

46. Jahrestreffen Deutscher Katalytiker in Weimar

13th to 15th of March 2013

YounGeCatS Conference Report

Marc Armbrüster, Malte Behrens, Barthel Engendahl,
Mehtap Oezaslan, Marcus Rose, Christoph Sprung

During last year's annual meeting of the German Catalysis Society (GeCatS) in Weimar, [M. Rose, S. Enthaler, ChemCatChem 2012, 4, 1068-1069] Prof. Walter Leitner (president of GeCatS) initiated a forum called "Future of Catalysis", to which a group of young scientists joined from different fields of catalysis research in academia and industry. Six people of those volunteered to join the organisation of this forum - YounGeCatS was founded. Within this first year various activities have been organised such as a networking meeting and travel grants for international conferences, which brought about great interest among the next generation of catalysis researchers.

Now, one year later, it happened again: the annual meeting of the German Catalysis Society took place in Weimar on March 13th-15th. The main program of the 46th conference with 519 participants involved five plenary lectures from academia and industry as well as 33 talks organized in two parallel sessions. Additionally, a new record of 275 poster presentations was set. The latest equipment and know-how of catalysis gear was presented during the permanent exhibition of 20 companies, keeping the participants updated on the market.

YounGeCatS organized two parallel poster workshops on highly interesting topics for a broad audience, which initiated an efficient exchange during the poster workshops and the following poster party. The first workshop was titled "Conversion of bio-resources" and covered a broad spectrum ranging from lignocellulosic biomass transformation via lignin depolymerisation and hydrogenolysis reactions of cellulose and glycerol, into the field of oleochemical transformations. The second workshop on "*In situ* characterization and hydrogen generation" bridged the gap between analytical techniques in the knowledge-based development of solid catalysts and processes, and the field of hydrogen production by heterogeneous catalysis.

Prof. Javier Pérez-Ramírez (ETH Zürich/Switzerland), the laureate of the prestigious „Otto Roelen Medal" in 2012, opened this conference in Weimar as the first plenary speaker. In his talk on "Deacon chemistry revisited: new catalytic processes for chlorine recycling" he gave insights into his research and recent developments in heterogeneous catalysis on the conversion of inorganic chlorine compounds. The second plenary speaker was Prof. Takashi

Tatsumi from the Tokyo Institute of Technology/Japan, one of two awardees of the 2012 “Alwin Mittasch Prize”. He addressed in his talk the “Design of advanced zeolite catalysts for the synthesis of chemicals” which is a field of great importance for future developments within the chemical industry. Prof. Dean Toste from the University of California, Berkeley, CA/USA, emphasized “The power of catalysis: homogeneous, heterogeneous and in between” in his plenary lecture. The focus was on novel concepts to bridge the gap between classical molecular catalysis and catalysis with inorganic solids, thus, illustrating the comprehensive possibilities enabled by catalytic processes. In the fourth plenary talk, Prof. Graham J. Hutchings from the University of Cardiff/UK, who was the other winner of the shared “Alwin Mittasch Prize” 2012, presented “Gold catalysis – recent developments” with an emphasis on the importance of supported nanoparticulate gold and gold alloy species as efficient redox catalysts. The final plenary lecture was given by Dr. Rocco Paciello from BASF SE, Ludwigshafen/Germany. He presented “Some recent examples of homogeneous catalysis in the chemical industry” and focused especially on the process development of the homogeneously catalyzed three-step synthesis of L-menthol from citral. This is an impressive example of how chemical industry is able to combine the utilization of molecular catalysts with the required process engineering into an efficient large-scale process.

Further highlights among the oral presentations were the talks given by the two awardees of the “Jochen Block Prize” 2013, which is the prestigious award of the German Catalysis Society for outstanding contributions of young academics in the field of catalysis research. Dr. Malte Behrens from the Fritz Haber Institute of the Max Planck Society in Berlin/Germany presented his work “On the active site of methanol synthesis”. His investigations of the commercial Cu/ZnO/Al₂O₃ methanol synthesis catalyst allowed detailed insights in the mechanism and the structure-activity-relations of the solid catalyst in the industrial methanol synthesis from syngas. Open questions as old as the process itself could be answered by his investigations. The other award winner was Dr. Frank Hollmann from the TU Delft/The Netherlands. His research focuses on the development of enzyme-catalyzed processes. Within his talk he bridged the gap between conventional chemocatalysis and biocatalysis, which gained more and more importance in recent years also within industrial applications.

Besides the scientific program, another highlight organized by YounGeCatS was the career-forum. Initially assumed for around 70 participants, it attracted approximately 280 young scientists (more than half of the total participants!) showing great interest in future career prospects. Opportunities for industrial and academic career were presented in two short presentations by Karin Schmitz of the German Chemical Society (GDCh) and Markus Behnke of the German Research Foundation (DFG), respectively. Subsequently, nine

companies and academic institutions were there for personal discussions and detailed background information on job opportunities at their booths.

But the career-forum was not the only change to the traditional program: The traditional conference dinner on the second evening of the conference was replaced by the "GeCatS Party" including a gorgeous live band and live cooking. This new format attracted participants of all age groups, fostered networking, and was well-reflected as a great highlight of the conference; a great potential for future meetings in Weimar.

In conclusion, this year's meeting of the German Catalysis Society in part co-organized by YounGeCatS was a great success. The meeting provided a broad overview on the research activities within the German catalysis community and lifts its international character due to an increasing number of international guests and participants. A well-balanced scientific program and various new activities strengthened the catalysis network across all ages and disciplines. In 2014 this story is to be continued and it will be time again for "Weimar reloaded", see you there.