

Curriculum Vitae

Prof. Dr.-Ing. Horst Hahn

Personal Information

* August 10, 1952 in Saarbrücken

Institut für Nanotechnologie

Karlsruher Institut für Technologie
Kaiserstraße 12, 76128 Karlsruhe, Germany

☎ (+49) 0721 6082-6350 📠 (+49) 0721 6082 6368

Horst.hahn@kit.edu

Scientific Vita

1978 Diploma, Universität des Saarlandes Saarbrücken

1978-1982 Research Assistant Dept of Materials Science, Technische Universität Berlin

1982 PhD, Technische Universität Berlin

1982-1985 Postdoctoral Research Associate, Dept. of Materials Science Universität des Saarlandes, Saarbrücken

1985-1987 Research Associate, Materials Science Division, Argonne National Laboratory, USA

1987-1990 Research Assistant Professor, Dept of Materials Science and Engineering, University of Illinois at Urbana-Champaign, USA

1990-1992 Associate Professor of Materials Science (tenured), Rutgers-The State University of New Jersey, USA, Dept of Mechanics and Materials Science

1992-2004 Full Professor of Materials Science, Head of Thin Films Division, Technische Universität Darmstadt (TUD)

2004-present Executive Director, Institute of Nanotechnology, KIT; Professor of Materials Science, TUD

Since 2005 Head of Joint Research Laboratory Nanomaterials at Institute of Materials Science, TUD

Since 2008 Head of Programme NANOMICRO: Science, Technology, System at KIT

Since 2011 Executive Founding Director of Helmholtz-Institute Ulm

Professional Activities

1994-1999 Associate Editor for Nanostructured Materials

1995-present Reviewer of research projects for DFG, AvH, DFG SFBs277, Saarbrücken und 445, Duisburg

1995-present Associate Editor for Materials Letters

1997-2001 Member of Scientific Advisory Board of Hahn-Meitner-Institute, Berlin

1999-2001 Chairman of Scientific Advisory Board of Hahn-Meitner-Institute, Berlin

2003-2006 Chairman of International Committee on Nanostructured Materials

2004-2008 Editor of Scripta Materialia

2004-2007 Member of Board of Section Nanotechnology, Dechema e.V., Frankfurt

2005-present Member of Scientific Advisory Board of GKSS (National Laboratory)

2005-2007 Member of Board of Directors of Materials Research Society, Warrendale, PA, USA

2006-2010 Chairman of Scientific Advisory Board of Leibniz-Institut für Neue Materialien gem. GmbH, Saarbrücken

2007-present Member of Advisory Board of CeNIDE-Center for Nanointegration, University of Duisburg-Essen

Areas of Expertise

- Nanostructured metals and ceramics and general nanostructures, i.e. clusters, nanoparticles thin films
- Synthesis processes and processing of nanostructured materials
- Stability and reliability of nanostructured materials

- Tailored and tuneable properties of nanostructures
- Functional properties of ceramics, i.e. electronic and ionic conductivity, and applications in printable electronics
- Energy materials, i.e. batteries and fuel cells

Awards and Honors

- 1982-1984 Fellowship for highly-qualified young scientists (24 month) from Fritz-Thyssen Foundation, Cologne
- 2004 Honorary Professor at University of Hyderabad, Physics Dept, Hyderabad, India
- 2005 Distinguished Professor of Indian Institute of Technology Madras, India (lifetime position)
- 2007 Guest Professor at Lanzhou University, Lanzhou China
- 2010 Elected member of Deutsche Akademie der Naturforscher Leopoldina, Halle
- 2010 Elected Member of European Academy of Sciences
- 2010 Fellow of the Materials Research Society (MRS), Pittsburgh, PA USA
- 2010/11 Guest Professor "Physics of nanostructured materials", Department of Physics, University of Vienna, Austria
- 2012 Heyn-Denk Münze, Dt. Gesellschaft für Metallkunde

International Cooperations

Prof. Dr. Robert Averback, University of Illinois at Urbana-Champaign, USA: Metastable alloy formation by high-pressure torsion

Prof. Dr. Pulickel Ajayan, Rice University, Houston, TX, USA: Carbon-nanostructures

Prof. Dr. Chandrabhas Bansal, University of Hyderabad, India: Tuneable nanomaterials

Prof. Dr. Subbu Bhattacharya, IIT Madras, Chennai, India: Nanopowders for energy applications

Prof. Dr. Anatoli Sidorenko, Institute of Electronic Engineering, Ind. Technologies AS REM, Kishinev, Moldavia: Functional thin films

Publications and Patents

Total number of publications: > 300

Total number of refereed publications: > 200

Total number of patents: 13

List of five most important publications

R.W. Siegel, S. Ramasamy, H. Hahn, Z.Q. Li, T. Lu, and R. Gronsky, *Journal of Materials Research*, 1988. **3**(6): p. 1367-1372.

H. Hahn, J. Logas, and R.S. Averback, *Journal of Materials Research*, 1990. **5**(3): p. 609-614.

R. Schmechel, M. Kennedy, H. von Seggern, H. Winkler, M. Kolbe, R.A. Fischer, X.M. Li, A. Benker, M. Winterer, and H. Hahn,

Journal of Applied Physics, 2001. **89**(3): p. 1679-1686.

H. Hahn and K.A. Padmanabhan,

Philosophical Magazine B-Physics of Condensed Matter Statistical Mechanics Electronic Optical and Magnetic Properties, 1997. **76**(4): p. 559-571.

P. Mondal, A. Klein, W. Jaegermann, H. Hahn,

Solid

State Ionics 1999. **118**: p. 331-339.