Joachim Stöhr
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Education:

1968 Vordiplom in Physics, Bonn University, Germany
1971 M.S. in Physics, Washington State University
1974 Dr. rer. nat. in Physics, TU München, Germany

Professional Experience:

Scientist at Lawrence Berkeley Laboratory (1976-77)
Senior Research Associate at Stanford Synchrotron Radiation Laboratory (1977-81)
Senior Staff Physicist at Exxon Research and Engineering Company (1981-85)
Research Staff Member at IBM Almaden Research Center (1985-89)
Manager, Department of Condensed Matter Science, IBM ARC (1989-91)
Manager, Department of Magnetic Materials and Phenomena, IBM ARC (1991-94)
Manager, Synchrotron Radiation Project, IBM ARC (1994-95)
Research Staff Member at IBM ARC (1995-99)
Professor of Photon Science, Stanford University (2000 – present)
Deputy Director, SSRL, Stanford University (2000-2005)
Director, SSRL (2005-2009)
Director, LCLS (2009-2013)
Professor Emeritus since September 2015

Fellowships, Awards, Honors:

- Fulbright Scholarship 1969-70
- Postdoctoral Scholarship from Deutsche Forschungsgemeinschaft 1975-76
- Fellow of the American Physical Society since 1988
- Adjoint Professor in Physics at Uppsala University, Sweden (1993-2000)
- Consulting Professor at Stanford Synchrotron Radiation Laboratory (1994-1999)
- IBM Outstanding Technical Achievement Award 1997
- Hofstadter Lecturer, Stanford University 2010
- Davisson-Germer Prize 2011 in Surface Physics from American Physical Society

Advisory Committees:

- Steering Committee for the Advanced Photon Source, Argonne (1985/86)
- Chairman, Users Executive Committee of the Stanford Synchrotron Radiation Laboratory (1986/87)
- Program Advisory Committee, Advanced Light Source, Berkeley (1995–1996)
- Chairman, Scientific Advisory Committee, Advanced Light Source, Berkeley (1996 – 1998)
- BESAC Advisory Committee Panel on Synchrotron Radiation Sources and Science, 1997, R. J. Birgeneau, chairman
- Chairman, Scientific Advisory Committee, Linac Coherent Light Source, SLAC, 1999-2003
- Basic Energy Sciences Advisory Committee (BESAC), US Dept. of Energy, 1999-2003
- Scientific Advisory Committee, BESSY-II Synchrotron Source, Berlin, Germany, 2000 – 2004

- Scientific Advisory Committee, SOLEIL Synchrotron Source, Orsay, France, 2001 – 2005
- Scientific Advisory Committee, Advanced Photon Source, Argonne, Illinois, 2002 – 2006
- Scientific Advisory Committee, Center for Nanophase Materials Sciences, Oak Ridge National Laboratory, 2006 –2009

Scientific Accomplishments:

My early scientific research focused on the development of x-ray based surface techniques, especially surface EXAFS and NEXAFS, and their use for the determination of the geometric arrangement and bonding of atoms, molecules and thin organic films on surfaces. This work is summarized in my 1987 review article "SEXAFS" (in *X-Ray Absorption: Principles, Applications, Techniques of EXAFS, SEXAFS and XANES*, Edits. D. Koningsberger and R. Prins, Wiley, 1988) and my 1992 book "NEXAFS Spectroscopy" (Springer). Today the major part of my research is concerned with magnetic materials and phenomena, in particular the study of magnetic thin films, interfaces and nanostructures, and their ultrafast dynamics by use of forefront x-ray techniques. This work forms the foundation of my 2006 book (with H. Siegmann) entitled "Magnetism: From Fundamentals to Nanscale Dynamics" (Springer).

In total I have written 2 books, 10 review articles in the form of book chapters and about 250 scientific Journal publications. I hold 5 patents and have given more than 150 invited talks at international scientific conferences, about 100 colloquia at Universities and Scientific Research Institutions, and 3 public lectures on the topic of magnetism and x-ray free electron lasers. I currently have an H-index of 83.

I am presently writing a new book tentatively entitled "Interactions of Soft X-Rays with Matter: From Spontaneous to Stimulated Response". This book was inspired by the advent of X-Ray Free Electron Lasers and the need to revise our conventional description of x-ray interactions as "one-photon-at-a-time".