

Mingxing Zhang

Professor in Materials Science and Engineering, the University of Queensland

Address: School of Mechanical and Mining Engineering, UQ, St Lucia QLD 4072, Australia

Telephone: (+61)7-3346-8709

Fax: (+61)7-3365-4799

E-mail: Mingxing.Zhang@uq.edu.au

Nationality: Australian

Web: <http://researchers.uq.edu.au/researcher/404>

EDUCATION

The University of Queensland, Australia	Ph.D	Materials Science and Engineering.	1997
Northwestern Polytechnical University, China	ME	Materials Science and Engineering	1987
Inner Mongolian University of Science and Technology, China	BE	Materials Science and Engineering	1984

PROFESSIONAL ACTIVITIES

- Professor and Disciplinary Leader for Materials and Manufacturing, The University of Queensland (UQ), Australia, (January 2021 to Present.)
- Professor, UQ, Australia, (January 2014 to December 2020.)
- Associate Professor, UQ, Australia, (January 2009 to December 2013.)
- Senior Lecturer, UQ, Australia, (January 2005 to December 2008.)
- Australian Research Council (ARC) Australian Research Fellow, UQ, Australia, (January 2005 to December 2009.)
- Research Fellow, UQ, Australia, (January 2001 to December 2004.)
- Postdoctoral Research Fellow, UQ, Australia, (April 1997 to December 2000.)
- Lecturer, Inner Mongolian University of Science and Technology, China, (September 1987 to January 1993)

AWARD AND HONORS

- International Magnesium Award for Special Contribution on Innovation of the Year by International Magnesium Society, 2023.
- Surface Innovations Prize, Institute of Civil Engineers, 2020.
- University of Queensland Foundation Research Excellent Award, 2006.
- Australian Research Council (ARC) Australian Research Fellowship, 2005.
- Australian FEI Cowley-Moodie Awards for excellence in electron microscopy, 2004.

MAIN SCIENTIFIC PUBLICATION

- M-X. Zhang, P. M. Kelly, M. A. Easton and J. A. Taylor, *Crystallographic Study of Grain Refinement in Aluminium Alloys Using the Edge-to-edge Matching Model*, Acta Mater. 2005, **53**, 1427. <https://doi.org/10.1016/j.actamat.2004.11.037>

- M-X. Zhang and P. M. Kelly, *Crystallographic Features of Phase Transformations in Solids*, Progress in Materials Science, 2009, **54**, 1101.
<https://doi.org/10.1016/j.pmatsci.2009.06.001>
- Y. Ali, D. Qiu, B. Jiang, F.-S. Pan, M.-X. Zhang, *Current research progress in grain refinement of cast magnesium alloys: a review article*, Journal of Alloys and Compounds, 2015, **619**, 639-651. <https://doi.org/10.1016/j.jallcom.2014.09.061>
- Qiyang Tan, Jingqi Zhang, Ning Mo, Zhiqi Fan, Yu Yin, Michael Bermingham, Yinggang Liu, Han Huang, Ming-Xing Zhang, *A novel method to 3D-print fine-grained AlSi10Mg alloy with isotropic properties via inoculation with LaB6 nanoparticles*, Additive Manufacturing, 2020, **32**, 101034.
<https://doi.org/10.1016/j.addma.2019.101034>
- Qiyang Tan, Jingqi Zhang, Qiang Sun, Zhiqi Fan, Gan Li, Yu Yin, Yinggang Liu, and Ming-Xing Zhang, *Inoculation treatment of an additively manufactured 2024 aluminium alloy with titanium nanoparticles*, Acta Materilia, 2020, **196**, 1-16.
<https://doi.org/10.1016/j.actamat.2020.06.026>
- Yu Yin, Qiyang Tan, Michael Bermingham, Ning Mo, Jingqi Zhang, Ming-Xing Zhang, *Laser Additive Manufacturing of Steels*, International Materials Reviews, 2021, <https://doi.org/10.1080/09506608.2021.1983351>
- Yinggang Liu, Jingqi Zhang, Qiyang Tan, Yu Yin, Shiyang Liu, Meng Li, Miaoquan Li, Qiong Liu, Ying Zhou, Tao Wu, Feng Wang, Ming-Xing Zhang, *Additive manufacturing of high strength copper alloy with heterogeneous grain structure through laser powder bed fusion*, Acta Mater., 2021, **220**, 117311.
<https://doi.org/10.1016/j.actamat.2021.117311>
- Yu Yin, Jingqi Zhang, Qiyang Tan, Wyman Zhuang, Ning Mo, Michael Bermingham, Ming-Xing Zhang, *Novel cost-effective Fe-based high entropy alloys with balanced strength and ductility*, Materials & Design, 2019, **162**, 24-33.
<https://doi.org/10.1016/j.matdes.2018.11.033>
- Jingqi Zhang, Yinggang Liu, Gang Sha, Shenbao Jin, Ziyong Hou, Mohamad Bayat, Nan Yang, Qiyang Tan, Yu Yin, Shiyang Liu, Jesper Henri Hattel, Matthew Dargusch, Xiaoxu Huang, Ming-Xing Zhang, *Designing against phase and property heterogeneities in additively manufactured titanium alloys*, Nature communications, 2022, **13**, 1-10. <https://doi.org/10.1038/s41467-022-32446-2>

RESEARCH INTERESTS

- Physical metallurgy of metallic materials, including steels, cast irons and light alloys.
- Metal additive manufacturing.
- Alloy design and grain refinement of light metals and steels.
- MAX Phase materials and high entropy alloys.
- Metallic biological materials.
- Surface engineering (cold spray, diffusion coating & surface nanocrystallization).
- Crystallography of phase transformations in solids.
- Applications of electron microscopy in materials research.