

## CELEST Member Short Profile



### Horst Hahn

Horst Hahn is the Executive Director of the Institute of Nanotechnology since 2004 and leads a research unit on advanced (nano-)materials, covering the range from synthesis, structural characterization and control of mechanical, physical and (electro-)chemical properties. He is retired professor in Materials Science at the TU Darmstadt. Previously, he did research in several institutions in the US for 8 years, is principal investigator at the Herbert Gleiter Institute of Nanosciences in Nanjing, China, is Distinguished Visiting Professor at the University of California Irvine and Distinguished Institute Professor at the Indian Institute of Technology Madras. He was Founding Director of the Helmholtz Institute Ulm. He has published more than 500 peer reviewed papers and holds more than 70 patents. He is member of the German National Academy Leopoldina, Foreign Member of the US National Academy of Engineering and of the US National Academy of Inventors and the European Academy of Sciences.

#### Institute of Nanotechnology

Hermann-von-Helmholtz-Platz 1  
 76344 Eggenstein-Leopoldshafen

#### Contact details

Prof. Dr. Horst Hahn  
 +49 721 6082 6350  
 horst.hahn@kit.edu

#### Research areas

His main research interests are in the synthesis, characterization and physical, (electro-)chemical and mechanical properties of advanced (nano-)materials, such as nanoglasses, high entropy materials and advanced alloys and ceramics. The main areas of applications are in electrochemical energy storage and printed electronics, both areas heavily relying on electrochemistry.

#### Lab equipment

Inert Gas Condensation systems with thermal and laser evaporation, MBE-, PLD-, ALD-, and sputtering thin film deposition systems, cluster ion beam deposition system, surface analysis, advanced electron microscopy, SQUID magnetometry, physical property measurement system, electrochemical characterization, battery cyclers

Horst Hahn @ INT	Link INT	Link lab equipment
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