Materials Genome Engineering in China:
The Beijing Advanced Innovation Center
and the National Key R&D Programs

Dawei Zhang, Ph.D. & Yu Yan, Ph.D.
University of Science and Technology, Beijing, China

FEBRUARY 8 (THURSDAY) | 10.00AM CDT
CHiMaD Headquarters, Hogan Building, Suite 1160

Broadcasting Link: https://global.gotomeeting.com/join/138323461

ABSTRACT Materials genome engineering aims at realizing the transition of new materials development from the traditional "trial and error" mode to a “rational experiments” mode (i.e., theoretical prediction and experimental verification). Since the Materials Genome Initiative was announced in 2011, Chinese researchers have shown tremendous interests in developing high-throughput computational methods (theory), high-throughput experimental tools (preparation and characterization) and specific databases, with financial supports from the Ministry of Science and Technology, the Ministry of Industry and Information Technology of China and also local governments. The talk will introduce the establishment of the landmark Beijing Advanced Innovation Center for Materials Genome Engineering and its developmental plans. In addition, the overall strategies of the National Key R&D MGE Programs will be introduced, covering the development of high throughput computational data banks, data mining, high throughput experimental methods for key applications (alloys, catalysis, polymers, etc.), platforms for integration of various materials data and machine learning methods.

BIOS Dawei Zhang received his Ph.D. in Materials Science and Engineering from Texas A&M University and is currently a professor at University of Science and Technology Beijing. He also serves as the Director of International Relations for the Chinese Society for Corrosion and Protection and the International Liaison of Technical Coordination Committee of NACE International. His research interests include smart coatings and surfaces, microbiologically influenced corrosion and environmental degradation of polymers and coatings. He has published over 60 papers on journals including Nature, Journal of Materials Chemistry A, Corrosion Science and ACS Applied Materials & Interfaces and is currently the Editor of Corrosion Science.

Yu Yan received his Ph.D. from the University of Leeds in 2006. In 2010, he moved to the University of Science and Technology where he graduated with a Bachelor degree. He is the author of 6 books and 65 peer reviewed articles. He was awarded the Tribology Bronze Medal by the International Tribology Council in 2008. His research interests include corrosion and tribocorrosion behaviors of biomedical alloys and high entropy alloys, hydrogen embrittlement of high strength steels.