

Preliminary program GSC-3

Sunday July 1 – Botanical Garden, entrance Poortlandplein 6

- 16.00-18.00 Registration
17.30-18.00 Opening by Roger Sheldon
18.30-21.00 Barbecue
21.00 Closing

Monday July 2 – Aula Conference Centre, Mekelweg 5

- 08.00-08.45 Registration
08.45-09.00 Opening by Roger Sheldon

Green Catalytic Methods (1)

- 09.00-09.50 **Matthias Beller** (Universität Rostock, DE) – “Developing practical catalysts for organic synthesis: From palladium- to iron-catalyzed processes”
09.50-10.10 Katsuyuki Tsuji (Showa Denko, JP) – “Development of green chemical processes catalyzed by solid heteropolyacids”
10.10-10.30 Takashi Tatsumi (Tokyo Institute of Technology/Japan Science & Technology Corporation, JP) – “High activity of Mn-MgAl-hydrotalcite in heterogeneously catalyzed liquid-phase selective oxidation of alkylaromatics to benzylic ketones with molecular oxygen”
10.30-11.00 Coffee/tea break

Green Catalytic Methods (2)

- 11.00-11.30 **Graham Hutchings** (Cardiff University, GB) (Green Chemistry Lecture) – “Selective oxidation catalysis using supported gold and gold palladium nanoparticles”
11.30-11.50 Esben Taarning (Technical University of Denmark, DK) – “Gold mediated oxidation of alcohols: A green route to methyl esters”
11.50-12.10 Biswajit Chowdhury (AIST/Calcutta University, JP/IN) – “Active species in the propylene epoxidation with O₂ and H₂ over gold nanoparticles deposited on three dimensionally mesoporous Ti-SiO₂”
12.10-12.30 Sören Klitgaard (Technical University of Denmark, DK) – “Direct green synthesis of amides by aerobic oxidation of alcohol and amine mixtures”
12.30-13.30 Lunch
13.30-15.30 Poster session 1 + Coffee/tea break

Green Chemistry and Pharmaceuticals

- 15.30-16.00 **Richard Henderson** (GlaxoSmithKline, US) – “Lessons learned through measuring green chemistry performance - The pharmaceutical experience”
16.00-16.20 William Leonard (Merck & Co., US) – “Preparative SFC at the kilogram scale to support pharmaceutical development”

- 16.20-16.40 Milton Hearn (Monash University, AU) – “Biopharmaceutical process intensification: The junction of green chemistry with biotechnology”
- 16.40-17.10 John Grate (Codexis, US) – “Green manufacture of chiral alcohols using custom evolved biocatalysts - Replacing boron-based reducing agents”
- 17.10-17.40 Peter Dunn (Pfizer, GB) – “Green chemistry at Pfizer”

Tuesday July 3

Non-conventional Media (1)

- 09.00-09.50 **Shu Kobayashi** (The University of Tokyo, Japan) – “Novel catalysts for green sustainable chemistry”
- 09.50-10.10 Yasuhiro Uozumi (Institute for Molecular Science, JP) – “Heterogeneous aquacatalytic asymmetric synthesis with polymeric palladium complexes”
- 10.10-10.40 Martyn Poliakoff (University of Nottingham, GB) - "Chemical Reactions in Supercritical Fluids"
- 10.40-11.10 Coffee/tea break

Non-conventional Media (2)

- 11.10-11.40 Peter Wasserscheid (Universität Erlangen-Nürnberg, DE) - "Green by enhanced performance: Multiphase ionic liquid catalysis"
- 11.40-12.00 Anders Riisager (Technical University of Denmark, DK) – “Continuous SILP catalysis – An efficient and solvent-free concept for homogeneously catalyzed reactions”
- 12.00-12.20 Santiago Luis (University Jaume I/CSIC, ES) – “Development of efficient processes under flow conditions based on catalysts immobilized onto monolithic supported ionic liquid phases”
- 12.20-12.40 Nuno Lourenço (Universidade Nova de Lisboa, PT) - “One pot enzymatic resolution and separation of alcohols based on task specific ionic liquids”
- 12.40-14.00 Lunch

Non-conventional Media (3)

- 14.00-14.30 Takao Ikariya (Tokyo Institute of Technology, JP) - "Supercritical fluids as greener catalytic reaction media"
- 14.30-14.50 Buxing Han (Chinese Academy of Sciences, CN) – “Functional ionic liquid from biorenewable materials: Synthesis and application as a catalyst in direct aldol reactions”
- 14.50-15.10 Sergei Zlotin (Russian Academy of Sciences, RU) – “Recycling of inorganic, organic and organometal catalysts via immobilization in (on) organic salts with fluorinated anions: A new approach to green sustainable processes”
- 15.10-15.30 Frédéric Lamaty (Université de Montpellier 2, FR) – “Mechanochemical activation and applications in solvent-free organic synthesis”
- 15.30-16.00 Coffee/tea break

Process Integration and Intensification

- 16.00-16.30 Jaap C. Schouten (Eindhoven University of Technology, NL) - "From micro devices via foam reactors to spinning disks: an exploratory expedition along new reactor technologies"
- 16.30-16.50 Sadashiv Swami (University of Toledo, US) – “An integrated approach for production of hydrogen from biomass”
- 16.50-17.10 Hajime Kawanami (AIST, JP) – “The water mediated rapid and selective reactions under high pressure and high temperature conditions”
- 17.10-17.30 Alexander Iles (University of Hull, GB) – “Purifying water with microreactors: Moving from microlitres to decalitres”

Wednesday July 4

Sustainability and Green Metrics

- 09.00-09.50 **Michael Braungart** (Universität Lüneburg/EPEA Hamburg, Germany, and MBDC, USA) – “Cradle to cradle design: A new approach for molecular and conceptual design”
- 09.50-10.10 Jennifer Young (ACS Green Chemistry Institute, US) – “Metrics for comparing analytical methods”
- 10.10-10.40 Peter Saling (BASF, DE) - “Higher sustainability in chemistry evaluated with eco-efficiency analysis and SEEBalance”
- 10.40-11.10 Coffee/tea break

Renewable Resources (1)

- 11.10-11.40 Jan van der Eijk (Shell, NL) – “Biofuels and Shell”
- 11.40-12.00 Jeppe Rass-Hansen (Technical University of Denmark, DK) – “Coupling of gas-phase glycerol processing with Fischer-Tropsch synthesis for liquid fuel production”
- 12.00-12.20 Vasile Parvulescu (University of Bucharest, RO) – “Sunflower and rapeseed oil transesterification over MgO (111) nanosheet catalysts”
- 12.20-12.40 Shuichi Matsumura (Keio University, JP) – “Synthesis and chemical recycling of green polyesters using environmentally benign catalyst”
- 12.40-13.30 Lunch
- 13.30-15.15 Poster session 2 + Coffee/tea break

Renewable Resources (2)

- 15.15-15.45 Istvan Horváth (Eotvos University, HU) – “Caprolactamium Hydrosulfate: An Ionic Liquid Used as the Reaction Medium for Large Scale Production of ϵ -Caprolactam for Decades”
- 15.45-16.05 Rafael Luque (The University of York, GB) – “Tunable carbonaceous materials for acid catalysed reactions”
- 16.05-16.25 Leon van de Water (University of Sydney, AU) – “Hierarchically structured composite materials for photocatalytic water splitting”
- 17.00 Departure by bus for Rotterdam

Thursday July 5

Green Catalytic Methods (3)

- 09.00-09.30 Xumu Zhang (The Pennsylvania State University, USA) –
“Development of new generation of asymmetric hydrogenation
reactions – A practical green chemistry approach”
- 09.30-09.50 Joost Reek (University of Amsterdam, NL) – “Supramolecular
strategies for easy recovery and recycling of homogeneous catalysts”
- 09.50-10.10 McDonald (Utrecht University, NL) – “Immobilised homogeneous
catalysts for sequential fine chemical synthesis”
- 10.10-10.30 Kazuhiko Sato (AIST, JP) – “Development of novel non-phenolic,
halide-free insulating resins by clean epoxidation process”
- 10.30-11.00 Coffee/tea break

Green Catalytic Methods (4)

- 11.00-11.30 Michel Philippe (L'Oreal, FR) - "Green chemistry for sustainable
development at L'OREAL"
- 11.30-12.20 **Robert H. Grubbs** (California Institute of Technology, US) – “The
efficient synthesis of large and small molecules using olefin metathesis
catalysts”
- 12.20-12.30 Closing ceremony