



Requested: 2025-06-01 10:06

Monday: March 10th				
10:45 - 11:00	Opening NCCCXXVI by Atsushi Urakawa and Caroline Paul (Ronde)			
11:00 - 11:50	PL1 <i>T. Laino – IBM Research Europe</i> Fueling the Digital Chemistry Revolution with Language and Multimodal Foundation Models chaired by A. Urakawa (TUD)			
11:50 - 13:00	Lunch Break			
	Rotonde	Sorbonne	Boston 17-19	Cambridge 30
	Electrocatalysis chaired by R. Kortlever (TUD)	Heterogeneous catalysis - CO ₂ hydrogenation chaired by J. Xie (RUG)	Organic chemistry and organo/biocatalysis chaired by J. Reek (UvA)	Characterisation and operando studies chaired by N. Kosinov (TU/e)
13:00 - 13:20	01 Membraneless Electrolyzers: A Viability Study from Cell to Stack in Comparison with Commercial Systems <i>Dr. Borah – University of Antwerp</i>	02 Constructing inverse CeO _x /Co catalysts for enhanced low-temperature CO ₂ hydrogenation <i>Y.G Gao – Eindhoven University of Technology</i>	03 Identifying peptide catalysts for Pictet-Spengler reactions via phage display <i>I.D. Jansen – University of Groningen</i>	04 Spatiotemporal X-Ray Absorption Spectroscopy of Ni-Mg-Al Mixed Oxide Catalysts During Dry Methane Reforming <i>S Ferwerda – Utrecht University</i>
13:20 - 13:40	05 Toluene hydrogenation using zero-gap PEM electrolyzer: Strategies to achieve high conversions <i>E. Demiröz – Delft University of Technology</i>	06 CO ₂ conversion over a Ru-based dual functional material for CO ₂ capture and conversion and its dependence on Ru-alkali metal interactions <i>F. Karaçoban – Wageningen University and Research Centre</i>	07 Asymmetric Enantio-Complementary Synthesis of Thioethers via Ene-Reductase Catalysed C-C bond formation <i>C. Heckmann – Delft University of Technology</i>	08 In Situ EC-STM Study of a Roughening Gold Single-Crystal Electrode Surface by Oxidation-Reduction Cycles in Different Electrolytes <i>S. Behjati – Leiden University</i>
13:40 - 14:00	09 Manufacturing multiscale porous electrodes with non-solvent induced phase separation for high performance redox flow battery electrodes <i>B. Liu – Eindhoven University of Technology</i>	010 Spark ablation: a dry, physical, and continuous method to prepare powdery heterogeneous catalysts for CO ₂ methanation <i>P. Hongmanorom – UCLouvain</i>	011 Nature-Inspired Rhythmic Processes: A Novel Route Towards Materials <i>S.A. Runikhina – University of Groningen</i>	012 The Electro-Oxidation of β-O-4 Model Compounds monitored in a Chamber-Separated Cell using In Situ ATR-IR Spectroscopy <i>S.M.K. Schwartzmann – Utrecht University</i>
14:00 - 14:20	013 Cation effects on caffeinated-Pt single crystal surfaces in alkaline HER	014 Influence of Hydrophobic and Hydrophilic Carbon Supports on Iron-based Catalysts for High-Pressure Low-Temperature Reverse Water Gas Shift <i>W.M. Meng – University of Groningen</i>	015 Integrated Strategy for Mild Catalytic Lignin Valorization: Selective Production of Aromatic Benzoquinones from Lignocellulosic Biomass <i>G. Guo – University of Groningen</i>	016 Advanced Sample Preparation for Total Reflection X-ray Fluorescence Spectroscopy for a Correlative Micro-spectroscopic Approach <i>K.B. Siebers – Utrecht University</i>
14:20 - 14:40	Coffee break			

	Rotonde	Sorbonne	Boston 17-19	Cambridge 30
	Materials chemistry chaired by A. Bansode (TUD)	Electrocatalysis - fine chemicals chaired by A. Garcia (UvA)	Biocatalysis chaired by I. Drienovska (VU)	Photocatalysis chaired by K. Wenderich (UT)
14:40 - 15:00	KN1 Diffusion in nanoporous materials: The need for speed in measurements and applications <i>R. Ameloot – Katholieke Universiteit Leuven</i>	O17 Sustainable electrocatalytic reductive animation of levulinic acid <i>M. Grundmann – RWTH Aachen University</i>	O18 Metal dependent activity of cupin enzymes <i>H. Brasselet – Delft University of Technology</i>	O19 On the Effect of Light on the CO Intermediate during CO2 Hydrogenation over a Co/TiO2 Catalyst <i>D.N. Maaskant – Utrecht University</i>
15:00 - 15:20		O20 Electrocatalytic C-H Amination from Primary Amines <i>D.D. Snabilié – University of Amsterdam</i>	O21 Asymmetric Au(I)-Enzymatic Catalysis <i>F. Della-Felice – University of Groningen</i>	O22 In-situ X-ray absorption spectroscopy study of the deactivation mechanism of a Ni-SrTiO3 photocatalyst slurry active in water splitting <i>M.T. Abudukade – University of Twente</i>
	Rotonde	Sorbonne	Boston 17-19	Cambridge 30
	Safety in chemical catalysis chaired by A. Bonsode (TUD)	Electrocatalysis chaired by A. Garcia (UvA)	Bruker workshops	VIRAN-NIOK session (for the members of VIRAN & NIOK)
15:20 - 15:40	O23 Learnings from a reactor explosion: Towards safer start-ups of catalysts systems by Willem Groendijk - Shell	O24 Titanium Carbide Hollow Fiber Electrodes: A Feasible Alternative for Platinized Titanium Hollow Fibers? <i>T. de Koning Gans – University of Twente</i>	Breaking New Ground in Catalysis and Spectroelectrochemistry: the new Vertex NEO-R FT-IR spectrometer by M. Kessler	A new national catalysis roadmap – status and way forward
15:40	Learnings from a reactor explosion: Towards safer start-ups of catalysts systems by Willem Groendijk - Shell	O25 Electric double layer at stepped Pt/water interface: insights from AIMD and continuum modeling <i>J Liu – Leiden University</i>	Raman microscopy for the spatial characterization of catalysts and catalytic reactions by F. Knechtel	A new national catalysis roadmap – status and way forward
16:10 - 18:10	Poster session A (Erasmus)			
18:10 - 20:15	Dinner, with presentation of Dutch Catalysis Roadmap (Col - VIRAN+NIOK) (Atrium)			
20:15	CDO Session (Rotonde) and KNCV career coaching (Room B9)			
Tuesday: March 11th				
09:00 - 09:50	PL2 N3C Award lecture chaired by C. Paul (TUD)			
	Rotonde	Sorbonne	Boston 17-19	Cambridge 30
	Materials chemisty chaired by M.F.N d'Angelo (TU/e)	Heterogeneous catalysis - mechanism and kinetics chaired by M. Monai (UU)	Electrocatalysis chaired by P. Ngene (UU)	Characterisation and operando studies chaired by A. van Blaaderen (UU)

09:50 - 10:10	026 3D Morphology Evolution of γ -Al ₂ O ₃ Pores during Catalyst Preparation <i>J.M.J.J. Heinrichs – Eindhoven University of Technology</i>	027 Unravelling the role of lattice strain on the prototypical hydrogen-deuterium exchange reaction <i>J.P. Jonasse – Utrecht University</i>	028 Electrocatalytic CO(2) reduction to Methanol on Pt(111) modified with a Pd Monolayer <i>A. Wawrzyniak – Leiden University</i>	029 Mechanistic insights into Direct Air Capture with carbon supported K ₂ CO ₃ sorbents using In Situ XRD <i>T.G. de Groot – Wageningen University and Research Centre</i>
10:10 - 10:30	030 Airborne preparation of Cu based heterogeneous catalysts: Structural features and catalytic competitiveness <i>G. Pampararo – Katholieke Universiteit Leuven</i>	031 Lignin depolymerization kinetics simulations through continuous lumping: mechanistic features in relation to β -O-4 bond cleavage <i>L.G. Garbarino – Ghent University</i>	032 Demonstration of confinement and voltage homogeneity for stable CO ₂ electrolysis on copper electrodes <i>J. Kok – Delft University of Technology</i>	033 Establishing Sample Preparation Protocols to Facilitate Accurate Nanoplastic Characterization <i>L.M. Zoutendijk – Utrecht University</i>
10:30 - 10:50	Coffee break			
	Rotonde	Sorbonne	Boston 17-19	Cambridge 30
	Biocatalysis chaired by C. Mayer (RUG)	Heterogeneous catalysis - CO ₂ conversion chaired by P.P. Pescarmona (RUG)	Electrocatalysis chaired by M. Koper (U. Leiden)	Computational chemistry and data science chaired by E.A. Pidko (TUD)
10:50 - 11:10	KN2 Harnessing the catalytic power of nitrogen-nitrogen bond forming enzymes for sustainable chemical synthesis <i>S. Schmidt – University of Groningen</i>	034 Sustainable catalytic synthesis of fully renewable cyclic carbonates <i>G. Berluti – University of Groningen</i>	035 Modular Design of Cu-S Planar Building Units in a Metal-Organic Framework for Enhanced Selectivity in Electrochemical CO ₂ -to-Formate Conversion <i>K. Roohi – Delft University of Technology</i>	036 From Catalyst Design to Reaction Testing in CO ₂ Valorization: Harnessing Big Data for Structure-Activity Correlation <i>J.A. Mendoza Mesa – Katholieke Universiteit Leuven</i>
11:10 - 11:30		037 Role of Zn in enhancing CO ₂ hydrogenation to methanol over Zn _x Zr _y O _y catalysts <i>Z. Zanganeh – Ghent University</i>	038 Unveiling Dual Roles of Organic Cations in Alkaline Hydrogen Evolution Reaction: From Promotion to Suppression <i>J. Fernández-Vidal – Leiden University</i>	039 Homogeneous Catalyst Design in the Digital Age: Insights from Machine Learning and Data Representation <i>A.V. Kalikadien – Delft University of Technology</i>
11:30 - 11:50	040 Biocatalytic Cascades: From geraniol to enantiopure (R)-citronellal <i>C. Ferrer Carbonell – Delft University of Technology</i>	041 Elucidating the Factors that Determine the Activity and Stability of In ₂ O ₃ -based Catalysts in CO ₂ Hydrogenation <i>M. Becker – ETH Zürich</i>	042 Role of pH in the electrochemical reduction of aldehydes and formose-like reactions <i>A. Raman – University of Twente</i>	043 A DFT Study of the promotion of Pd/CeO ₂ for CO oxidation by Surface Lattice Doping <i>M. Li – Eindhoven University of Technology</i>
11:50	Lunch break			
13:00 - 13:50	PL3 <i>P. Melchiorre – University of Bologna</i> Photochemistry, Organocatalysis & Enzymes: New Radical Opportunities chaired by B. de Bruin (UvA)			
	Rotonde	Sorbonne	Boston 17-19	Cambridge 30
	Heterogeneous	Electrocatalysis chaired	Photocatalysis and organic	Heterogeneous

	catalysis - methane activation chaired by E.T.C. Vogt (UU)	by M.C. Figueiredo (TU/e)	chemistry chaired by D. Hetterscheid (U Leiden)	catalysis - Reaction mechanism chaired by I. Vollmer (UU)
13:50 - 14:10	KN3 Demonstration and scale-up of autothermal oxidative coupling of methane to produce olefins by Pankaj Gautam (SABIC)	O44 Salt Formation and Flooding in MEA Cells for CO2 Electrolysis under Industry-Relevant Temperatures <i>H.M. Pelzer – Delft University of Technology</i>	O45 Preorganization within Photoactive Pt12L24 Nanospheres for Accelerated Decarboxylation Catalysis at Low Concentrations <i>R. Ham – University of Amsterdam</i>	O46 The Role of Water in Copper Zeolite Methane Oxidation <i>M.L. Bols – Ghent University</i>
14:10 - 14:30		O47 Kinetic Analysis of the Oxygen Reduction Reaction Electrocatalysis Using Advanced Transient Voltammetry <i>R.Z. Sol – Leiden University</i>	O48 Photoenzymatic biaryl formation by dual Ni/aryl ketone cross coupling <i>T.C. Böllersen – University of Groningen</i>	O49 Detection of Hydroxylamine Intermediate Opens a New Perspective on Ammonia Selectivity in Metal-Catalyzed Nitrate Reduction <i>J. Betting – University of Twente</i>
14:30 - 14:50	O50 Developing a Two-Stage Thermocatalytic Process to Convert CO2 into Aromatics <i>J.J.G. Kromwijk – Utrecht University</i>	O51 On the effect of support polarity in carbon-supported nickel nanoparticles for electrocatalytic hydrogen peroxide production <i>I.J. van Luijk – Wageningen University and Research Centre</i>	O52 Enantioselective intramolecular cyclization of 2,3-dihydrobenzofurans using strong photoreductants <i>C.J. Nielsen – University of Amsterdam</i>	O53 Tracking Iron Dynamics in NH3-SCR Catalysis: Mechanistic Insights gained by Quasi In-Situ Mössbauer Spectroscopy <i>D.G.J. Broens – Eindhoven University of Technology</i>
14:50	Coffee break			
	Rotonde	Sorbonne	Boston 17-19	Cambridge 30
	Coordination chemistry chaired by J.C. Slootweg (UvA)	Heterogeneous catalysis - depolymerisation chaired by F.J. de Zwart (ETHZ)	Electrocatalysis - in situ/operando study chaired by W. van der Stam (UU)	Homogeneous catalysis chaired by M.E. Moret (UU)
15:10 - 15:30	O54 Metal-Ligand Proton Tautomerism: The Hidden Role of Tunneling <i>S. Melnikov – Utrecht University</i>	O55 Mechano-Catalytic Depolymerization of Polypropylene by Fracture of Covalent Materials <i>A. Hergesell – Utrecht University</i>	O56 Protochips electrocatalysis at realistic temperatures using liquid phase electron microscopy - N.A. Krans – Protochips	O57 Controlled homogeneous monohydrogenation of muconic acid and muconates via Ru catalyzed transfer hydrogenation <i>L. De Vriendt – Katholieke Universiteit Leuven</i>
15:30 - 15:50	O58 Cavity-Directed Synthesis of Labile Polyoxometalates for Catalysis in Confined Spaces <i>C. Liu – Katholieke Universiteit Leuven</i>	O59 Catalytic pyrolysis: paving the way for circular polyurethane <i>T.G.W. Engels – University of Groningen</i>	O60 Tracking the surface structure and the influence of cations and anions on the double-layer region of a Au(111) electrode <i>A. Adnan – Leiden University</i>	O61 Homogenously catalyzed additive-free formic acid dehydrogenation assisted by “Hidden” metal-ligand cooperation <i>S. Shi – University of Amsterdam</i>
15:50 - 16:10	KN4 Redox-active formazanate ligands in coordination chemistry and applications <i>E. Otten – University of Groningen</i>	O62 Investigating influence of Ni particle size on hydrogenolysis of PE <i>V. Drozhzhin – Eindhoven University of Technology</i>	O63 Quasi simultaneous X-ray absorption and diffraction to study activation and regeneration of an indium-bismuth catalyst for CO2 electroreduction at high current density <i>M. Biggiero – Utrecht</i>	O64 Manganese(I)-Catalyzed Enantioselective alkylation to access P-stereogenic phosphines <i>B. Wan – University of Groningen</i>

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16:10 - 16:30		065 Chemical Recycling of HDPE and LDPE from Municipal Waste Stream Using Hydrothermal Liquefaction Process <i>S. Chien – University of Amsterdam</i>	066 Surface Restructuring of Copper Electrode during CO2 Electro-reduction Revealed by In Situ Electrochemical Atomic Force Microscopy <i>H. Wang – Utrecht University</i>	067 Highly Strained Tricyclic Oxanorbornenes with Uncommon Reactivity Enable Rapid ROMP for High-Performance Polyenes <i>B.O. Grabbet – Utrecht University</i>
16:30	Poster session B (Erasmus)			
18:30	Dinner (Atrium)			
20:00	Bowling tournament			
Wednesday: March 12th				
09:00	PL4 <i>SB Bals – University of Antwerp</i> Transmission electron microscopy to understand the behavior of nanomaterials during catalysis chaired by P.E. de Jongh (UU)			
	Rotonde	Sorbonne	Boston 17-19	Cambridge 30
	Electrocatalysis chaired by D.M. Morales (RUG)	Heterogeneous catalysis - ammonia chaired by J.A. Faria (UT)	Electrocatalysis - mechanism chaired by R.V. Mom (U Leiden)	Sustainability and Photochemistry chaired by T. Bouwens (TUD)
09:50 - 10:10	KN5 Electrocatalytic synthesis of fertilizers <i>M. Costa Figueiredo – Eindhoven University of Technology</i>	068 Metal Hydride Nanocomposite Materials as TM-free Catalysts for Ammonia Synthesis <i>J.C. Verschoor – Utrecht University</i>	069 Operando Spectroelectrochemistry Elucidates the Mechanism of Molecular Electrocatalytic CO2 Reduction Catalyzed by an Iron Porphyrin <i>A. Salamé – Leiden University</i>	070 High-Tech Innovations for Low-Tech Solutions: Implementing Golden Hydrogen for Off-Grid Clean Cooking and Cooling <i>M Michiels – Katholieke Universiteit Leuven</i>
10:10 - 10:30		071 A Century of Data: Thermodynamics and Kinetics for Ammonia Synthesis on Various Commercial Iron-based Catalysts <i>H Keesstra – University of Twente</i>	072 Cation-mediated pseudocapacitance dominates the interfacial charging of α-Fe2O3(0001) in alkaline electrolyte <i>J.J.J. Eggebeen – Leiden University</i>	073 Reversible metal-binding with the flick of a light switch <i>L. Stringer – Utrecht University</i>
10:30	Coffee break			
	Rotonde	Sorbonne	Boston 17-19	Cambridge 30
	Computational chemisry in catalysis chaired by G. Li (WUR)	Electrocatalysis chaired by M. Altomare (UT)	Heterogeneous catalysis - bio-based materials conversion chaired by J.H. Bitter (WUR)	Photocatalysis chaired by G. Mul (UT)
10:50 - 11:10	KN6 Theory-Driven Innovation in Single Atom Alloy Catalysis: from Data and Models to Understanding and Design <i>M. Stamatakis – University of Oxford</i>	074 Direct growth of nickel borides on Ni foam for enhanced electrocatalytic performance in the oxidation of 5-hydroxymethylfurfural <i>J. Hong – University of Groningen</i>	075 Maximising cyclopentanone yields from furfural hydrogenation via catalytic and reactor synergy <i>A.S. Patil – Eindhoven University of Technology</i>	076 Thermal-photocatalytic coupled regeneration of activated carbon filters for indoor air VOC abatement. <i>K.S Schoofs – University of Antwerp</i>
11:10 -		077 Hybrid Electrolyzer Configuration for	078 Selective production of biobased primary amines by	079 New Mechanochemical

11:30		Efficient CO2 Electrolysis <i>A.M. Ismail – Delft University of Technology</i>	reductive amination over atomically dispersed Pt1/S-C <i>Y. Ding – Wageningen University and Research Centre</i>	Synthesis of Covalent Triazine-based Frameworks for the Photocatalytic Production of H2O2 <i>L.S. Häser – RWTH Aachen University</i>
11:30 - 11:50	080 First-Principles Insights into the Catalytic Activity of Pd and Pt Across Size Scales with the Promoting Effect of Ceria Support <i>S.W. Bernart – Eindhoven University of Technology</i>	081 The potential-dependent structure of Pt3Ni alloy electrocatalysts and its effect on electrocatalytic activity <i>H.J. Nagra – Leiden University</i>	082 The effect of Ag addition to Au catalysts for the oxidation of 5-hydroxymethylfurfural to 2,5-furandicarboxylic acid <i>H.L. Nolten – Utrecht University</i>	083 Defect-Engineered Core-Shell Au@TiO2 Photocatalysts for Enhanced Visible-Light CO2 Conversion <i>A. Raes – University of Antwerp</i>
11:50 - 12:10	084 General Trends in the Composition-Activity Relations in High-Entropy Alloys <i>V.A. Mints – Imperial College</i>	085 Ultrathin Overlayers for Anode Protection in Offshore Green Hydrogen Production via Saline Water Electrolysis <i>K.S. Encalada Flores – Delft University of Technology</i>	086 Effect of Support Acidity for Acrolein Synthesis by Glycerol Dehydration over WO3/TiO2: N, S and P Doping <i>M. Battisti – RWTH Aachen University</i>	087 Evaluation of TiO2 photocatalytic coating on metallic substrates: influence of substrate type, coating layers, and operational conditions <i>D.B. Baetens – University of Antwerp</i>
12:10 - 13:10	Lunch break			
	Rotonde	Sorbonne	Boston 17-19	Cambridge 30
	Computational chemistry chaired by N. Artrith (UU)	Atomically-defined solid catalysts chaired by M. Saeys (Ghent U)	Electrocatalysis chaired by K. Wenderich (UT)	Homogeneous catalysis chaired by E. Otten (RUG)
13:10 - 13:30	088 Using DFT-based Molecular Dynamics to Understand the Mechanism of COx-to-Methonal in Cobalt Complex Electrocatalysis <i>L.Z. Zhuo – University of Amsterdam</i>	089 Design of phosphine based solid molecular catalysts for the telomerization of isoprene with various nucleophiles <i>J. Nikodemus – RWTH Aachen University</i>	090 Modifying a carbon-based gas diffusion layer for electrochemical CO2 reduction to multi-carbon products in acidic electrolyte <i>K.M.R. Lawrence – Delft University of Technology</i>	091 Oxidative conversion of cellulose-derived furanic compounds to furan-2,5-dicarboxylic acid <i>A.R.H. Kenbeek – University of Amsterdam</i>
13:30 - 13:50	092 Sulfur-centered Lewis superacid on sulfated zirconium oxide enables the degradation of the polyolefins <i>A.A. Kolganov – Delft University of Technology</i>	093 Exploring the stability of Ru(III) single-sites in amorphous silica: a selective catalyst for CO2 hydrogenation to formate <i>S. Santos – Ghent University</i>	094 On the Relevance of Surface Hydroxyl Groups in Carbon Catalysts for the Electrocatalytic Production of H2O2 <i>P. Mazaira Couce – Wageningen University and Research Centre</i>	095 Schrock type Metathesis Catalysts: When a Nobel Prize Award Becomes an Industrial Reality <i>E. Robe – XiMo Hungary</i>
13:50 - 14:40	PL5 Scale-down studies for biocatalysis by John Woodley (DTU) chaired by R. Leveson-Gower (TUD)			
14:40 - 15:00	Prizes & Closure (Rotonde)			
15:00	Buses to Leiden Central Station			