The advances of Sino-German new materials

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Sino-German chemical industries and research organizations have been achieving impressive progresses in the field of new materials in the recent years. These progresses are not only owing to the innovation ability, but also the in-depth cooperation between Chinese and German chemists and chemical engineers. Association of Chinese Chemists and Chemical Engineers in Germany (GCCCCD®), founded in 1988 in Karlsruhe, Germany, successfully held its 29th annual conference on 27 October 2017 in Hamburg with the theme “Sino-German New Materials Forum”. The topics covered design, synthesis and applications of new materials, energy conversion and storage materials, bio-medical and biomimetic materials, and other novel performance materials. Twelve professors from German and Chinese universities, among whom five are German, three are Chinese teaching in Germany, and two are from China, along with fourteen scientists from various research institutes and chemical industries, presented the recent developments in their areas. Besides oral presentations, a poster session was held, which provided more opportunities for researchers to present their findings. “Excellent poster awards” were voted by the participants of the conference. With “Sino-German New Materials Forum” as basis, *Frontiers of Chemical Science and Engineering* (FCSE) organized this Special Issue to bring the exciting progresses and achievements in the research fields of new materials to more readers.

This Special Issue include four review articles and nine research papers from German and Chinese research groups. These contributions cover a wide range of research topics, such as energy conversion and storage, Li-ion battery, novel polymerization of polyolefin nanocomposites, biodegradable thermoplastic elastomers, applications of flash light irradiation, laser ablation, gas aerating in new materials formation, sintered porous surface tubes for heat exchangers, graphene oxide for efficient petroleum separation, etc. Besides the research topics themselves, readers will also find inspiring methods on structure analysis and synthesis of inorganic complexes and crystal transformation systems.

On behalf of editors, I am grateful to all authors and reviewers for their contributions to this Special Issue. I extend my thanks to the Editors-in-Chief and members of FCSE Editorial Office for their tremendous efforts and consistent support to make the publication successful.

Prof. Rongbiao Wang is the president of Association of Chinese Chemists and Chemical Engineers in Germany (in German: Gesellschaft Chinesischer Chemiker und Chemieingenieure in der Bundesrepublik Deutschland e.V. (abbr. GCCCCD®)), and a research chemist of Kurita Europe GmbH. Since March 2018, he is appointed as an adjunct professor at the Southwest Petroleum University, China.

Prof. Rongbiao Wang obtained his Master's and then doctoral degree in physical chemistry in Saarland University and Leipzig University in Germany, respectively. Before

Received May 17, 2018; accepted May 19, 2018

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he started his career in chemical industry in 2005, he worked as a post doctoral research fellow at Leipzig University for four years, focusing on functional nanoparticles, bio-membrane and nanoprinting. His continuous industrial experiences have covered developing and patenting healthy wet strength agents for paper making, additives in starch adhesives for corrugated paper board, and researching new products on the basis of inorganic salt for various industrial applications.

Since July 2014, Prof. Wang has contributed his spare time to the non-profit organization “GCCCD[®]” and taken the position as president of board. He organized together with the GCCCD[®] sub branches four annual conferences, and established the “Award for Excellent PhD Supervisors of Chinese Students”. Under his leadership, the association increased from 40 members in 2014 to more than 400 in 2018.