvA)
Characterization of smokeless powders by on-line 2DLC

Murat Sorkun (DIFFER)
Exploration of chemical space with ChemPlot

Nina Ligthart (LEI)
Bio-orthogonal regulation and tracking of α -galactosylceramide derivatives

Kevin Venrooij (RU)
One CAAR T cell to rule them all

Lieuwe Biewenga (TUE)
Engineering of a pH-switchable generic antibody-blocking protein

Shikha Dhiman (TUE)
Reciprocal receptor clustering by dynamic multivalent supra-molecular polymers

Dmitrii Kriukov (UT)
History-dependence in chemical reaction networks enable dynamic switching

Oliver R. Maquire (RU)
A prebiotic phosphorylation system with analogues of ATP and kinases

Bernadette Mohr (UvA)
Rational discovery of cardiolipin-selective molecules by high-throughput simulations

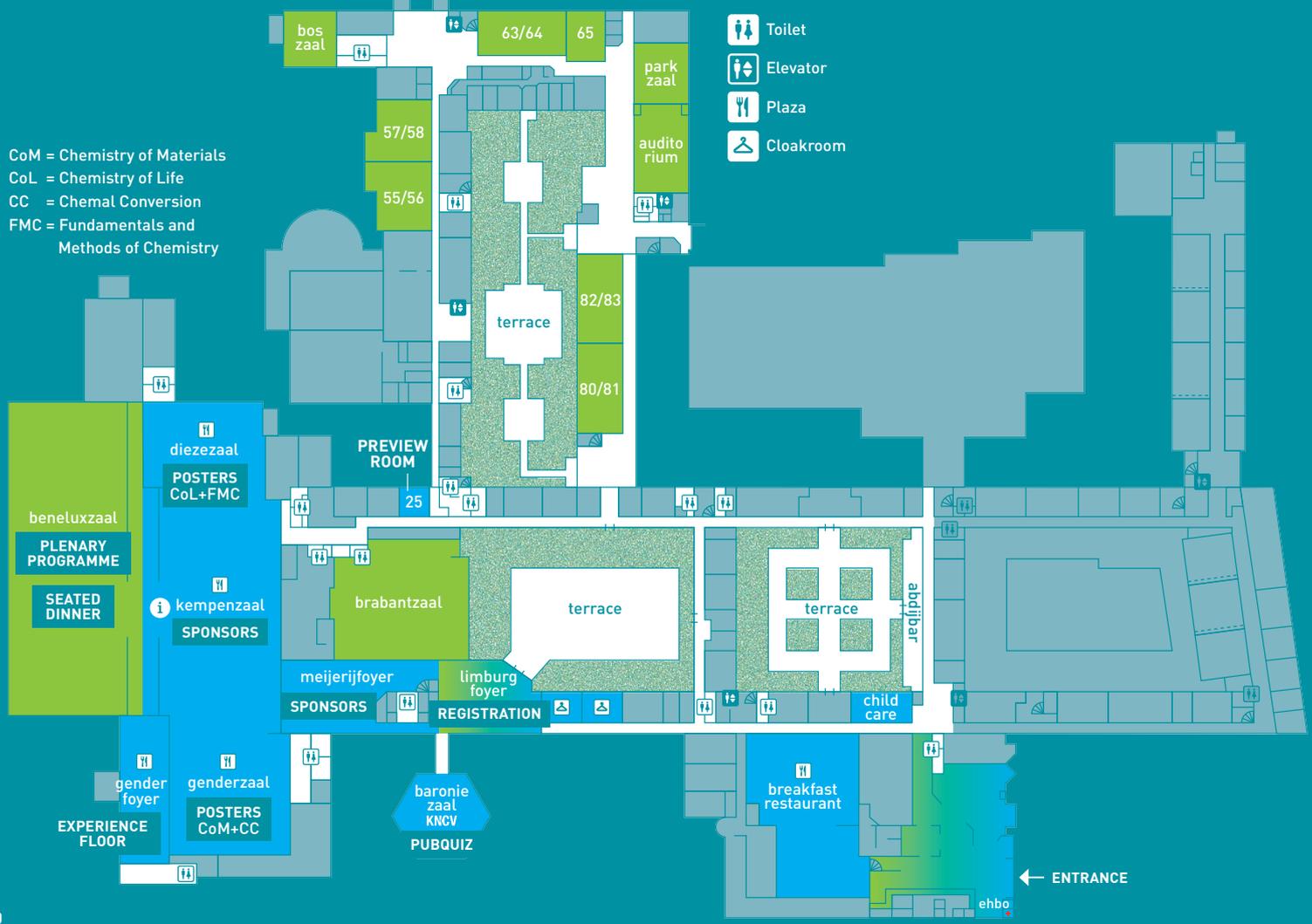
David Poole (VU)
In silico assessment of aryl hydrocarbon receptor activation

Ida de Vries (NKI)
AlphaFill: Enriching AlphaFold models with co-factors and ligands



CoM = Chemistry of Materials
 CoL = Chemistry of Life
 CC = Chemical Conversion
 FMC = Fundamentals and
 Methods of Chemistry

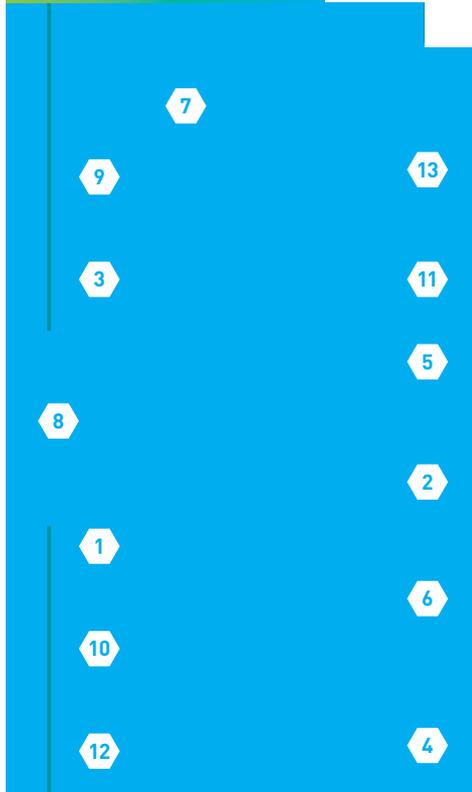
-  Toilet
-  Elevator
-  Plaza
-  Cloakroom



FLOOR PLAN SPONSORS

EXHIBITION FLOOR

KEMPENZAAL



1. ACS + CAS
2. Canon
3. Catalisti + Flanders Investment & Trade
4. Chemistry NL
5. Elsevier
6. Hezelburcht
7. KNCV
8. NWO
9. Screening Devices
10. Shell
11. Symeres
12. Talentmark
13. Wyatt Technology

MEIJERIJFOYER

SCM

Seaborough

Chemport Europe Ecosystem will be present with a few of its partners. Confirmed are: Groningen Seaports, Eco Fuels, Teijin, Bio BTX.

GENDERFOYER

Lorentz Centre

Shell

Stralia

Sustainables

TNO

NWO CHAINS 2022 PARTNERS AND SPONSORS



KNCV



**Lorentz
center**



Symeres
Making Molecules Matter. Together.



HEZELBURCHT



FLANDERS
INNOVATION &
ENTREPRENEURSHIP

CATALISTI

Clusters for Growth



WYATT
TECHNOLOGY



SCM
Software for
Chemistry &
Materials

Canon

CAS
A division of the
American Chemical Society



**ACS
central
science**

**ACS
OMEGA**

JACS Au
AN OPEN ACCESS JOURNAL OF THE AMERICAN CHEMICAL SOCIETY



SEABOROUGH

FLANDERS
INVESTMENT
& TRADE



Flanders
State of the Art

TALENTMARKTM
THE LIFE IN SCIENCE



**CHEMPORT
EUROPE**



GRONINGEN SEAPORTS



BioBTX

TEIJIN

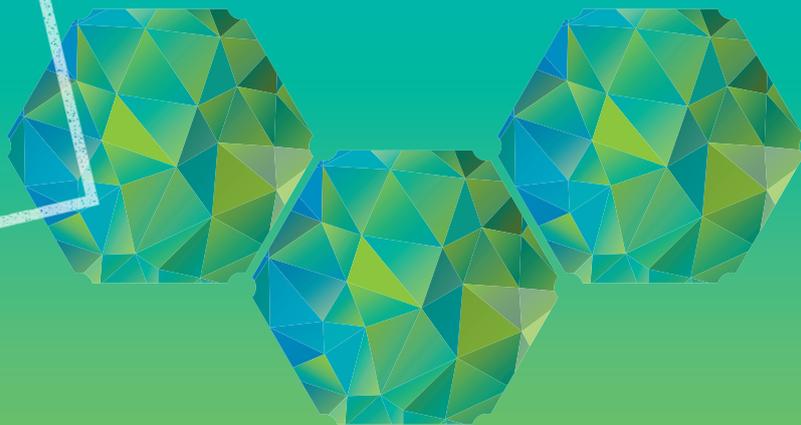
ecoFUELS
netherlands

119

Ah!

The element
of surprise

Save the date:
IUPAC CHAINS 2023
20 – 25 August



 **chains**
CHemistry As INnovating Science

KNCV



ChemistryNL