

IPID4all Senior Research Exchange with Carl von Ossietzky University of Oldenburg

Feedback report

Jinsheng, Xiao, PhD

*Hydrogen Energy Research Group
School of Automotive Engineering
Wuhan University of Technology
Hubei 430070, China*

Exchange period

15.09.2017-22.09.2017

Exchange topic

Development of New Energy Vehicles in China

Host university

Carl von Ossietzky University of Oldenburg

Host research group

*Research Group Cascade Use (CCU)
Carl von Ossietzky University of Oldenburg,
26129 Oldenburg, Germany*

Host supervisor

Dr. Alexandra Pehlken

Activities/Contacts

- Gave the lecture of “Development of New Energy Vehicles in China” in Dr. Alexandra Pehlken’s Research Group Cascade Use (CCU) together with the group of Prof. Michael Wark of Institute of Chemistry. The term of new energy vehicle (NEV) is used politically by China’s government, which is defined to include battery electric vehicle (BEV), plug-in hybrid electric vehicle (PHEV) and fuel cell vehicle (FCV). This presentation includes both development history and future development of NEVs in China. It then talks about fuel cell vehicles and cascade use of NEVs. The topics concern market, competitions, demonstration, innovations, policies and strategies of NEVs.
- In the same time, introduced briefly the 7th International Conference on Hydrogen Safety (ICHS 2017) which was hold during September 11-13 in Hamburg and the presentation I made there "A dual zone thermodynamic model for refueling hydrogen vehicles". The risk assessment and life cycle analysis used in hydrogen safety analysis and evaluation are also interested in the Research Group Cascade Use (CCU).
- Worked on the joint paper “Assessment for potential of scrap tire recycling in China” which is originally written by Dr. Alexandra Pehlken and her visiting scholar Mr. Zhongkai Li and verified later by her visiting student Ms. Yuan Shi by collecting some new data. Statistics data of previous years and forecasting data of future years for the sale amount and population amount of vehicles in China are going to be added to the paper. The numbers of sales and population of vehicles will be used to estimate the producing amount and recycling amount of scrap tires during both previous years and future years. The paper is planning to be submitted in the end of this year.
- Discussed with Mr. Pascal Böwer, a PhD student of Prof. Michael Wark, on our joint paper “Parametric study of hydrogen purification performance by pressure swing adsorption on two activated carbon beds”, which is based on the work done by Prof. Michael Wark’s visiting student Mr. Liang Fang.
- Had a meeting with Mr. Andreas Günther for discussing the cooperation on the Master of Science Programme Renewable Energy Online (REO) which qualifies students in the field of renewable energy systems, resources and sustainability.
- Had a short meeting with managing coordinator Dr. Thomas Klenke of Center for Environmental and Sustainability Research (COAST).

Future collaboration/Outlook

- To revise and publish the joint paper “Assessment for potential of scrap tire recycling in China” which is originally written by Dr. Alexandra Pehlken and her visiting scholar Mr. Zhongkai Li.

IPID4all Senior Research Exchange with Carl von Ossietzky University of Oldenburg Feedback report

- To publish a joint paper on the topic “Parametric study of hydrogen purification performance by pressure swing adsorption on two activated carbon beds” with the group of Prof. Michael Wark of Institute of Chemistry, and to find further cooperation opportunity on this topic.
- To publish a joint paper on the topic “Potential market and strategies for part reuse and material recovery of new energy vehicles in China” with Dr. Alexandra Pehlken’s Research Group Cascade Use (CCU), and to find further cooperation opportunity on this topic.
- To further communicate with Mr. Andreas Günther to find the cooperation opportunity on the development for the Master of Science Programme Renewable Energy Online (REO) and the Postgraduate Programme Renewable Energy (PPRE).



Fig.1 Working place at the Research Group Cascade Use (CCU) of Dr. Alexandra Pehlken.

Acknowledgement

The IPID4all Senior Research Exchange project is supported by the German Academic Exchange Service (DAAD) with funds from the Federal Ministry of Education and Research (BMBF). Thanks to Ms. Grit Schürmann and Ms. Charlotte Schaeffer for their efficient administration helps.



Federal Ministry
of Education
and Research