



Requested: 2026-06-10 09:06

Monday: March 2nd				
10:45	Opening NCCC XXVII by A. Urakawa and C. Paul			
11:00	<b>PL1</b> Selin Kara - Aarhus University & Leibniz University Hannover - Intensification of chemo-enzymatic processes towards industrial volumetric productivities			
11:45	<b>PL2</b> Charlotte Williams - U Oxford - Catalysis for the circular economy: understanding and predicting performances in polymerizations and depolymerizations			
12:30	Lunch break			
13:30	<b>01</b> CO <sub>2</sub> hydrogenation on CeO <sub>2</sub> nanorods-supported Fe-Co electrocatalysts in Protonic Ceramic Cell Reactors <i>E. Marousiadou - University of Groningen</i>	<b>02</b> Stabilization of Cu species in UiO-66 metal-organic framework for CO <sub>2</sub> -to-methanol: insights from in situ X-ray studies and electron microscopy <i>A. Liutkova - Paul Scherrer Institute (PSI)</i>	<b>03</b> New Metastable Furan-Based Surfactants Designed for End-of-Life: Synthesis, Physicochemical Properties and Degradation <i>M.M. Broekman - Utrecht University</i>	<b>04</b> The Mechanism of CO <sub>2</sub> conversion over a Ru-K <sub>2</sub> CO <sub>3</sub> Dual Functional Material through operando quick-EXAFS <i>F. Karaçoban - Wageningen University and Research Centre</i>
13:50	<b>05</b> Engineering Porous Transport Layers for Efficient Co-Electrolysis of Glucose and Water <i>D. Zagoraios - DIFFER</i>	<b>06</b> Flame spray pyrolysis synthesis of NiO-Ga <sub>2</sub> O <sub>3</sub> : The role of metal alloy and oxide interfaces in CO <sub>2</sub> hydrogenation to methanol <i>M.A. Attallah - Eindhoven University of Technology</i>	<b>07</b> Sustainable Paracetamol Production: Enzymatic Oxyfunctionalisation at Kilogram Scale <i>J.M.A. Hengst - Delft University of Technology</i>	<b>08</b> X-ray absorption spectroscopy applications on a multi-purpose laboratory X-ray diffractometer <i>L. Ding - Malvern Panalytical B. V.</i>
14:10	<b>09</b> The Key Role of Electrocatalysis in the Development of Efficient and Stable Fuel Flexible Protonic Ceramic Cells with Biogas Feedstocks <i>H. Zheng - University of Groningen</i>	<b>010</b> It's Not That Deep - Mapping Accessible Surface States of Ni-Ga Catalysts under CO <sub>2</sub> Hydrogenation <i>M.S. Baidun - Delft University of Technology</i>	<b>011</b> Biocatalytic chiral amine synthesis coupled with in-situ chemo-catalytic substrate production <i>A. Doutry - UCLouvain</i>	<b>012</b> Operando Multi-spectroscopy Approach Identifies the Fe <sup>2+</sup> /Fe <sup>3+</sup> Couple Responsible for N <sub>2</sub> O-Redox-Mediated Reactions in Fe-Zeolites <i>D.C. Cano Blanco - PSI/EPFL</i>
14:30	<b>013</b> Structure Sensitivity of the Double-Layer Properties of a Platinum Electrode <i>N.L. Fröhlich - Leiden University</i>	<b>014</b> Linking structure to activity in ZnZrOx catalyst for CO <sub>2</sub> hydrogenation to methanol: the influence of preparation methods <i>M. Firmansyah - University of Groningen</i>	<b>015</b> Hydrogen-driven enzymatic production of (S)-citronellol <i>T.J. van t Riet - Delft University of Technology</i>	<b>016</b> Investigating the Radical Stabilization via Paramagnetic Zr <sup>3+</sup> <i>L. Seidling - Utrecht University</i>
14:50	Coffee break			
15:10	<b>017</b> Ru-Catalyzed Transfer Vinylation of Alcohols <i>S. Tin - Leibniz Institute for Catalysis, 18059, Rostock, Germany</i>	<b>018</b> Enhancing higher alcohol synthesis by using mixed solid catalysts <i>P. Diehl - Ruhr University Bochum</i>	<b>019</b> Multiscale Impact of Electrolyte Saturation and Transport in Nanoporous Copper Catalyst Layers during CO <sub>2</sub> Reduction <i>D. Choukroun - University of Antwerp</i>	<b>020</b> Sulfur-Induced Electronic States in Anatase Titania Extend Charge Carrier Lifetime <i>C. Geci - University of Maine</i>

15:30	<b>O21</b> Conversion of pyrolytic sugars to 5-hydroxymethylfurfural promoted by choline chloride in biphasic systems over homogeneous Lewis catalysts <i>C Ruan - University of Groningen</i>	<b>O22</b> Hydroprocessing of tree bark-derived sterols into sustainable aviation fuels <i>N.F. Zuidema - Eindhoven University of Technology</i>	<b>O23</b> Investigating Single-Crystal Pt(111) at Low Potentials Using Advanced Transient Voltammetry <i>R.Z. Snitkoff-Sol - Leiden University</i>	<b>O24</b> Charge Carriers Dynamics of Ru/TiO <sub>2</sub> : The Importance of Holes in Photothermal CO <sub>2</sub> Reduction on Ru/TiO <sub>2</sub> <i>A. Meena - University of Twente</i>
15:50	Workshop: Measuring adsorbate profiles in catalytic reactors by iso-potential operando DRIFTS - Bruker & REACNOSTICS - R. Horn (TUHH)	Workshop: (A) Next generation meso-macropore analysis - Anton Paar - M. Thomas	Workshop: Work on methanation and steam methane reforming, data acquisition and kinetic modeling - Hiden Analytical - J. De Wilde (UC Louvain)	Workshop: Advanced GC Technologies for Catalyst and Biofuel Analytical Challenges - Shimadzu - E. Shimbo
16:10	Workshop: Advanced FTIR solutions for catalysis studies - Bruker - X. Stammer	Workshop: (B) In-situ pore structure and chemisorption analysis of catalysts - Anton Paar - M. Thomas	Workshop: Autonomous kinetic model development for heterogeneous catalytic reactions - AI-based calculation from reactor profiles and DRIFTS - REACNOSTICS - S. Jakobtorweihen	Workshop: Metal Organic Framework (MOF), Silica Alumina (Zeolites), Precious Metal- (supported and homogeneous), Mixed Metal Oxide-, Skeletal Nickel-, catalyst and their applications - Neocat & CatOlyst - P. Vadalia & J. Groen
16:30 - 18:30	Poster session A			
17:00 - 17:45	Parallel Career development workshop - J. Campos (Coaching and counselling) - Cambridge 30			
18:30	Dinner			
20:15	CDO session			

Tuesday: March 3rd

09:00	<b>PL3</b> Frank Glorius - U. Münster - On data, discovery & sensitivity in (photo)catalysis			
09:50	<b>KN1</b> Chris Slootweg - UvA - Catalysing a sustainable future: radical redesign of chemistry for circularity	<b>O25</b> Photoredox Entatic Catalysis in Porous Materials <i>M. Di Berto Mancini - University of Amsterdam</i>	<b>O26</b> The Mechanism of CO <sub>2</sub> Electroreduction in Acetonitrile-based Electrolytes: An In Situ IR Study <i>A. Berghuis - University of Twente</i>	<b>O27</b> Nanoscale strain-engineering for modulating oxidation and hydrogenation catalysis <i>J.P. Jonasse - Utrecht University</i>
10:10		<b>O28</b> Two Routes, One Vision: Inorganic–Organic Materials Engineering for High-Performance Visible-Light Photochemical Systems <i>MR Ashu Abey - University of Bath</i>	<b>O29</b> Nature of the Pb surface during CO <sub>2</sub> reduction in N,N-Dimethylformamide <i>J.P. Smaak - Leiden University</i>	<b>O30</b> Regulating Dynamic Coordination Environments in Pt <sub>1</sub> /CeO <sub>2</sub> Single-Atom Catalysts <i>Q. Gu - Eindhoven University of Technology</i>
10:30	Coffee break			
10:50	<b>KN2</b> Clemens Mayer - RUG - Harnessing evolution to break PFAS: engineering next-generation	<b>O31</b> Catalysis in Ball Mills: Mechanochemistry as an Alternative Synthesis Strategy	<b>O32</b> Formate selective CO <sub>2</sub> reduction in water promoted by triethanolamine using immobilized Mn(bpy)	<b>O33</b> Atomic-level investigation of TM and Ln co-doping effects on Pd/CeO <sub>2</sub> single-atom catalysts for CO oxidation <i>M. Li - Eindhoven University of</i>

	defluorinases	<i>M. Wohlgemuth – Ruhr-University Bochum</i>	catalyst <i>M.C. van Rijn – University of Amsterdam</i>	<i>Technology</i>
11:10		<b>034</b> Accounting for the Footprints of Bulky Molecules in Multi-site Kinetic Models <i>A. Fischer – Ghent University</i>	<b>035</b> Active Site Determination of Heterogenized Molecular Electrocatalysts <i>E. Antoniono – Delft University of Technology</i>	<b>036</b> Rapid Analysis of Uncondensed Lignin Feedstocks and Reductive Catalytic Depolymerization Products with ATR-FTIR and Chemometrics <i>T. Dezaire – Utrecht University</i>
11:30	<b>037</b> Photobiocatalytic atroposelective biaryl coupling <i>B. Dačević – University of Groningen</i>	<b>038</b> Understanding Hydrodynamics in a Circulating Fluidised Bed Reactor for Integrated Carbon Capture and Utilisation: A Computational and Experimental Study <i>M.R.A. Coppens – Delft University of Technology</i>	<b>039</b> Tuning Product Selectivity in Electroreduction of NO via Phase Engineering of MoS <sub>2</sub> Nanosheets <i>M. Li – Delft University of Technology</i>	<b>040</b> CO <sub>2</sub> methanation over nickel: a kinetic balancing act between CO <sub>2</sub> and CO activation <i>K.T. Rommens – Ghent University</i>
11:50	<b>041</b> Tuning Old Yellow Enzymes for desaturation via non-canonical amino acids <i>T. Greven – Delft University of Technology</i>	<b>042</b> Blue Scientific/Renishaw - A. King - Workshop: Study catalysis with Raman spectroscopy	<b>043</b> Tuning MoS <sub>2</sub> electrocatalyst's nanostructures and HER performances by optimizing the reduction treatments <i>M. Pouilly – IFPEN</i>	<b>044</b> Active sites in MAPO-18 zeotypes for CO <sub>2</sub> hydrogenation: a NMR study <i>W. Temmerman – Ghent University</i>
12:10	Lunch break			
13:10	<b>045</b> Elucidating the reaction mechanism of CO <sub>x</sub> hydrogenation using <sup>12</sup> C/ <sup>13</sup> C and <sup>1</sup> H/ <sup>2</sup> H isotope fractionation <i>M. Verstraten – Eindhoven University of Technology</i>	<b>046</b> Impact of catalyst layer architectures on a zero-gap CO <sub>2</sub> electrolyzer towards multi-carbon products <i>F.M.B. Gusmão – University of Antwerp</i>	<b>047</b> From Molecules to Reactors: Modeling the Hydrogenolysis of Polyolefins <i>S. Bissesar – University of Twente</i>	<b>048</b> Exploring H <sub>2</sub> O <sub>2</sub> – dependent inactivation of rAaeUPO <i>A. Pothuizen – Delft University of Technology</i>
13:30	<b>049</b> Unprecedented CO <sub>2</sub> reduction activity through in situ self-assembly of Ru-CeO <sub>x</sub> heterostructures <i>D. Vico van Berkel – Delft University of Technology</i>	<b>050</b> Investigation of Water Management in MEA Cells for CO <sub>2</sub> Electrolysis to Prolong System Lifetime <i>H.M. Pelzer – Delft University of Technology</i>	<b>051</b> AI-Driven Electrocatalysis: Adaptive Control of the Glycerol Oxidation Reaction via Reinforcement Learning <i>V.A. Mints – Imperial College London</i>	<b>052</b> Force feeding PaDa-I: a hybrid nest for selective chemo-enzymatic oxyfunctionalization <i>M. Kinnaer – UCLouvain</i>
13:50	<b>KN3</b> Jingxiu Xie - RUG - Thermocatalytic CO <sub>2</sub> conversion to chemicals and fuels via Fischer-Tropsch synthesis	<b>053</b> Polymer Membrane Gas-Diffusion Layer with Nanowire Catalyst Implemented in Zero-Gap CO <sub>2</sub> Electrolyzer Prevents Salt Precipitation-Induced Failure <i>R. Haaring – Korea Advanced Institute of Science and Technology</i>	<b>054</b> Dynamically correct reaction rate constants in heterogeneous catalysis <i>M. Bocus – Ghent University</i>	<b>055</b> Exploring the biocatalytic reduction of alkynes to alkenes using the Old Yellow Enzyme family <i>C. Ferrer Carbonell – Delft University of Technology</i>
14:10		<b>056</b> Scaling Up Membrane Electrode Assembly Electrolyzers for CO <sub>2</sub> Conversion:	<b>057</b> The Stability of Single-Atom Catalysts <i>A.N. van Dam – VU University Amsterdam</i>	<b>058</b> Bulky alkene reduction catalyzed by ene reductases <i>J. Berger – Delft University of Technology</i>

		Strategies to Mitigate Salt Deposition <i>L. Gatti - Italian Institute of Technology</i>		
14:30	<b>O59</b> Understanding Structure-activity Relationship over Al-Fe based Catalysts for CO and CO <sub>2</sub> Hydrogenation <i>Y. Fan - Eindhoven University of Technology</i>	<b>O60</b> Understanding and Mitigating SO <sub>2</sub> -induced Deactivation of Ag Electrocatalysts during CO <sub>2</sub> Electrolysis <i>S Fu - Delft University of Technology</i>	<b>O61</b> Multiscale Computational Insights into Thermal and Catalytic Pyrolysis of Polyolefins <i>F. Xu - Utrecht University</i>	<b>O62</b> Exploring dehydrogenases for redox catalysis with the noncanonical cofactor NMN - N. Travnicek - Delft University of Technology
14:50	Coffee break			
15:10	<b>O63</b> Kinetics of mechano-catalytic polypropylene depolymerization for recycling: Effects of surface-activated beads and mill geometry. <i>L. Delarue - Utrecht University</i>	<b>O64</b> Electrolyte-dependent behavior of a cobalt-based MOF during the glycerol oxidation reaction <i>F.J.A van Lieshout - University of Groningen</i>	<b>O65</b> The Circle of Life: A Catalyst's Story Revealed through Kinetics and Dynamic NMR <i>S. Yassiri - Delft University of Technology</i>	<b>O66</b> Tuning porosity in 3D-printed Ni/TiO <sub>2</sub> catalysts for enhanced CO <sub>2</sub> methanation efficiency <i>J. Cazemier - VITO NV</i>
15:30	<b>KN4</b> Maarten Roeffaers - KU Leuven - Illuminating microplastics: chemical, optical and materials approaches to a growing challenge	<b>O67</b> Graphene-Covered Pt(111): A Tunable, CO-Tolerant Hydrogen Oxidation Catalyst <i>K Boterman - Leiden University</i>	<b>O68</b> Strategies for homogeneous thermal hydrogenation of CO <sub>2</sub> to methanol <i>G. Gherardini - University of Amsterdam</i>	<b>O69</b> Tuning active Ni particle size with dopants enhances carbon yield in catalytic methane pyrolysis <i>D.P.C. van Eck - Utrecht University</i>
15:50		<b>O70</b> On the pH-Dependent Role of Oxygen Functional Groups in Carbon Catalysts for Electrochemical H <sub>2</sub> O <sub>2</sub> Production <i>P. Mazaira Couce - Wageningen University and Research Centre</i>	<b>O71</b> Fluoroalkoxy ligands: Neither too much, Nor too little Fluorine Optimizes Ligand Fields <i>F.J. de Zwart - ETH Zürich</i>	<b>O72</b> Bismuth-Regulated Metal-Support Redox: Preventing Over-Oxidation in Pd Catalysts for Lean Methane Oxidation <i>JHB Pouw - University of Twente</i>
16:10 - 18:10	Poster session B			
17:00 - 17:45	Parallel Career development workshop - J. Campos (Coaching and counselling) - Cambridge 30			
18:10	Dinner			
21:00	Bowling tournament NIOK NPP			

Wednesday: March 4th

09:00	<b>PL4</b> Hirohito Hirata - Toyota Motor Corporation - Progress and future of automotive exhaust gas purification catalysts: mutual utilization of materials data for exploring material application			
09:50	<b>O73</b> PEM fuel cell catalyst layer performance starts in solution - J. Homan - Delft University of Technology	<b>O74</b> Mesoporous titanasilicate-silica-coated magnetic ferrite core-shell catalysts for the epoxidation of limonene	<b>O75</b> The Origin of the Constant Phase Element Behaviour of Pt(111) Near the Potential of Zero Charge <i>K.J. Levey - Leiden</i>	<b>O76</b> Catalytic conversion of CO <sub>2</sub> and bio-based compounds into renewable polycarbonates <i>H. Moradi - University of Groningen</i>

		<i>A.B. Lozada Miniguano - Université catholique de Louvain</i>	<i>University</i>	
10:10	<b>077</b> Microwave-assisted batch and continuous flow process for the sustainable synthesis of the water electrolysis anode materials <i>I.A. Khan - SDU</i>	<b>078</b> Unraveling the synergistic effect of alcohol and water in lignin transfer hydrogenolysis <i>J Chen - University of Groningen</i>	<b>079</b> The Inherent Voltage Penalties of Emerging Electrochemical Reactions in near-neutral pH conditions <i>G. Prats Vergel - Delft University of Technology</i>	<b>080</b> Catalytic Cascade Strategies for Transforming CO <sub>2</sub> into High-Value Products via Formaldehyde equivalents <i>W. Vande Capelle - Katholieke Universiteit Leuven</i>
10:30	Coffee break			
10:50	<b>KN5</b> Tom Burdyny - TUD - How extreme gradients govern the performance and stability of electrocatalysis	<b>081</b> Structural Dynamics of Lacunary Polyoxometalate Activated with H <sub>2</sub> O <sub>2</sub> Elucidated by in situ ATR-IR and atomistic simulations <i>T. Iwano - Delft University of Technology</i>	<b>082</b> Sn(oct) <sub>2</sub> -mediated mechano-catalytic PLA depolymerization <i>F. Mattarozzi - Utrecht University</i>	<b>083</b> Unusual synthesis approach for core-shell cocatalysts, resulting in enhanced photocatalytic activity of SrTiO <sub>3</sub> during gas phase methanol dehydrogenation. <i>Y. Haver - Ruhr-Universität Bochum</i>
11:10		<b>084</b> Ultrafast Probing of Heat-Induced Chemistry on Metal Nanoparticles <i>B. Yilmaz - Delft University of Technology</i>	<b>085</b> Quantifying Internal Transport in Plastic Hydrogenolysis and Overcoming It through Innovative Catalyst Architecture <i>P. Venugopal - University of Twente</i>	<b>086</b> Synergistic optimisation of photocatalytic hydrogen production based on experimental design and Bayesian optimisation <i>J. Pöttker-Menke - Ruhr-Universität Bochum</i>
11:30	<b>087</b> Co <sub>9</sub> S <sub>8</sub> /Ni Precursor for Efficient Conversion of Complex Carbohydrate Mixtures Derived from Ethanosolv Fractionation <i>C. Jiang - University of Groningen</i>	<b>088</b> Accelerated Hydrogen Evolution at Polymer-Functionalized Gold - A Kinetic or a Local pH Effect? <i>S. Hardt - Leiden University</i>	<b>089</b> Effect of Molybdenum on the Performance of Ni/SiO <sub>2</sub> Catalysts for Polyolefin Hydrogenolysis <i>X Huang - University of Groningen</i>	<b>090</b> Lucigenin: A Strongly Oxidizing Dicationic Photocatalyst for the Direct Azolation of Arenes <i>A. Matei - University of Groningen</i>
11:50	<b>091</b> Surface Electrochemistry of Au(111) and Pt(111) in Non-Aqueous Electrolytes <i>GP Grossman - Leiden University</i>	<b>092</b> Poly(vinyl alcohol)/chitosan hydrogel microneedles for transdermal delivery of <i>Mitragyna speciosa</i> crude extracts: fabrication, release behavior, and antibacterial activity <i>A. Panchuchird - Department of Chemistry, Faculty of Science, Silpakorn University</i>	<b>093</b> Radical Initiated Polymer Degradation to Enhance Polypropylene Recyclability <i>RB Maas - Utrecht University</i>	<b>094</b> Workshop: Chemspeed - J. de Keijzer - Turning Processes into Automation for High-Speed Innovation
12:10	Lunch break			
13:00	<b>KN6</b> Max Voß - RWE - Towards net zero: decarbonizing flexible power generation	<b>095</b> Hydrothermally stable catalysts for the one-pot conversion of cellulose to ethylene glycol <i>A.L. Slama de Freitas - University of Groningen</i>	<b>096</b> Optimizing nickel anode regeneration strategies for alkaline water electrolysis <i>N. Cucu - University of Groningen</i>	<b>097</b> Partially Ammonium-Substituted Phosphotungstic Acid as a Catalyst for Efficient Methanolation of Toluene into Xylenes <i>N. Laloux - Université Catholique de Louvain</i>

13:20		<b>O98</b> Carbide fraction effect of molybdenum carbide catalysts on furfural reductive amination <i>Y. Ding - Wageningen University and Research Centre</i>	<b>O99</b> Effect of Fe Impurities on the Surface Structure of Ni-based Electrodes <i>M. Hage - University of Amsterdam</i>	<b>O100</b> The Phosgene-Free Synthesis of Isocyanates Through The Dehydrogenation of Formamides <i>E. Daenens - Katholieke Universiteit Leuven</i>
13:40	<b>O101</b> Mitigating CO poisoning of platinum electrodes for efficient electrochemical hydrogen oxidation in hydrogen compression applications <i>C. Englezos - University of Twente</i>	<b>O102</b> Mechanistic insights in the selective catalytic oxidation of glycolaldehyde: an industrially feasible route to bio-glycolic acid <i>M. Heshmat - Wageningen University and Research Centre</i>	<b>O103</b> Advancing Alkaline Water Electrolysis with Stable Raney Nickel Coatings for High Current Density Operation <i>H.Y. Chen - Eindhoven University of Technology</i>	<b>O104</b> Upcycling Polyethylene to C12-C18 Olefins via Isomerizing Ethenolysis <i>A.A. Tsygankov - Delft University of Technology</i>
14:05	<b>PL5</b> Pelayo García de Arquer - ICFO - Beyond static approaches to control electrolysis interfaces			
14:50	Prizes & Closure			
15:15	Buses to Leiden Central Station			