



Curriculum Vitae

Hans Richter

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Education

1959	Abitur
1959 - 1965	Study of Materials Science, TU Magdeburg
1971	Dissertation (Metal Physics), TU Magdeburg
1988	Habilitation (Semiconductor Technology), Academy of Sciences, Berlin

Work Experiences

1965/6	Quality Management, Leichtmetallwerk Rackwitz
1966 - 1971	Assistant, 1. Physik. Institut , TU Magdeburg
1971 - 1988	Academy of Sciences of the GDR, IHP Berlin/Frankfurt (Oder) Scientist, Head of Department/Devision, Deputy Director
1978 / 1988 - 1990	University Lectures, Humboldt-University, Berlin
1988 - 1991	Scientist
1991 - 2005	Head of Department, IHP Frankfurt (Oder)
1999 - 2005	Founder and Director of IHP / BTU Joint Lab, Cottbus University Lectures, BTU Cottbus
2002	Hon. Prof., BTU Cottbus
2005 - present	Director of Matrix - angewandte Forschung Ltd. & Co. KG, Frankfurt (Oder) CEO of Gesellschaft zur Förderung von Wissenschaft und Wirtschaft - GFWW - e. V., Frankfurt (Oder)

Memberships

Leibniz-Societät der Wissenschaften zu Berlin (Election 2002)
Deutsche Physikalische Gesellschaft
Gesellschaft zur Förderung von Wissenschaft und Wirtschaft -
GFWW - e. V.
Leibniz -Institut für interdisziplinäre Studien, Berlin
Wissenschaftlicher Beirat „Mikrosystemtechnik“
Hochschule für Technik und Wirtschaft Berlin (HTW)

Boards / Committees

Member of SEMI's European ISS - Committee, Brussels
(since 2001)
Executive Board Member
of European Materials Research Society (E-MRS), Strasbourg
(2001 -2016)
Wissenschaftsrat – Excellence Initiative,
Member of the Evaluation Group “Institutional Strategy”,
University of Konstanz, (2011/2)
E-MRS Vice President (2009 – 2014)

Research Interests

Defects in Semiconductors
Defect Engineering and Gettering
Semiconductor Materials and Technologies
Nanoelectronics
Si-based Photovoltaics
Nano-Transistors

Scientific Publications

- more than 200
- “Material effects in manufacturing of silicon based solar cells and modules”
Phys. Status Solidi C 8, No. 3, 871 – 874, 2011
 - “Scaling properties of ballistic nano-transistors”
Nanoscale Research Letters, 2011, 6:365
 - “Materials for Key Enabling Technologies”
E-MRS / ESF (MatSEEC) Report, April 2011, Strasbourg
 - “A Quantitative Model for Quantum Transport in Nanotransistors”
NANOSYSTEMS: PHYSICS, CHEMISTRY, MATHEMATICS, 2013, 4 (6), P. 800–809
 - “Characterization of nanotransistors in a semiempirical model”
Thin Solid Films 613 (2016) 6–10

Selected Presentations

more than 250

- “Overview of GADEST”
Oxford, UK, 22nd to 27th September 2013
- “Crystalline Silicon - a Key Component of Nanoelectronics and Photovoltaics”
IV World Materials Summit, Strasbourg, October 12, 2013
- “Silicon for Key Enabling Technologies”
IME - CAS, Beijing, December 2013
and
State Key Lab of Silicon Materials Hangzhou, December 2013
- “Silicon for Key Enabling Technologies (Microelectronics,, Photonics)”
Chinese Materials Annual Meeting 2014, Chengdu, July 4 -7, 2014,
- “30 years of GADEST –Design of materials and functionality”
GADEST XVI, Bad Staffelstein, September 20, 2015
- “Recent Advances of Silicon Materials Research in Europe and Expected Role in Japan”
7th JSPS Silicon Symposium, Kona, Hawaii, November 24, 2016
- “Silicon – Skeleton of Semiconductor Applications Closed Loop: Materials, Functionality, Performance, and New Materials”
International Forum on Innovation and Emerging Industries Development (IEID 2018) Shanghai, China, September 2018

Patents

41

Latest patent applications:

DE 10 2018 104 305 A1 2019.07.04

“Zweikanal-Halbleiterbauelement“

US 11,227,954 B2 Jan. 18, 2022

“Two-Channel Semiconductor Component“

WO 2022/207369 A2 06.10.2022

“Double-Gate Four-Terminal Semiconductor Component with Fin-Type Channel Region“

Other Activities

- Technology Politics
- Leader of the Asia Invest Project SELECT-IT - Sino-European Liaison Enabling Collaborations and Trade in Information Technology, (EC, 2005 - 2006)
- Founder and member of the Executive Committee of the Conference Series “Gettering and Defect Engineering in Semiconductor Technology - GADEST” (biannual since 1985)
- Member of the Supervisory Board, Silicon Sensor AG (2002 - 2007)
- Member of the Scientific Advisory Council, UBIN AG (2012 - 2015)