## Programme NCCC 2024



10:45 - 11:00	Opening			
11:00 - 11:45	<b>PL1</b> S.S. Stahl – University of Wisconsin-Madison Maximizing the Potential of Dioxygen in Synthetic Aerobic Oxidation Reactions			
11:45 - 12:30	PL2 E. Reisner - University of Cambridge Integrated Solar Chemistry Devices for Sustainable Synthesis			
12:30 - 13:30				
	Rotonde	Sorbonne	Boston 17-19	Cambridge 30
	Heterogeneous Catalysis - CO2 Hydrogenation	Biomass - Carbohydrates	Homogeneous Catalysis/Coordination Chemistry	Heterogeneous Catalysis - Light Alkanes
13:30 - 13:55	KN1 The role of catalysis in decarbonizing the petrochemical industry G. Pollefeyt - DOW	<b>O1</b> Relationship between Lewis acid sites and activity over carbohydrates conversion <i>Y.B. Boudjema - IFPEN</i>	<b>O2</b> Hydride as a Leaving Group in Nucleophilic Aromatic substitution S. Melnikov – Utrecht University	O3 Support Effects in Vanadium Incipient Wetness Impregnation for Oxidative and non- oxidative Propane Dehydrogenation Catalysis I.A. Khan – Katholieke Universiteit Leuven
13:55 - 14:20		<b>O4</b> Novel Pt/CNF mixed matrix membranes for the catalytic dehydrogenation of glucose <i>E. van Keulen – Wageningen University and Research Centre</i>	<b>O5</b> Presentation canceled due to personal circumstances	O6 Measuring Local Exothermic Effects during the Oxidative Coupling of Methane using Operando Luminescence Thermometry D.W. Groefsema - Utrecht University
14:20 - 14:45	<b>07</b> Selectivity control between Reverse Water-Gas Shift and Fischer-Tropsch Synthesis in Carbon-supported Iron-based Catalysts for CO2 Hydrogenation  W. Meng – University of Groningen	<b>08</b> A tunable CoOx@NC catalyst for highly efficient and selective hydrogenation of 5-hydroxymethylfurfural with water <i>T.W Wang - University of Groningen</i>	<b>O9</b> Expanding the toolbox of β-diketiminate chemistry: A π-extended benzo[f,g]tetracenebased ligand L. Killian – Utrecht University	<b>O10</b> Shape-dependent activity of Pd/CeO2 nanorods, nanocubes, and nano-octahedrons on lean methane oxidation <i>M.C.P. Chiquetto Policano University of Twente</i>
14:45 - 15:00	Coffee break			
	Rotonde	Sorbonne	Boston 17-19	Cambridge 30
	Heterogeneous Catalysis - CO2 Hydrogenation	Heterogeneous Catalysis	Energy Storage	Materials Characterisation
15:00 - 15:25	<b>O11</b> Understanding the high CO2 methanation activity of Co/CoO interfaces: a density	O12 Probing Catalyst Stability during Unsaturated Fatty Acid Hydrogenation in the	O13 Potential of the S- Pt/TiO2 catalyst for Hydrogen Loading and Release of the LOHC	<b>O14</b> Observing atmosphere dependent segregation in Au-Pd coreshell nanoparticles using it

	functional theory study R.D.E. Krosschell - Eindhoven University of Technology	Liquid Phase by In-Situ Fluorescence Spectroscopy J.W. Bos – Utrecht University	system Benzyltoluene/Perhydro Benzyltoluene B.B. Bong – RWTH Aachen University	situ TEM M. Perxés Perich - Utrecht University	
15:25 - 15:50	O15 Structure-sensitive Reactivity of CO2 Hydrogenation Intermediates on Supported Nickel Catalysts as Probed by In-situ Infared Spectroscopy B.T. Kappé – Utrecht University	<b>O16</b> The coupling of ethylene and benzene towards styrene: ligand design and immobilisation <i>F.M. Martens – Katholieke Universiteit Leuven</i>	O17 Engineering durable hydrogen evolution & oxidation catalysts for the H2-Br2 flow battery W.M. Berkers – University of Twente	<b>O18</b> 3D visualization of impregnated catalyst supports - in wet and dry state J.M.J.J. Heinrichs - Eindhoven University of Technology	
15:55 - 16:25	Workshop CAS: Unique Catalytic Sythesis Search Strategies in CAS SciFinder-n	Workshop Metler Toledo: Automation and Digitalization in the Chemical and Pharmaceutical Industry	Workshop RSC: How do I publish research and what is it with referee 2?	Workshop VIRAN/Young NIOK: Catalysis Col Engagement	
16:25 - 16:55	Workshop Surface Measurement Systems: Carbon Dioxide Capture			Workshop VIRAN/Young NIOK: Catalysis Col Engagement	
16:30	Poster session A				
18:15					
18:15	Dinner with CDO lecture				
20:15					
20:15	CDO session	KNCV carreer workshop in Room B9			
09:00 - 09:45					
	Rotonde	Sorbonne	Boston 17-19	Cambridge 30	
	Rotonde  Electrocatalysis - C2 Products	<b>Sorbonne</b> Photocatalysis	Boston 17-19  Heterogeneous Catalysis - Catalyst Preparation	Cambridge 30  Materials Characterisation	
09:50	Electrocatalysis - C2 Products  O19 What is the role of	Photocatalysis  O20 Photocatalytic	Heterogeneous Catalysis - Catalyst Preparation  O21 Aspects of	Materials Characterisation  O22 Spectromicroscopic	
09:50 - 10:15	Electrocatalysis - C2 Products	Photocatalysis	Heterogeneous Catalysis - Catalyst Preparation	Materials Characterisation	

10:40	Coffee break				
10:55					
	Rotonde	Sorbonne	Boston 17-19	Cambridge 30	
	Heterogeneous Catalysis	Photocatalysis	Homogeneous Catalysis	Electrocatalysis - Oxidation Reactions	
10:55 - 11:20	KN2 Leveraging Polymer Coatings on Heterogeneous Catalysts to Modulate Diffusion and Transition States J.A. Faria Albanese – University of Twente	<b>O27</b> Development of a flow platform for solar-assisted CO2 conversion over heterogeneous catalysts  T. Masson – University of Amsterdam	<b>O28</b> Xylose dehydration to furfural in deep eutectic solvents over homogeneous Lewis acid catalyst <i>C.R. Ruan – University of Groningen</i>	O29 A novel, straightforward method to prepare a Fe-doped Ni3S2 Electrocatalyst for Oxygen Evolution Reaction with high stability at industrially-relevant current density J. Zhu – University of Groningen	
11:20		<b>O30</b> Boosting gas phase TiO2 photocatalysis with	<b>031</b> Product inhibition in Aromatic	<b>032</b> Directing the selectivity of the oxygen	
11:45		weak electric field strengths of V/cm M.N.T. Tran - University of Lille	Hydroxylation by Bio- inspired Manganese catalysts M.R. Saha - Utrecht University	reduction reaction by confinement of a catalyst in a metal organic framework  M.E. Hoefnagel - Leiden University	
11:45 - 12:10	O33 On the Activation of W/ZSM-5 Catalysts for Methane Dehydroaromatization as Probed with Operando Spectroscopy J.J.G. Kromwijk - Utrecht University	<b>O34</b> RoboChem: Automated Optimization of Photocatalysis with Al- Powered Robotics A. Slattery – University of Amsterdam	O35 Elucidating the mechanism of lignin diol-stabilized acidolysis of C3-β-O-4 lignin models using triflic Brønsted acidic salt catalysts G. Guo – University of Groningen	O36 Functionalization of 3D-structured Electrodes by Atomic-Layer-Deposited NiO for Efficient Water Oxidation S. Haghverdi Khamene – Eindhoven University of Technology	
12:10	Lunch break				
- 13:30					
13:30 - 14:15	<b>PL4</b> "Standing on Strong Catalysis Shoulders" – Some Highlights of The Netherlands Catalysis and Celebrating N3C - Prof. M. Tromp				
	Rotonde	Sorbonne	Boston 17-19	Cambridge 30	
	Computational	New Polymers	Materials Characterization	Electrocatalysis	
14:20 - 14:45	KN3 Mechanistic and structural sources of complexity in the atomic scale simulation of Brønsted acidic zeolite catalysts C. Chizallet - IFP Energies nouvelles	<b>O37</b> Novel bio-based cyclic carbonates and investigation on their ROP to polycarbonates <i>G. Chiarioni – University of Groningen</i>	O38 Operando XAS and DRIFTS Investigations into Bi- Promotion of the CO Oxidation Reaction over Supported Pt Nanoparticles J. Siewe – Utrecht University	O39 Selective Electrochemical Oxygen Reduction to Hydrogen Peroxide by Confinement of Cobalt Porphyrins in a Metal-Organic Framework D. Rademaker - Leiden University	
14:45 - 15:10		O40 Renewable and Intrinsically Recyclable Polymers: Ring-Opening (Metathesis) Polymerization of Furan Diels-Alder Adducts E. Harsevoort - Utrecht University	<b>O41</b> Developing an insitu DRIFTS Method to Study the Kinetics of Ethylene Polymerization by Metallocene-based Catalysts  A.S.M. Falodah – Utrecht University	<b>O42</b> Tuning the textual properties of carbon-based catalysts for enhanced CO2 electrolysis  S. Fu - Delft University of Technology	

15:10	Coffee break				
15:25					
	Rotonde	Sorbonne	Boston 17-19	Cambridge 30	
	Electrocatalysis	Heterogeneous Catalysis	Biomass	Polymers	
15:25 - 15:50	<b>O43</b> Exploring the Electrocatalytic Upgrading of 5-HMF on Nickel Boride Nanocrystals <i>J. Hong – University of Groningen</i>	<b>O44</b> Stability of highly dispersed Pd/CeO2 catalysts under hydrothermal and realistic three-way catalysis conditions <i>V.A.J. Jestl – Eindhoven University of Technology</i>	o45 Crystal phase effects on the structure and performance of Ni and Ru nanoparticles for H2-free glycerol conversion to alanine <i>J. Li – University of Groningen</i>	<b>O46</b> Post Polymerisation Modification of Polyethylene by Photochemical Oximation <i>M. Otten – Utrecht University</i>	
15:50 - 16:15	<b>O47</b> Self-Supported Nibased Nanostructures for Anion Exchange Membrane Water Electrolysis  A. Ranade – Eindhoven University of Technology	O48 Supported Transition Metal Sulfides in Selective High- Pressure Ring-Opening: Mechanistic Studies and Poison Resilience C.G. Gross - Technical University Munich	<b>O49</b> Bifunctional catalysts for C-C cleavage of lignin A. Radu – Eindhoven University of Technology	<b>O50</b> Oxidative Conversion of Polyethylene towards Dicarboxylic Acids with O2/NO <i>T.J. Smak - Utrecht University</i>	
16:15 - 16:40	KN4 Probing electrode- electrolyte interactions under operando conditions M.C.O. Monteiro - Fritz Haber Institute of the Max Planck Society	<b>O51</b> Selective Epoxidation of ethylene to ethylene oxide: A model for chloride effects over an industrial EO catalyst V.P. Santos - Dow Benelux	O52 Walking up the value chain: the development of catalytic and electrochemical pathways to access high-value products from lignin A.A. Castillo Garcia – University of Graz	<b>O53</b> Utilizing Mesoporous Materials to Assess the Catalytic Performance of Polyethylene Pyrolysis J.H. Minkelis – Utrecht University	
16:40 - 17:05		O54 Effect of CO2 Pretreatment on the CO Oxidation Performance of Pt/Al2O3 Catalysts J. Yan – Utrecht University	O55 Cu-Mn Spinel Oxide for Enhanced Solvolysis of Enzymatic Hydrolysis Lignin D.F. de Waard – Eindhoven University of Technology	<b>O56</b> External Acidity as Performance Descriptor for Assessing Catalytic Cracking of Polyolefins over Zeolite-based Materials S. Rejman – Utrecht University	
17:05	Poster session B				
18:30					
18:30	Dinner				
21:00	25th Anniversary party with music from TOF!				
01:00					
09:00	PL5 J. Andexer - University of Freiburg Polyphosphate-driven enzyme cascades for biocatalytic alkylation				
09:45					
	Rotonde	Sorbonne	Boston 17-19	Cambridge 30	
	Homogeneous Catalysis	Materials Chemistry - CO2	CO/CO2 Hydrogenation	Materials Characterisation	
09:50	KN5 Bismuth Redox	<b>O57</b> Dual Functional	<b>O58</b> Unravelling the	<b>O59</b> On the microstructure	

10:15	Catalysis J. Cornella – Max-Planck- Institut für Kohlenforschung	Material of Ruthenium and K2CO3 for Direct Air Capture and Conversion of CO2 F. Karaçoban – Wageningen University and Research Centre	Site-Density Effect of Highly Dispersed Zn in Catalytic CO2 Hydrogenation to Methanol and Dimethyl Ether X. Yu – Utrecht University	of the electrode-electrolyte interface during oxygen evolution reaction (OER) using operando XAS  N. Deka – Leiden University
10:15		O60 Effects of	<b>061</b> CO and CO2	<b>062</b> Ultrafast Carrier
10:40		deliquescence on DAC performance on carbon supported K2CO3 sorbents with different surface polarity T.G. de Groot - Wageningen University and Research Centre	hydrogenation to hydrocarbons over promoted phase-pure $\chi$ -Fe5C2 catalysts S.L. Li - Eindhoven University of Technology	Dynamics in LaFeO3 Perovskite Thin Films M. Lazemi - Utrecht University
10:40	Coffee break			
10:55				
	Rotonde	Sorbonne	Boston 17-19	Cambridge 30
	Biocatalysis	Heterogeneous Catalysis - CO2	Photo- and Electrochemistry	Catalysis for Organic Synthesis
10:55 - 11:20	KN6 PET Recycling: from Enzyme and Process Optimization to an Industrial Plant A. Marty – Carbios	O63 Tuning Metal- Support Interactions in the CO2 Hydrogenation over Ni Supported on TiO2 Polymorphs A.E.M. Melcherts – Utrecht University	O64 Enabling Efficient Electrocatalytic Hydrogen Peroxide Production: The Role of Nanoparticle Geometry I.J. van Luijk – Wageningen University and Research Centre	<b>O65</b> Introducing molecular complexity using organolithium cross-coupling chemistry <i>P. Visser – University of Groningen</i>
11:20 - 11:45		O66 Selectivity descriptors for light olefins selectivity in tandem CO2 conversion to olefins over mixed metal oxide – small pore zeolite catalysts A. Sajid – Katholieke Universiteit Leuven	O67 Tuning the Active Phase of a CO2 Hydrogenation Co/TiO2 Catalyst with UV Light D.N.M. Maaskant - Utrecht University	O68 Non-directed C-H Arylation of Electron-rich Arenes via Palladium/S,O- ligand Catalysis K. Deng - University of Amsterdam
11:45 - 12:10	<b>069</b> Enzymatic cascade towards statins <i>R.K. Kuijpers – Delft University of Technology</i>	hydrogenation to methanol by Cu clusters in interaction with singlesite Zn in zincosilicate CIT-6  Y. Gao – Eindhoven University of Technology	O71 Enhanced metal- support interaction in dewetted Pt nanoparticles for electrochemical hydrogen evolution reaction S. Harsha - University of Twente	<b>072</b> Highly stereoselective electrochemical semihydrogenation of alkynes with nickel complexes <i>S. Verbeek – Leiden University</i>
12:10 - 12:35	<b>O73</b> Discovery of bacterial reductive aminases as versatile biocatalysts to synthesize chiral amines <i>E.P.J. Jongkind – Delft University of Technology</i>	<b>O74</b> A Confined Inverse Zn2+/CuOx Structure for the Selective CO2-CH3OH Conversion <i>X. Ye - Utrecht University</i>	O75 Magnetic field enhancement of CoFe2O4 spinel for alkaline OER L.B. Donk - Eindhoven University of Technology	O76 Dyes as efficient organocatalysts for converting CO2 and epoxides into cyclic carbonates  J. Chen - University of Groningen
12:35	Lunch break			
13:20				
	Rotonde	Sorbonne	Boston 17-19	Cambridge 30

	Plastic as Feedstock	Materials Characterisation	Polymers	Organometallic Chemistry	
13:20 - 13:45	KN7 Catalytic processing of the new circular feedstocks L.A. Boot - Ketjen Netherlands BV	O77 An In Situ TEM Study of the Influence of Water Vapor on Reduction of Nickel Phyllosilicate – Retarded Growth of Metal Nanoparticles at Higher Rates S.J. Turner – Utrecht University	<b>O78</b> Photocatalytic Degradation of PFOA over Gold and Silver Modified TiO2 and In2O3 Catalysts <i>G. Scandura – University of Antwerp</i>	<b>O79</b> Decoding the active site in supported organometallic catalysts via autonomous configurational space exploration <i>A.A. Kolganov - Delft University of Technology</i>	
13:45 - 14:10		<b>O80</b> Using X-ray spectroscopy to evaluate the electrocatalytic interface between Au and aqueous electrolytes <i>S. Louisia – Leiden University</i>	<b>O81</b> Mechano-catalytic conversion of polyolefins in the ball mill <i>C.L. Seitzinger – Utrecht University</i>	<b>O82</b> Shape selective crosscoupling of arylboronic acids and simple arenes by Pd-zeolite catalysts <i>J.V. Vercammen – Katholieke Universiteit Leuven</i>	
14:10 - 14:55	<b>PL6</b> <i>M. Muhler – Max-Planck-Institut</i> Redox Catalysis at Surfaces – from Thermal to Photo-, Electro- and Plasmacatalysis				
14:55 - 15:15	Prizes & Closure				
15:15	Buses to Leiden Central Station				