Monday, June 8th

12:30 – Registration

13:50 – Welcome

14:00 – **Plenary**

Location: Main Hall, Chair: Magnus Skoglundh

Optical spectroscopy as a “Swiss army knife” in understanding catalysts
P1 Silvia Bordiga

15:00 – Coffee

15:30 – **Nordic Keynote**

Location: Main Hall, Chair: Magnus Skoglundh

Dynamic electrochemical interfaces: From understanding to controlling reactivity
K1 Antonia Herzog

16:10

Electrocatalysis *Pascal, Chair: B. Wickman*	**Emission Control** *Tesla, Chair: T. Maunula*	**New methods and concepts** *Main Hall, Chair: P-A. Carlsson*
16:20 O1 Reza Khaleghi Abasabadi *In-situ studies revealing the synthesis mechanism of platinum-yttrium nanoalloy catalysts*	O4 Susanne Mossin *In-situ EPR applied for speciation of active metal sites in zeolites*	O7 Jessi van der Hoeven *Nanoscale strain-engineering controls the reactivity of nanoparticle catalysts*
16:40 O2 Mailde S. Ozório *Coupled effects governing stability and ORR activity in AuPd and AuCu binary alloy catalysts*	O5 Patrick Lott *Catalyst design through pathway synergy: NH_3-SCR-driven enhancement of H_2-SCR activity and selectivity*	O8 Florian Maurer *From single atoms to clusters and back: Evolution of noble metals on CeO_2 for oxidation catalysis*
17:00 O3 Nils Rieger *In-situ investigation of PEMFC catalyst-ionomer interactions with electrochemical quartz crystal microbalance* 17:20	O6 Audrey Dannar *Revisiting pressure modulation as a method to increase reaction rates*	O9 Jan Knudsen *Capabilities and analysis methodologies for dynamic operando spectroscopy vision of catalyst surfaces at the MAX IV laboratory*

17:30 – **Berzelius lecture**

Location: Main Hall, Chair: Hanna Härelind

TBA

18:10

18:20 – **Poster session**

21:00

Tuesday, June 9th

9:00 — **Plenary**
Location: Main Hall, Chair: Anders Hellman
Spin-mediated promotion of magnetic metal catalysts
P2 Jens K. Nørskov

10:00 — Coffee

10:30 — **Nordic Keynote**
Location: Main Hall, Chair: Anders Hellman
Transient (spectro-)kinetics as a generous source of knowledge about reaction-diffusion systems in catalysis
K2 Evgeniy Redekop

11:10

CO_2 hydrogenation and C-C coupling *Pascal, Chair: U. Olsbye*	Biomass, plastic and rubber valorization *Tesla, Chair: L. Olsson*	New methods and concepts *Main Hall, Chair: O. Deutschmann*
11:20 O10 Aqsa Batool *Gallium promotes Ni/Al_2O_3 from methanation to methanol synthesis catalysts in CO_2 hydrogenation*	O14 Anker Jensen *Effect of sulfur on noble metal catalysts for stabilization of biomass pyrolysis oil model compounds*	O18 Hjalte Ambjørner *Advances in operando electron microscopy in heterogeneous catalysis*
11:40 O11 Leonardo Sousa *Identification of transient intermediates and active species in $CuZnZrO_2$ catalysts for CO_2 hydrogenation to methanol*	O15 Karina Valihura *Design of hydrotalcite-derived Mg-Al oxide catalysts for the selective valorisation of bioethanol into higher alcohols*	O19 Luca Carnevale *Multi-stimulus in situ TEM for catalysis using a mems-based environmental nano-reactor*
12:00 O12 Nasir Shezad *Hierarchical zeolite 13X-supported Ni catalysts for carbon dioxide conversion into methane*	O16 Duangamol Tungasmita *Integrated valorization of agricultural residues to ethyl levulinate and sustainable bio-based applications*	O20 Christian Reece *Determining the state of a $Pd/\gamma\text{-}Al_2O_3$ catalyst using pulsed flow and transient spectroscopy*
12:20 O13 Raffaele Cheula *Graph models and fine-tuned machine learning potentials for microkinetic analyses in heterogeneous catalysis*	O17 Jiaqi Wang *Intrinsic metal effects govern methoxy retention versus demethoxylation in the electrochemical upgrading of guaiacol*	O21 Silvia Mauri *CO oxidation on $NiFe_2O_4$ under an applied magnetic field: Elucidating the relation between catalytic mechanism and magnetic properties*

12:40 — Lunch

CO_2 hydrogenation and C-C coupling *Pascal, Chair: L. Castoldi*	Biomass, plastic and rubber valorization *Tesla, Chair: A. Jensen*	New methods and concepts *Main Hall, Chair: J. Halldin Stenlid*
13:40 O22 Sahra Ahmed *Structural and catalytic insights into Pd@UiO-66 for C-C coupling reactions*	O26 Päivi Mäki-Arvela *Solventless hydrodeoxygenation of dihydroeugenol in a continuous reactor over Ni catalysts modified with Fe and Ce*	O30 Aksel Violle *AI-driven automated synthesis for zeolite-based catalyst discovery*
14:00 O23 George Marnellos *K-doped $LaFeO_3$ perovskites for CO_2 hydrogenation to light olefins*	O27 David Serrano *Coupling low-temperature lignocellulose pyrolysis with vegetable oil catalytic co-processing over ZSM-5 zeolite: Enhanced aromatic hydrocarbon production and extended catalyst lifetime*	O31 Luis Antonio Cipriano Marcos *Computational robustness of the spin effects in chemisorption and catalysis*
14:20 O24 Adeem Ghaffar Rana *Impact of hydrothermal treatment on the physicochemical properties and MTO activity of H-ZSM-5 catalysts*	O28 Meline Parent *Influence of hexagonal MoO_3 tunnel structure on HDO performance*	O32 Marius Juul Nielsen *Adsorption energy calculation on inverse catalysts with machine learning interatomic potentials*
14:40 O25 Felix Herold *On the anchoring mechanism of metal nanoparticles on carbon supports*	O29 Muhammad Abdus Salam *Catalytic valorization of sugarcane bagasse: effect of cu loading to Ni in Y-Zeolite*	O33 Alvaro Posada-Borbón *Reaction kinetics of liquid organic hydrogen carriers from first-principles: Conversion of methylcyclohexane/ toluene on Pt(111)*

15:00

Tuesday, June 9th

15:00 — Coffee

15:30 — **Nordic Keynote**

Location: Main Hall, Chair: Henrik Grönbeck

On DFT-based multiscale modelling in heterogeneous catalysis
K3 Minttu M. Smith

16:10

	H_2 production and storage *Pascal, Chair: M. Rønning*	**Biomass, plastic and rubber valorization** *Tesla, Chair: D. Creaser*	**Ammonia synthesis and utilization** *Main Hall, Chair: S. Mossin*
16:20	O34 Lidia Castoldi *Impact of Fe-Fe_3C-C phase evolution on methane pyrolysis kinetics: From catalyst structure to reactor scale*	O38 Filippo Ravasio *Selective reduction of α-pinene by transfer hydrogenation with noble metals on carbon*	O42 Olaf Deutschmann *Electro-catalytic ammonia synthesis in proton-conducting ceramic cells*
16:40	O35 Auden Ti *Electro-oxidation of Au(111) studied by operando EC-qXRR*	O39 Rui Pedro da Cruz *Catalytic hydrodeoxygenation of biomass pyrolysis oil model compounds in a continuous slurry reactor*	O43 Vasyl Marchuk *Highly dispersed pt for low-temperature ammonia oxidation: Insight into ligand environment with HERFD XAS*
17:00	O36 Jakob Munkholt Christensen *Insights into methane reforming from oscillations in the reaction*	O40 Jonas Elmroth Nordlander *Active phase of a Cu-Mo catalyst supported on alumina for HDO of biomass*	O44 Alexander Gunnarson *Water tolerance as a key challenge for ammonia decomposition catalysts*
17:20	O37 Zouhair El Assal *Improvement of the performance of Fe-based catalysts by Ni in CO_2-free H_2 production by thermocatalytic decomposition of CH_4*	O41 Xuan-Huy Le *Activity of NiMo/Al2O3 catalyst in waste tire pyrolysis oil upgrading: The effect of sulfidation degree*	O45 Clemens Wöllhaf *Inductively heatable catalysts for ammonia synthesis*

17:40 — Free time

18:30 — Conference Dinner

21.00

Wednesday, June 10th

9:00 — **Plenary**
Location: Main Hall, Chair: Edvin Lundgren
Electrolyte effects on electrocatalytic hydrogen and oxygen evolution
P3 Marc T.M. Koper

10:00 — Coffee

10:30 — **Nordic Keynote**
Location: Main Hall, Chair: Edvin Lundgren
Shedding synchrotron light on catalyst surfaces at work
K4 Uta Hejral

11:10

Selectivity in complex synthesis *Pascal, Chair: H. Grönbeck*	New catalytic materials *Tesla, Chair: A. Holm*	Ammonia synthesis and utilization *Main Hall, Chair: M. Luneau*
11:20 O46 Tapio Salmi *Synthesis of hydrogen peroxide and epoxides: catalysts, kinetics, mechanism and reactor modelling*	O50 Paula Sebastián Pascual *Pulse-mediated electrodeposition of shaped structures for HMF electrocatalysis*	O54 Sašo Gyergyek *Electrified hydrogen storage and on-demand release via ammonia using magnetically heatable Ru–CoNi nanocomposite catalysts*
11:40 O47 Ananya Mohanty *Size-dependent bulk hydride diffusion in Pd nanoparticles and its impact on H_2O_2 synthesis*	O51 Yang Hu *In operando studies of the synthesis and structural evolution of supported electrocatalysts*	O55 Alicia San Martin Rueda *Structural and chemical stability of $LaSrCoFeO_3$ perovskite thin films for ammonia oxidation*
12:00 O48 Martin Høj *Methanol-to-jet fuel (MTJ) pathway and catalysts*	O52 Martina Zava *Ni-Cu alloy-decorated TiO_2 nanotubes for photocatalytic degradation of pharmaceuticals*	O56 Miha Grilc *Magnetically-heated Ru/C hydrotreatment of levulinic acid in cold fluid by electrified slurry reactor*
12:20 O49 Matej Hus *Size and shape effect of silver nanoparticles on ethylene epoxidation: A multiscale simulation*	O53 Henrik Eliasson *Automated 3D characterization of small nanoparticles for high-throughput screening with transmission electron microscopy*	O57 Marcin Makosa-Szczygie *Ammonia oxidation on perovskites for ammonia SOFCs*

12:40 — Lunch

Electrocatalysis *Pascal, Chair: S. Sunde*	Emission Control *Tesla, Chair: R. Villamaina*	Ammonia synthesis and utilization *Main Hall, Chair: S. Blomberg*
13:40 O58 Elias Diesen *Entropy-enthalpy compensation in electrocatalytic rates*	O61 Tim Delrieux *Scale-bridging characterization of Pd/Al_2O_3 methane oxidation catalysts during sulfur poisoning*	O64 Sam Taylor *Operando AP-XPS on plasma catalysis for ammonia production: A temperature study*
14:00 O59 María Paula Salinas-Quezada *Lab-scale operando X-ray diffraction reveals temperature-accelerated coalescence-dominated growth of Pt nanoparticles*	O62 Willow Dew *Influence of support on alloying and segregation behavior in palladium-silver alloy catalysts during methane oxidation*	O65 David Degerman *Effect of potassium promotion of the Haber-Bosch process, investigated by in-situ X-ray photoelectron spectroscopy*
14.20 O60 Anna Panagiota Souri *Exploiting the tunability of dilute alloys for sustainable electrocatalytic reactions*	O63 Ulrike Küst *Carbon subsurface traffic jam as driver for methane oxidation activity and selectivity on palladium surfaces*	O66 Christian Marinelli Johansen *Photodriven reduction of N_2-to-NH_3 and mechanistic lessons learned along the way*

14.40 — Conclusion

15.00 — Coffee