PROGRAMME DAY 2: TUESDAY 4 DECEMBER 2018

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07.00 - 09.00 BREAKFAST

ROOM	PARKZAAL	80-81	82-83	58	55-57	63-64	65	BOSZAAL
	NEW MOLECULES FOR MEDICINAL CHEMISTRY Chair: Luc Brunsveld	PROTEIN FUNCTIONALIZATION Chair: Martijn Verdoes	SYSTEMS CHEMISTRY Chair: Peter Korevaar	OMICS TO THE NEXT LEVEL Chair: Rawi Ramautar	BRINGING SPECTROSCOPY TO LIFE Chair: Jocelyne Vreede	GENE REGULATION Chair: Hugo van Ingen	PROTEIN CRYSTALLOGRAPHY Chair: Loes Kroon-Batenburg	FROM SYNTHETIC MEMBRANES TO SYNTHETIC CELLS Chair: Alexander Kros
09.00 - 09.15	**E. Mock (LEI, Van der Stelt)** Discovery and characterisation of an in vivo active nape-pld inhibitor	**N. van der Zouwen (RUG, Witte)** An in situ combinatorial methodology to synthesize and screen chemical probes	**B. Liu (RUG, Otto)** Competition between self-replication and folding	**V. Kuzyk (VU, Lingeman)** In-depth characterization of heavily glycosylated proteins as biomarkers for colorectal cancer	**A. Lucini Paioni (UU, Baldus)** Spatial localization and selectivity in dynamic nuclear polarization	**H. van der Heul (LEI, Van Wezel)** Regulatory and mutational analysis of the biosynthesis of the angucycline antibiotic lugdunomycin	**R. Gierse (RUG, Hirsch)** Structural insights into the catalytic mechanism of the anti-infective target DXS	**A. Kopf (UU, Killian)** Membrane solubilization by Styrene–Maleic Acid copolymers: importance of polymer length
09.15 - 09.30	**D. Haksar (UU, Pieters)** Strong inhibition of cholera toxin B subunit by cheap, polymer-based multivalent inhibitors	**J. Bruins (WUR, Albada)** Inducible, selective labelling of antibodies via enzymatic oxidation of tyrosine to 1,2-quinones	**S. Yang (TU/e, De Greef)** A DNA-encoded sender-receiver system	**Y. Luijkx (UU, Wennekes)** Probing the dynamic role of fucose in our gut-microbiome homeostasis via a chemical biology approach	**S. Bakels (RU, Rijs)** Self-assembly of isolated peptides followed by mass-selective Infrared action spectroscopy	**J. Joosten (RU, Van Rij)** Mosquito PIWI proteins go nuclear	**V. Arkhipova (RUG, Guskov)** Light-triggered blockers in studies of glutamate transporters	**A. Akiva (TU/e, Sommerdijk)** Osteocyte differentiation and collagen mineralization in a 3d tissue culture
09.30 - 09.45	**X. Yang (LEI, Van der Es)** A covalent antagonist for the human adenosine A3 receptor	**A. el Hebieshy (LUMC, Ovaa)** A novel method for site-directed antibody conjugation	**F. Xiu (UT, Kudernac)** Dynamic supramolecular tubules as a minimalistic mimic of the cellular cytoskeleton	**A. Junaid (LEI, Hankemeier)** Microengineered human blood vessel for next generation drug discovery	**Q. Miao (LEI, Ubbink)** Design, synthesis and application of double-armed cobalt(II) paramagnetic NMR probes	**T.J. Cui (TUD, Joo)** Gliding mode allows Argonaute to bypass cellular obstacles during target search	**D. Bhairosing-Kok (NKI, Sixma)** Structural studies of DNA mismatch repair initiation	**D. Blanken (TUD, Danelon)** DNA-programmed lipid production for the growth of a synthetic cell

09.45 - 10.00 COFFEE BREAK

10.00 - 10.05 OPENING PLENARY DAY (BENELUXZAAL)

10.05 - 10.50 **PLENARY LECTURE: KEVIN PLAXCO - UNIVERSTIY OF CALIFORNIA SANTA BARBARA** (BENELUXZAAL)
COUNTING MOLECULES, DODGING BLOOD CELLS: REAL-TIME MOLECULAR MEASUREMENTS DIRECTLY IN THE LIVING BODY

10.50 - 11.20 **KNCV GOLD MEDAL LECTURE: PASCAL JONKHEIJM - UNIVERSITY OF TWENTE** (BENELUXZAAL)
CHEMICAL STRATEGIES FOR CELL-INSTRUCTIVE BIOINTERFACES

11.20 - 12.05 **PLENARY LECTURE: BERT WECKHUYSEN - UTRECHT UNIVERSITY** (BENELUXZAAL)
CATALYSTS LIVE & UP CLOSE

12.05 - 13.35 LUNCH, NEXTGENCHEM@NL LUNCH, SWITCH TO POSTERS DAY 3

ROOM FOCUS SESSIONS	PARKZAAL Novel reactivity leads to novel synthesis Chair: Adri Minnaard	80-81 Integrative X-omics to understand the molecular building blocks of life Chair: Thomas Hankemeier	82-83 Polyelectrolyte complexes Chair: Jasper van der Gucht	AUDITORIUM Programmable peptide- and protein nanomaterials Chair: Renko de Vries	55-57 *Organised by KNCV* Intact protein analysis Chair: Manfred Wuhrer	63-64 Designer materials inspired by nature Chair: Nathalie Katsonis	65 *Organised by KNCV* Teaching and learning chemistry Chair: Fer Coenders	BOSZAAL *Organised by Holland Chemistry* Power/biomass to chemicals Chair: André Heeres	58 *Organised by KNCV* Chemistry of cultural heritage in a historical perspective Chair: Sven Dupré
13.35 - 14.55	1. **Johan Winne (Ghent University)** Traveling terpenoid chemical space with a heterocyclic cation 2. **Eelco Ruijter (VU)** Ugi's legacy: from multicomponent reactions to natural product synthesis 3. **Xingchen Yan (RUG)** Direct addition of hard organometallics to conjugated non-protected carboxylic acids enabled by Lewis acids	1. **Alain van Gool (RUMC)** Innovation within the Netherlands X-omics Initiative 2. **Joep de Ligt (UMCU)** Understanding cellular signalling in cancer using high-throughput multi-omics 3. **Maarten Altelaar (UU)** Targeted MS for the high-throughput assessment of kinome-wide activation states 4. **Nelus Schoeman (LEI)** Metabolomics in multi-omics: Applications challenges and future perspectives	1. **Esra te Brinke (UT)** Asymmetric polyelectrolyte multilayer membranes for micropollutant removal 2. **Marco Dompè (WUR)** Thermoresponsive complex coacervate-based underwater adhesives 3. **Evan Spruijt (RU)** Chemically active coacervates as protocell models	1. **Jan Pille (TU/e)** Pathway-dependent assembly of elastin-like peptide nanoparticles 2. **Aimee Boyle (LEI)** Design and Characterisation of Peptides Containing Multinuclear Metal Centres 3. **Roman Jerala (National Institute of Chemistry, Slovenia)** Coiled-coil protein origami	1. **Tomislav Caval (UU)** Characterization of glycoengineered erythropoietins with native mass spectrometry 2. **Elena Dominguez Vega (VU)** MS-based analytical techniques for the characterization of immunoglobulins 3. **Rob Haselberg (VU)** Native separations coupled to mass spectrometry to enable intact protein structural and functional characterization	1. **Thomas Speck (University of Freiburg)** Bio-inspired materials systems: inspiration for technology and architecture in the 21st century 2. **Rienk Eelkema (TUD)** Responsive chemical reaction networks in soft materials 3. **Marieke Gerth (TU/e)** Dynamic assembly of helical supramolecular fibres	1. **Joris Berding (Rotterdam Univ. of Appl. Sciences)** What makes teaching highly valued? 2. **Renée Moezelaar and Jan-Willem Toering (KNCV)** Chemistry Media Centre in the classroom 3. **Marijn Meijer (C3)** Virtual Reality and Branched Video	1. **Hans Lammers (AKZO Nobel)** Green Hydrogen Technology 2. **Pieter Imhof (BioBTX)** Bio-based production of cornerstone chemicals 3. **Vincent Voet (Stenden University)** Recycling of Polyesters: Closing the Loops	1. **Mariana Pinto (UU)** Chemists in the Field of Archaeology in the Nineteenth-Century 2. **Maartje Stols-Witlox (UvA)** Recipes for Change: the Chemistry of Historical Restoration Recipes 3. **Maarten van Bommel (UvA)** Discoloration of Cultural Heritage: Towards a Chemical Understanding of Fading of Artworks

14.55 - 15.25 COFFEE BREAK

15.25 - 16.55 NWO GROUP LEADER MEETING (BRABANTZAAL)

ROOM WORKSHOPS 15.25 - 16.55	65 *Organised by People in Science* Career development for PhD students and postdocs	58 *Organised by NWO* Grants for junior researchers	PARKZAAL *Organised by Elsevier* Reviewer workshop	BOSZAAL *Organised by KNCV* Core values in chemistry

ROOM INSPIRATION SESSION - CHEMISTRY FOR THE FUTURE 15.30 - 16.00	55 - 57 *Organised by Nouryon* **Magnus Nydén** The Fourth Industrial Age - Autonomous Chemical Plants

16.55 - 17.15 COFFEE BREAK

ROOM	PARKZAAL	80-81	82-83	AUDITORIUM	55-57	63-64	65	BOSZAAL	58
	OXIDATION AND [DE]OXYGENATION CHEMISTRY Chair: Sylvestre Bonnet	LAYERS AND FILMS IN CATALYSIS Chair: Paolo Pescarmona	CATALYSIS ENGINEERING Chair: Jimmy Faria	MICELLES IN NANOMEDICINE Chair: René van Nostrum	MOLECULES, FORCES AND MOTION Chair: Eelco Ruijter	SMART MATERIALS Chair: Ryan Chiechi	MOLECULAR STRUCTURE AND SPECTROSCOPY Chair: Annemieke Petrignani	GELS & NETWORKS Chair: Evan Spruijt	DISSIPATIVE & ACTIVE SOFT MATERIALS Chair: Liesbeth Janssen
17.15 - 17.30	**G. Laudadio (TU/e, Noel)** Photochemical Csp3-H Oxidation in a continuous-flow microreactor	**T. Slot (UvA, Shiju)** Novel MXene based materials as acid catalysts	**D. Benz (TUD, Van Ommen)** Deposition of Pt onto P25 via atomic layer deposition and its role on the photocatalytic activity	**M. Najafi (UU, Vermonden)** Native chemical ligation for crosslinking of flower-like micelles	**F. Holtrop (UvA, Slootweg)** Steric attraction in lewis acid/base chemistry	**W. Zhang (TU/e, Schenning)** Light controlled liquid release from a polymer coating	**M. Munshi (RU, Oomens)** Protoisomerization of (iso)indigo dye confirmed by infrared ion spectroscopy (IRIS) in the gas phase	**T. Canrinus (RUG, Browne)** Shedding light on self-assembly mechanisms in hydrogels	**H. Che (TU/e, Van Hest)** ATP-mediated self-adaptive stomatocyte nanomotors
17.30 - 17.45	**S. d'Agostini (LEI, Hetterscheid)** Towards robust molecular iron catalysts for water oxidation	**J. Vos (LEI, Koper)** MnOx/IrOx as selective oxygen-evolving electrocatalyst in acidic chloride solution	**M. Bernardes Figueiredo (RUG, Deuss)** Depolymerization of technical lignins and model compounds at room conditions with ozone	**N. Feiner (TU/e, Albertazzi)** Micellar stability in biological media dictates internalization in living cells	**F. Lancia (UT, Katsonis)** Molecular motors for dynamic control over responsive matter	**S. Willems (WUR, Van Leeuwen)** Capturing microspheres with nanogrippers: a supramolecular approach for achieving specificity	**M. Koenis (UvA, Buma)** Taming conformational flexibility in Vibrational Circular Dichroism spectroscopy	**N. Tito (TU/e, Ellenbroek)** Harnessing entropy to enhance toughness in reversibly-crosslinked polymer networks	**P. Moerman (UU, Kegel)** Using microfluidics to measure the phoretic forces that drive autophoretic swimmers
17.45 - 18.00	**J. Li (UU, Klein Gebbink)** A Cptt-based Trioxo-rhenium catalyst for the deoxydehydration of diols and polyols	**D. Fu (UU, Weckhuysen)** Oriented zeolite membranes with controllable performance	**G. Li (TUD, Gascon)** On the structure and evolution of Mo species in Mo/ZSM-5 zeolite by methane activation	**Y. Liu (UU, Hennink)** Reduction-responsive core-cross-linked micelles for photodynamic therapy	**T. van Daal (TU/e, Sijbesma)** "Click" luminescence; thio-1,4-Michael additions harnessed for catalytic mechanoluminescence	**W. Danowski (RUG, Feringa)** Unidirectional rotary motion in a metal organic framework	**G. Wierda (WUR, Scott)** Preventing phase distortion; on-flow study of a three-phase reaction with on-line NMR monitoring	**M. Jaspers (RU, Van Arkel Prize)** Mechanics and Structure of Strain Stiffening Biomimetic Hydrogels	**S. van Rossum (TUD, Eelkema)** Catalytic control in a dissipative reaction network leading to transient crystallisation

18.15 - 20.00 SEATED DINNER (BENELUXZAAL)

20.00 - 20.30 **AWARD CEREMONIES:** ATHENA PRIZE; GOUDEN KIEM-"CHEMICAL START-UP OF THE YEAR"; HOLLAND CHEMISTRY STUDENT COMPETITION (BENELUXZAAL)

20.30 - 21.30 **AFTER DINNER LECTURE: PIETERNEL LEVELT - KNMI, DELFT UNIVERSITY OF TECHNOLOGY** (BENELUXZAAL)
AIR QUALITY FROM SPACE: INDICATOR OF HUMAN ACTIVITY

21.30 - 01.00 EVENING PROGRAMME

LEGEND FOR THE MORNING (09.00 - 09.45)
MEDICINAL CHEMISTRY
BIOMOLECULAR CHEMISTRY
ANALYTICAL CHEMISTRY & MATERIALS CHEMISTRY
PROTEINS, DNA, RNA
BIOMEMBRANES & STRUCTURAL BIOLOGY

LEGEND FOR THE AFTERNOON (17.15 - 18.00)
CATALYSIS & PROCESS TECHNOLOGY
SOFT MATTER
THEORY & SPECTROSCOPY
MATERIALS SCIENCE
ORGANIC CHEMISTRY & POLYMER CHEMISTRY