

TCSUH SPECIAL SEMINAR

Jian-Zhong Jiang

Dean, School of Materials Science and Engineering, Fuyao University of Science and Technology, Fuzhou, P.R. China; and Chair Professor and Director, International Center for New-Structured Materials (ICNSM), Laboratory of New-Structured Materials, School of Materials Science and Engineering, Yuquan Campus, Zhejiang University, Hangzhou, P.R. China

Wednesday, February 28, 2024

12:00 p.m. – 1:00 p.m.

In Person: Houston Science Center (HSC), Room 102

Temperature and Pressure-Induced Structural Changes in Disordered Alloys



ABSTRACT: Phase transitions in materials are the subject of great interest. The polyamorphic crossover induced by temperature and/or pressure, defined as a phenomenon having dramatical changes in structure and properties and no change in the chemical composition. in disordered materials, e.g., liquids and amorphous materials, is often more complex as compared to the polymorphic transition in crystalline materials. In this talk, we will survey behaviors of disordered alloys (metallic liquids and metallic glasses) under various temperatures and pressures. In my first talk, pressure-induced phase transformation in various metallic glasses will be further discussed. In my second talk, temperature-dependent atomic structure evolutions in various metallic liquids (from pure element to multi-component systems) will be mentioned, esp. challenges and potential for liquid-to-liquid transition in metallic liquids will be critically discussed.

BRIEF BIO: Jian-Zhong Jiang is the Dean of the School of Materials Science and Engineering in Fuyao University of Science and Technology, Fuzhou, P.R. China. He received Ph.D. Degree in 1991 and worked as Postdoc (1991-1992) in University of Saarland, Germany, Research Fellow (1993-1994) in University of Liverpool, Assistant Professor (1994-1996) and Associate Professor (1996-2003) at Department of Physics, Technical University of Denmark. Since 2004, he has been appointed as Chair Professor at School of Materials Science and Engineering, Zhejiang University and since 2006, been appointed as the Director of the International Center for New-Structured Materials (ICNSM), Zhejiang University. Since 2024, he has been appointed as the Dean of School of Materials Science and Engineering, Fuyao University of Science and Technology. Prof. Jiang has been corresponding author of 500 papers, including Science, ProgMaterSci, AdvMater, PNAS, PRL, JACS, Nanolett, ScienceAdv, Matter, NatureCommun, AdvFuncMater, and Acta Mater, H=72, citation number more than 22,000 and 50 granted patents. His interests cover disordered alloys, phase transformation and liquids.

Host: Dr. Zhifeng Ren

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