

## cfaed Seminar Series

**DATE:** November 01, 2019 (Friday)  
**TIME:** 16:00 PM – 17:00 PM  
**LOC:** Lecture hall CHE 089/E (ground floor)  
CHE building (Chemie-Neubau), Bergstr. 66  
01069 Dresden



### GUEST SPEAKER:

**Prof. Lei Jiang**

Technical Institute of Physics and Chemistry, Chinese Academy of Sciences,  
Beijing, P.R. China

### TITLE:

**“Smart Interfacial Materials with Super-Wettability”**

### ABSTRACT:

Learning from nature, we developed super-wettability system: superhydrophobic, superoleophobic, superhydrophilic, superoleophilic surfaces in air and superoleophobic, superareophobic, superoleophilic, superareophilic surfaces under water. Furthermore, we fabricated artificial materials with smart switchable super-wettability, i.e., nature-inspired binary cooperative complementary nanomaterials that consisting of two components with entirely opposite physiochemical properties at the nanoscale, are presented as a novel concept for the building of promising materials.

### BIOGRAPHY:

Lei Jiang received his B.S. degree in solid state physics (1987), and M.S. degree in physical chemistry (1990) from Jilin University in China. From 1992 to 1994, he studied in the University of Tokyo in Japan as a China-Japan joint course Ph.D. student and received his Ph.D. degree from Jilin University of China with Prof. Tiejin Li. Then, he worked as a postdoctoral fellow in Prof. Akira Fujishima's group in the University of Tokyo. In 1996, he worked as researcher in Kanagawa Academy of Sciences and Technology, Prof. Hashimoto's project. In 1999, he joined the Institute of Chemistry, Chinese Academy of Sciences (CAS). In 2015, he moved to the Technical Institute of Physics and Chemistry, CAS. Since 2008, he also served as the dean of School of Chemistry and Environment in Beihang University. He was elected as members of the Chinese Academy of Sciences and the World Academy of Sciences in 2009 and 2012. In 2016, he was also elected as a foreign member of the US National

Academy of Engineering. Lei Jiang's broad range of research areas is widely recognized and very actual in terms of direct spin-offs for society. His main achievement is synthesizing and designing super-wettable and super-repelling interfacial material systems. He has published over 500 papers including 3 papers in Nature, 1 paper in Science, 1 paper in Nat. Nanotechnol., 1 paper in Nat. Rev. Mater., 2 paper in Nat. Mater., 14 papers in Nat. Commun., 7 papers in Sci. Adv., 2 papers in Chem. Rev., 10 papers in Chem. Soc. Rev., 7 papers in Acc. Chem. Res., 47 papers in Angew. Chem. Int. Ed., 32 papers in J. Am. Chem. Soc., and 130 papers in Adv. Mater. The works have been cited more than 75,000 times with an H index of 133 (Web of Science).