

Curriculum Vitae

FRANK MUECKLICH

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AFFILIATION:

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BORN: 08/17/1959, Dresden, Germany

FAMILY STATUS: married to Ute Muecklich
(consultant),
children: Marc (1990), Sina (1992), Anna (1993)



PROFESSIONAL STATUS

- since 2009 **Founding Director, Material Engineering Center Saarland (MECS),**
Research Center of the Steinbeis Foundation, Saarbruecken, Germany
- since 1995 **Head, Institute for Functional Materials at Saarland University,**
Dept. Materials Science and Engineering, Saarbruecken, Germany
- since 2008 **Founder and Chairman, European School of Materials (EUSMAT),**
Saarland University, Saarbruecken, Germany
- since 2014 **Editor, Practical Metallography - Preparation, Imaging and Analysis of Microstructures,**
Hanser Publisher, Munich, Germany

PROFESSIONAL CAREER

- 1991–1995 **Max-Planck group leader “Materials Characterization and Microstructure Design”,** MPI for
Metals Research (Prof. G. Petzow), Stuttgart
- 1990–1991 **Post Doc at Max Planck Institute for Metals Research (Prof. G. Petzow, Prof. A. Seeger),**
Stuttgart
- 1988–1990 **Head of the Lab “Microscopic Microstructure Characterization”,**
Department Physical Metallurgy, Freiberg Mining Academy, Freiberg
- 1985-1987 **Graduation and Doctorate (Dr.-Ing.): “X-ray Diffraction on point defects in GaAs single**
crystals”, Department Physical Metallurgy, Freiberg Mining Academy, Freiberg
- 1980–1985 **Degree (Dipl.-Ing.): Physical Metallurgy and Materials Science & Engineering,**
Department Physical Metallurgy, Freiberg Mining Academy, Freiberg

FIELDS OF WORK AND MAIN SCIENTIFIC INTERESTS:

- **3D microstructure research in the micro, nano and atomic scale** to understand quantitative correlations between microstructural features and processing as well as properties
- **New theoretical and experimental methods** for image analysis, visualization and classification.
- **Microstructure design by Laser interference structuring and functionalization** using Direct Laser Interference Patterning (DLIP).
- **Advanced microstructure morphologies** for high performing functional metallic materials.

PUBLICATIONS - total number: >400

>340 peer reviewed, >100 non peer reviewed, 11 patents, 12 book chapters, 1 textbook

TEXTBOOK: J. Ohser and F. Mücklich „Statistical Analysis of Micro Structures in Materials Science“
John Wiley & Sons Ltd., Chichester, 2000, 381 pages, 303 Refs., 115 Figs., 52 Tabs., 64 Program codes

AWARDS and HONORS

- **President** (Science) of the **German Materials Society**, (DGM 2019-2020)
- **Full member** of the **German Academy of Science and Engineering** (acatech), 2018
- **Fellow** (FASM) of the **American Society for Materials** (ASM), USA, 2018
- **Henry Clifton Sorby Award 2016** for the lifetime achievement in microstructure research, IMS in the American Society for Materials, ASM International (USA)
- **Berthold Leibinger Innovation Award 2016**, best innovation in applied Laser technology (2nd award), Berthold Leibinger Foundation, Germany, shared with coworkers: A. Lasagni, C. Gachot, A. Rosenkranz, M. Hans, K. Trinh,
- **German Copper Prize 2013**, best industrial copper innovation of the year, German Copper Institute, Düsseldorf, shared with coworkers: D. Britz and C. Selzner
- **Löhn-Prize 2012**, for the most innovative transfer project of a Steinbeis Institute, Steinbeis-Foundation, Germany, shared with coworkers: D. Britz, C. Selzner
- **Fellow Member** of the Honor Society for Materials Science and Engineering (ASMu, USA, 2010)
- **Werner Köster Prize 2010**, for “Quantitative 3D Characterization of Graphite Morphologies in Cast Iron” German Materials Society, DGM, shared with coworker: A. Velichko
- **Honda Initiation Grant 2010**, Honda R&D Europe, innovative scientific idea with high potential for automotive industry, Honda Foundation, Japan, shared with coworker: C. Gachot
- **Morton Antler Memorial Lecture 2009**, honored at the International World Conference on Electrical Contacts ICEC Vancouver, IEEE (USA)
- **Roland Mitsche Prize 2008**, awarded for lifetime achievements in the field of microscopic microstructure research, German Materials Society, DGM (Germany) and Austrian Society for Metallurgy and Materials ASMET (Austria),
- **Werner Köster Prize 2007**, for “Laser Interference Metallurgy – using as a tool for micro/nano Structuring”, German Materials Society, DGM, shared with coworkers: C. Daniel, A. Lasagni
- **Alfried Krupp Prize 1997**, annual prize for Germany’s most promising younger University Professor (first Materials Scientist), Alfried Krupp Foundation,
- **Georg Masing Memorial Prize 1995**, annual prize for the most promising junior materials scientist, German Materials Society, DGM
- **Student Excellence Award of TU Freiberg Mining Academy**, for the best student of the year 1982, 1983, 1984, 1985

SCIENTIFIC SUPERVISION of DISSERTATIONS

- **>40** supervised and successfully completed doctoral dissertations
- Out of them: **5 full professorships**: Germany (Dresden), Austria (Vienna), USA (Tennessee), China (Dalian), Chile (Santiago d.C.) and further leading positions in national and international companies

LEADERSHIP IN SCIENTIFIC ORGANIZATIONS

- Since 2019 **President** (Science) of the **German Society for Materials** (DGM)
- Since 2017 **Board of Directors**, **International Metallographic Society** in the **American Society of Materials** (ASM International)
- 2016-2018 **Selection Board** for **Fellows of the Foundation of German Business sdw** (Responsible Professor for Universities in Southwest Germany – Trier, Saarbruecken, Kaiserslautern), Berlin

- 2015-2016 **“Fachkollegiat” of the German Science Foundation (DFG)**
 2006-2015 **Selection Board of the Alexander v. Humboldt Foundation (Feodor Lynen Program)**
- since 2010 **EU-Coordinator of the European Graduate School DocMASE (Erasmus Mundus Doctorate) “Advanced Materials Science and Engineering”, Saarbrücken-Linköping-Barcelona-Nancy-Lulea**
- since 2005 **EU-Coordinator of the Erasmus Mundus Master Program AMASE (Advanced Materials Science and Engineering) Saarbrücken-Lulea-Barcelona-Nancy**
- 2008-2013 **Supervisory Board of the German Society for Materials, DGM, Germany**
- 2006–2008 **Chairman of the Advisory Board of the German Society for Materials, DGM, Germany**
- 2002-2006 **Member of the Advisory Board of the German Society for Materials, DGM, Germany**
- 2006-2008 **Visiting Professor at Dalian University, Dalian, China (several visits)**
- since 2006 **Appointment “Foreign Advisor for the Korean Society for Metallography”, KSM, Korea**
- 1998-2002 **Chairman of the Expert Committee on Metallography, DGM, Germany**
- since 1995 **Reviewer mainly for German Science Foundation, Humboldt-Foundation, Volkswagen-Foundation, Swiss National Science Foundation, Science Fond Austria, Ministries of Science and Technology for the Federal Government of Germany and for EU**

LEADERSHIP OF INTERNATIONAL CONFERENCES (only conference chair activities shown)

- **Conference Chair: MSE2018-** Germany’s most comprehensive international conference on Materials Science and Engineering, Darmstadt, September 2018
- **Conference Chair: EUROMAT 2013,** Sevilla, Spain (largest conference in Materials Science and Engineering in Europe, 2500 participants, 54 symposia, organized by fems (EU)
- **Conference Chair: MSE2008 –** Germany’s most comprehensive international conference on Materials Science and Engineering) Nuremberg, Germany, 1200 participants, 23 symposia, organized by DGM
- **Conference Chair: INTERNATIONAL 3D MICROSTRUCTURE MEETING 2011** Saarbrücken, organized by Saarland University and Fraunhofer Society, Germany
- **Conference Chair: GERMAN COPPER CONFERENCE 2010** Saarbrücken, organized together with the German Copper Institute, Düsseldorf
- **Conference Chair: EUROMET2000 – 3rd European Congress on Metallography** Saarbrücken, organized by DGM, Germany
- **Conference Chair: GAFOS 1999 – German-American Frontiers of Science** Potsdam, Germany, organized by NAS (USA) and Humboldt Foundation (Germany)

EDITORIAL BOARDS AND REVIEW ACTIVITIES FOR INTERNATIONAL JOURNALS

Editor of “Practical Metallography – Preparation, Imaging and Analysis of Microstructures”
 Carl Hanser Publ., www.practical-metallography.com , (editor in chief since 1998)

Editorial Boards: *Metallography, Microstructure, and Analysis (MMA, Springer and ASM), International Journal of Materials Research (IJMR, Hanser), Materials Science and Technology (MST, Maney),*

Reviewer for scientific journals: *for many appropriate journals, most frequently for: Scientific Reports (Nature), Adv. Mat., Adv.Eng.Mat., Intermet., Acta Mat., IJMR, MMA, Wear, Appl. Surface Science, phys.stat.sol., Materials (MDPI) and others*

NON SCIENTIFIC LEADERSHIP ACTIVITIES

Since 2015 Board member, Commercial Council of the Saarland State Bank (Saarländische Landesbank)

Since 2010 Advisory Board member, Saarland Venture Capital Society (SWG - Saarländische Wagniskapital Gesellschaft)

HONOURARY ACTIVITY

Since 2015: Board and Managing Director of the University Society of Saarland (Universitätsgesellschaft des Saarlandes)