Registration Form for WFC Scientific Committee

Personal Info.

Name: Zhai Qijie

Title：Professor

Affiliation: Shanghai University

Research Interest

Metal solidification under physical fields.

Main Achievements (<200 words)

Zhai Qijie engages in the research of steel solidification, has won the second prize of National Technological Invention, the first prize of Shanghai Technological Invention, and the first prize of Shanghai Natural Science Award (all ranked first). He has published over 400 SCI papers and has been recognized as a highly cited scholar in metallurgical engineering by Elsevier for three consecutive years. He found that the electroinduced subcooling introduced by pulse current promoted nucleation at the solid-liquid interface of metal melt, and the crystal nucleus forms crystalline rain under the action of electromagnetic force. This is the mechanism by which pulse current refines the structure of metal solidification. On this basis, the Pulse Magnetic Oscillation (PMO) homogenization technology was invented, which has been popularized and applied in many metallurgical enterprises. He proposed a new concept of feature unit and employed it as a key element of thermal simulation, and developed a series of thermal simulation experimental equipments.