FUNCAT / Center2Center Symposium (12th-14th of April 2022)

April 12 (Tuesday):

Arrival and check in at the Harnack-House

April 13 (Wednesday):

09:00-09.05 **Opening / Welcome (F. Schüth, G. Hutchings)**

09:05-10:00 ***Plenary Lecture 1***, Ferdi Schüth, *Mechano-chemical synthesis and catalysis*

10:00-10:30 Eylül Öztuna, *Pd thin film catalysts for acetylene hydrogenation*

10:30-11:00 ***Coffee-Break***

11:00-11:30 Sam Pattisson, *Au/C catalysts for acetylene hydrochlorination: an overview of recent progress and future challenges*; Jake Williams, *Investigating the difference between gas and liquid phase alkyne hydrogenation*

11:30-12:00 Klara Sophia Kley & Jacopo de Bellis, *Selective hydrogenation of highly concentrated acetylene streams over mechanochemically-synthesized PdAg supported catalysts*

12:00-12:30 Mark Douthwaite, *Cooperative redox enhancement effects in bimetallic catalysis*

12:30-13.30 **Lunch-Break**

13.30-14:30 ***Plenary Lecture 2***, Graham Hutchings, *Au nanoparticle and alloys for oxidation reactions*

14.30-15:00 Kendra Belthle, *Cobalt-support interaction effects in CO_2 hydrogenation*

15:00-15:30 **Coffee-Break**

15:30-16:30 **Flash presentations** (3 minutes short presentations, the program is given below)

16:30- 18:30 **Poster session / further group discussions**

19:00-22:00 **Symposium Dinner**

April 14 (Thursday):

09:00-10:00 ***Plenary Lecture 3***, Annette Trunschke, *Re-thinking experimental approaches in catalysis research: why artificial intelligence-assisted discovery of new catalysts will benefit from rigorous experimental protocols and automation*

10:00-10:30 Lucas Foppa, *Identifying the materials genes of selective oxidation with clean experiments and artificial intelligence*

10:30-11:00 ***Coffee-Break***

11:00-11:30 David Willock & Herzain Rivera, *Hydrogen adsorption on Pd surfaces and its effect on CO_2 Activation*

11:30-12:00 Igor Kowalec, *Cu, Pd and Zn surfaces for CO_2 activation and hydrogenation*

12:00- 12:15 **Final remarks & closing symposium**

12:15 **Lunch & Departure**

Flash Presentations

Acetylene Chemistry

1. **Anna Lazaridou:** Sulfur promotion in Au/C catalyzed acetylene hydrochlorination
2. **Yanlin Wang:** Active sites of Pt-based catalysts in acetylene hydrochlorination reaction
3. **Özgül Agbaba:** Oligomerization of acetylene to 1,3-butadiene

CO_2 Reduction

4. **Tugce Beyazay:** Hydrothermal CO_2 reduction over Ni-Fe nanoparticles
5. **Ray Miyazaki:** AI with experimental and theoretical data: role of the support material for CO2 hydrogenation
6. **Isla E. Gow:** The effect of support surface area on Pd/ZnO catalysts for CO_2 hydrogenation to methanol.
7. **Naomi Lawes:** Investigating the formation of active PdZn nanoparticles for CO_2 hydrogenation to methanol

Selective Oxidation

8. **Fenglou Ni:** Aqueous Au-Pd colloids catalyze selective methane oxidation to methanol with oxygen under mild conditions
9. **Isaac T. Daniel:** Au–Pd separation enhances bimetallic catalysis of alcohol oxidation
10. **Joseph Brehm:** Chemo-enzymatic cascades pptimising selective C-H Oxidation
11. **Kai Wang:** The promotional effect of calcination treatment on Pd/C catalyst for solvent-free benzyl alcohol oxidation

H_2O_2 Generation

12. **Alexander STENNER:** A chemo-enzymatic oxidation cascade to activate C-H bonds with in-situ generated H_2O_2
13. **Ashley Ward:** The fffect of pre-treatment of the support for the direct synthesis of H_2O_2
14. **Greg Sharp:** Enhanced selective oxidation of benzyl alcohol via in situ H_2O_2 production over supported Pd-Based catalysts
15. **Ben Bayntun:** Utilisation of in situ generated H_2O_2 for greywater remediation

Synthesis and Beyond

16. **Rohini Khobragade**: Catalysts synthesis via mechanochemical method
17. **Sofia Mediavilla Madrigal:** Characterisation of novel trimetallic catalysts for CO Activation
18. **Bolun Wang:** Bipyridine embedded polyphenylene porous organic polymers for anchoring Au and Cu Single Sites