

Assistant Professor Rui Liang

Department of Engineering Science, Faculty of Innovation Engineering
Macau University of Science and Technology

MS. Supervisor

Tel. (+853)88973116

E-mail rliang@must.edu.mo

PhD in Civil Engineering, The Hong Kong University of Science and Technology, 2018

MPhi in Chemical and Biomolecular Engineering, The Hong Kong University of Science and Technology,
2014

MSc in Mechanical Engineering, The Hong Kong University of Science and Technology, 2012

B.E. in Inorganic Nonmetal Materials Engineering, Shandong University, China, 2010

Mystery of Materials

- ♦ Organic/inorganic composite
- ♦ Functional hydrogels enhanced by nanoparticles
- ♦ Polymer-modified cementitious materials
- ♦ High-strength lightweight construction materials

2022-now **Assistant Professor**, Department of Engineering Science, Faculty of Innovation Engineering, Macau
University of Science and Technology

2021-2022 **Chief Technical Officer**, Advanced Materials R&D Center, Zhuhai UM Science & Technology
Research Institute

2019-2021 **Postdoctoral Fellow**, Institute of Applied Physics and Materials Engineering, University of

2017-2018 Research Assistant, Institute of Applied Physics and Materials Engineering, University of Macau

- ♦ **China Postdoctoral Science Foundation 2022M713666** -tiny
nanoparticles to strengthen conductive nanocomposite hydrogels with high stretchability and low
) **Principal Investigator**, 2022.
- ♦ **2220004000047**
) **Principal Investigator**, 2022.
- ♦ **2022 FDCT-GDST Jointly Funding 2022A0505030026**
) **Principal Investigator**, 2022.

[1] **Liang, R.**, Liu, Q., Hou, D.*, Li, Z., & Sun, G.* (2022). Flexural strength enhancement of cement paste through monomer incorporation and in situ bond formation. *Cement and Concrete Research*, 152, 106675.

[2] **Liang, R.**, Li, Z., Weng, L., Zhang, L., & Sun, G*. (2018). Recoverable hydrogel with high stretchability. *Journal of Materials Chemistry B*, 6, 10532-10539.

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[9] Liu, Q., Lu, Z., Hu, X., Chen, B., Li, Z., **Liang, R.***, & Sun, G.* (2021). A mechanical strong polymer-cement composite fabricated by in situ polymerization within the cement matrix. *Journal of Building Engineering*, 103048.

[10] Guo, H., Xu, J., Tang, Z., Liu, Q., Wang, M., **Liang, R.***, & Sun, G.* (2022). Effect of super water absorbing polymer based anti-washout admixtures on the properties of seawater-mixed cement paste. *Materials and Structures*, 55(2), 1-14.

[11] Wang, M., Liu, Q., Liang, X., Xu, J., Li, Z., **Liang, R.***, & Sun, G. (2022). Influence of Metakaolin on Properties of Magnesium Potassium Phosphate Cement with High Water-to-Solid Ratio. *Journal of Materials in Civil Engineering*, 34(9), 04022227.

Professional Certification and Awards

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Journal Editorship

Invited peer reviewer for

- Construction and Building Materials (Elsevier)
- RSC Advances (Royal Soc Chemistry)