

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
(member of the Saarland Parliament),
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 2021 **Spokesperson of the German Academy of Engineering Sciences, acatech, for TN MSE**
since 2014 **Editor, Practical Metallography, 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: >700

>540 peer reviewed, 11 patents, 13 book chapters, 1 textbook,

h-Index *h*=67 - Google Scholar, 06/2025

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

- **Heyn-Denkmünze 2023** (German Materials Society, Deutsche Gesellschaft für Materialkunde e. V. DGM)
- **Albert-Keil-Preis 2023** (Förderverein Kontakte und Schalter e.V., 2023)
- **Saarland Ambassador** (appointed by the Saarland Prime Minister, 2019)
- **President (Science) of the German Materials Society**, (DGM 2019-2020)
- **Löhn-Prize** of the Steinbeis Foundation, Stuttgart 2019, for a new generation of electric plug contacts with an optimum performance through high-speed laser structuring
- Appointed Full member of the **German Academy of Science and Engineering** (acatech), 2018
- Appointed **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** of the Steinbeis Foundation 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 (ASM, USA, 2010)
- **Werner Köster Prize** of the German Society for Materials 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, USA, 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** of the German Society for Materials 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 of the Alfried Krupp Foundation**, annual prize for Germany’s most promising younger University Professor (as first Materials Scientist)
- **Georg Masing Memorial Prize** of the German Society for Materials 1995, annual prize for the most promising junior materials scientist, German Materials Society, DGM
- **Johann-Gottfried-Herder medal, 1982, TU Mining Academy Freiberg**, excellent language skills
- **Student Excellence Awards 1982-1985, TU Mining Academy Freiberg**

SCIENTIFIC SUPERVISION OF DISSERTATIONS

- 60+ supervised and successfully completed doctoral dissertations

LEADERSHIP IN SCIENTIFIC ORGANIZATIONS

since 2021	National Academy of Science and Engineering (acatech) <i>elected spokesperson for the Topic Network Materials Science and Engineering</i>
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
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 IN SCIENTIFIC CONFERENCES (only conference chairs selected)

- **Conference Chair: 1st German-American Metallography Conference** (organized by DGM+IMS), Saarbruecken, 2022
- **Conference Chair: MSE2018-Darmstadt** Germany’s most comprehensive international conference on Materials Science and Engineering (DGM), Darmstadt, September 2018
- **Conference Chair: EUROMAT2013-Sevilla**, organized by fems, 3000+ participants
- **Conference Chair: MSE2008-Nuremberg** – Germany’s most comprehensive international conference on Materials Science and Engineering (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

- **Editor of “Practical Metallography – Preparation, Imaging and Analysis of Microstructures”**
De Gruyter, Berlin, www.practical-metallography.com, (editor in chief since 1998)
- **Member of Editorial Board of “Scientific Reports”**
Springer Nature, Heidelberg, www.springernature.com
- **Member of Editorial Board “Metals”**
MDPI, Basel, Switzerland, www.mdpi.com
- **Member of Editorial Board of “Metallography, Microstructure, and Analysis”**
MMA, Springer and ASM
- **Member of Editorial Board: International Journal of Materials Research**
IJMR, Hanser
- **Member of Editorial Board: 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 Financing Company Ltd.
 (SWG - Saarländische Wagnisfinanzierungsgesellschaft mbH)

HONOURARY ACTIVITY

since 2014: Board and Managing Director of the University Society of Saarland (Universitätsgesellschaft des Saarlandes e. V.)

MEMBERSHIPS

- German Society for Materials - Deutsche Gesellschaft für Materialkunde (DGM) - www.dgm.de
- American Society for Materials (ASM) - www.asminternational.org
- Association of German Engineers - Verein Deutscher Ingenieure (VDI) - www.vdi.de
- Amnesty International Association Germany - www.amnesty.de
- Rotary International - www.rotary.de
- Deutscher Fachjournalisten-Verband - www.dfjv.de
- Saarland Ambassador – SHS Foundation - www.saarlandbotschafter.de