

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,**
De Gruyter Publisher, Berlin, 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:

- **New functional surfaces by Laser Interference Patterning**, based on tailored micro topography and microstructures
- **3D microstructure research in the micro, nano and atomic scale** to tailor quantitative correlations between processing and properties of metallic materials
- **Advanced microstructure morphologies for functional metallic materials**
- **Innovative aspects of materials research on the way to circular economy**

PUBLICATIONS - total number: >610

>470 peer reviewed, 11 patents, 12 book chapters, 1 textbook, h-Index h=53, Google Scholar, April 2022

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

- Saarland Ambassador (appointed by the Saarland Prime Minister, 2019)
- **President (Science) of the German Materials Society, (DGM 2019-2020)**
- **Löhn-Prize 2019**, for a new generation of electric plug contacts with an optimum performance through high-speed laser structuring
- 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
- **Alpha Sigma Mu Distinguished Life Member award, 2010**
- **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
- **Johann-Gottfried-Herder medal, 1982**, for excellent language skills
- **Student Excellence Award of TU Freiberg Mining Academy**, for the best student of the year 1982, 1983, 1984, 1985

SCIENTIFIC SUPERVISION of DISSERTATIONS

- 50 supervised and successfully completed doctoral dissertations

LEADERSHIP IN SCIENTIFIC ORGANIZATIONS

Since 2020 National Academy of Science and Engineering (acatech)
elected deputy spokesman in Materials Science and Engineering

2019-2020 **President (Science) of the German Society for Materials (DGM)**

2016-2019 **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 in cooperation 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

Member of Editorial Board of “Metals”

MDPI, Basel, Switzerland, www.mdpi.com

Member of Editorial Board of “Scientific Reports”

Springer Nature, Heidelberg, www.springernature.com

Editor of “Practical Metallography – Preparation, Imaging and Analysis of Microstructures”

De Gruyter, Berlin, 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 2014: Board and Managing Director of the University Society of Saarland (Universitätsgesellschaft des Saarlandes e. V.)

MEMBERSHIP:

- German Society for Materials - Deutsche Gesellschaft für Materialkunde (DGM) www.dgm.de
- Association of German Engineers - Verein Deutscher Ingenieure (VDI) www.vdi.de
- Amnesty International Association Germany www.amnesty.de
- Saarland Ambassador – SHS Foundation www.saarlandbotschafter.de