

Wolfgang M. Sigmund

Professor, Editor-in-Chief of Critical Reviews in Solid State and Materials Sciences

Department of Materials Science and Engineering

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Research Interests

Applied colloid science; processing of materials; enhancing materials properties; biomedical and environmental applications of novel materials.

Education

1992 Ph.D. Max-Planck-Institute for Polymer Research, Mainz, Germany

1987 Diplom in Chemistry, University of Heidelberg, Germany

1985 Vordiplom in Chemistry, University of Heidelberg, Germany

Professional Background

2006- Professor in Materials Science and Engineering.

2006- Editor-in-Chief for Critical Reviews in Solid State and Materials Sciences.

2003-2005 Editor for Critical Reviews in Solid State and Material Sciences.

2002-2006 Associate Professor, tenured – Department of Materials Science and Engineering, University of Florida.

1999-2002 Assistant Professor – Department of Materials Science and Engineering.

1996-1998 Director of Headquarters, KKS (Ceramic research), Stuttgart, Germany.

1995-1998 Assistant Professor and Deputy Director of the Institute for Nonmetallic Inorganic Materials, University of Stuttgart, Germany.

1993-1993 Visiting Research Professor – RIKEN, Wako-Shi, Japan.

1992-1993 Post-Doctoral Associate - Chemistry Department, University of Florida.

1989-1991 Research Associate, Max-Planck Institute for Polymer Research, Mainz, Germany.

Summary of Accomplishments

- More than **160 publications** and **150 presentations**.
- One **edited book** and four invited book chapters.
- Citation analysis: **h-index 19**, best cited paper **>160 citations**
- Awards: **Doctoral mentoring award**, elected to **European Academy of Sciences**
- Evidence of consistent external funding: **>20 proposals** funded in the past 8 years
- Evidence of development of intellectual property: **15 patents**/provisional patents, and patent disclosures to Office of Licensing and Technology at University of Florida
- **24 Ph.D.s** and **16 Masters** chaired and graduated from 1999-2008, i.e. **2.4 Ph.D.** per year.
- **>150 Ph.D.** and **Master committees** at UF and international universities from 1999-2008
- **Editor-in-Chief** for worldwide **top ten ranked Journal in materials sciences and solid state physics**: Critical Reviews in Solid State and Materials Sciences, ISI 2004 Impact factor **5.22**

Awards/Honors/Professional Accomplishments:

2007/2008 Award for best **Doctoral dissertation mentor** of the University of Florida

2008 elected Chair of the faculty council of the college of engineering, representing all faculty in the college of engineering.

2006+ Editor-in-Chief for Critical Reviews in Solid State and Materials Sciences.

2007+ Editorial Board for Journal Recent Patents on Materials Science
2007+ Editorial Board for Journal Ceramics International
2007 Research featured on cover page of JOM, Jan. 2007 issue
2007 Research featured on cover page of J. Am. Ceram. Society
2004 Faculty Excellence Award, MSE, University of Florida
2004 Editorial Advisory Board for Encyclopedia of Surface and Colloid Science
2003 Guest Editor Journal of Nanoscience and Nanotechnology
Elected Member of European Academy of Sciences
Listed in “Who is Who in Engineering Education”, “Who is Who in America”, “Who is Who in Sol-Gel”

Activities

- Vice President for ASM/TMS Florida
- Chair of the Florida Section of the American Ceramic Society 2002, 2008+
- Senator of the University of Florida 2007-2010
- Council member of the College of Engineering, UF 2007-2010
- Budget committee of the College of Engineering, UF 2008-2009
- Chair Long Range Planning Committee, Department of Materials Science and Engineering. 2006-2008
- Chair Bylaws Committee of the Department of Materials Science and Engineering, UF. 2007-2008
- Treasurer of the Florida Section of the American Ceramic Society 2003-2008
- Nomination Committee, Basic Science Division, American Ceramic Society
- Ceramic Education Network - American Ceramic Society
- KERAMOS UF Chapter academic advisor 1999-2004

Selected Invited Publications in Archival Journals (2003-2007)

1. Tsai, YY; Oca-Cossio, J; Agering, K, **Sigmund, W.**, et al Novel synthesis of cerium oxide nanoparticles for free radical scavenging, NANOMEDICINE Volume: 2 Issue: 3
Pages: 325-332 Published: JUN 2007.
2. Huey BD, **Sigmund W**, The application of scanning probe microscopy in materials science studies - Commentary, JOM 59 (1): 11-11 JAN 2007
3. **Sigmund W**, Yuh J, Park H, et al.
Processing and structure relationships in electrospinning of ceramic fiber systems
JOURNAL OF THE AMERICAN CERAMIC SOCIETY 89 (2): 395-407 FEB 2006

Patents (selected from over 10 disclosures)

1. W. Sigmund, A. Daga, *Joining of ceramic powder pressed components in the green state with a gelcast joint*, Office of Technology Licensing - UF# 11234, **2003**, Provisional US-Patent **2004**
2. W. Sigmund, J. Spatz, *Ultralyophobic Interfaces*, University of Heidelberg, Office of Technology Licensing, UF# 11326, **2003**, Provisional US-Patent **2004**.
3. Wolfgang Sigmund, Sung-Hwan Lee, Ben Koopman, Brij Moudgil, *Photocatalytic Nanocomposites for the Inactivation of Microbes*, Office of Technology Licensing, UF#-11418, **2004**, Provisional US-Patent, **2004**.