

Professor Liu Zhuang

Macao Institute of materials science and engineering

E-mail: zhuangliu@must.edu.mo

Academic Qualification:

- Post-doctoral Scholar, Stanford University, 2009
- Ph.D. in Chemistry, Stanford University, 2008
- B.S. in Chemistry, Peking University, 2004

Teaching Area

Materials science

Research Area

- Inorganic nanomaterials for biomedical imaging and cancer theranostics.
- Polymer-based, protein-based, and other biomimetic nano-platforms for cancer combination therapy.
- Nanomedicine and cancer radiation therapy.
- Biomaterials for immunoengineering.
- Nanotechnology to modulate tumor microenvironment for enhanced cancer treatment.
- Translational nanomedicine and biomaterials.

- Jun Xu, Jia Lv, Qi Zhuang, Zongjin Yang, Zhiqin Cao, Ligeng Xu, Pei Pei, Chenya Wang, Hanfei Wu, Ziliang Dong, Yu Chao, Chao Wang, Kai Yang, Rui Peng*, Yiyun Cheng* and **Zhuang Liu*** ers
for post- *Nat. Nanotechnol.*, 15, 1043-1052 (2020).
- Xuan Yi, Hailin Zhou, Yu Chao, Saisai Xiong, Jing Zhong, Zhifang Chai, Kai Yang*, and **Zhuang Liu*** -triggered tumor-specific thrombosis to enable potent photothermal
Sci. Adv., 6(33): eaba3546 (2020).
- Fei Gong, Liang Cheng*, Nailin Yang, Yuehan Gong, Yanwen Ni, Shang Bai, Xianwen Wang, Muchao Chen, Qian Chen, **Zhuang Liu***. "Preparation of TiH_{1.924} nanodots by liquid-phase exfoliation for enhanced sonodynamic cancer therapy" *Nat. Commun.*, 11, 3712 (2020).
- Lele Sun, Fengyun Shen, Jun Xu, Xiao Han, Chunhai Fan, **Zhuang Liu***. -Edited Ligand Positioning on Red Blood Cells to Enable Optimized T Cell Activation for Adoptive
Angew. Chem. Int. Ed., 59, 2-14 (2020).
- Yu Chao, Chao Liang, Huiquan Tao, Yaran Du, Di Wu, Ziliang Dong, Qitong Jin, Guobin Chen, Jun Xu, Zhisheng Xiao, Qian Chen, Chao Wang, Jian Chen and **Zhuang Liu*** cock-
tail chemo-immunotherapy after in situ gelation to trigger robust systemic antitumor immune
Sci. Adv., 6(10), eaaz4204 (2020).
- Ziliang Dong, Liangzhu Feng*, Yu Hao, Quguang Li, Muchao Chen, Zhijuan Yang, He Zhao, **ZhuangLiu***. CaCO₃ based Nanomedicine for Enhanced Sonodynamic
Chem, 6,1391-1407 (2020).
- Jingjing Liu, Min Wu, Yutong Pan, Yukun Duan, Ziliang Dong, Yu Chao, **Zhuang Liu***, Bin Liu*. Coordination Polymers for Targeted Tumor Combination Therapy
Adv. Funct. Mater., 30, 1908865 (2020).
- Lin Zhang, Jinhua Zhou, Lvzhong Hu, Xiao Han, Xinwei Zou, Qian Chen, Youguo Chen*, **Zhuang Liu***, Chao Wang*. Formed Fibrin Scaffold with Cyclophosphamide to
Synergize with Immune Checkpoint Blockade for Inhibition of Cancer Recurrence after
Adv. Funct. Mater., 30(7), 1906922 (2020).
- Xiao Han, Shufang Shen, Qin Fan, Guojun Chen, Edikan Archibong, Gianpietro Dotti, **Zhuang Liu*** Derived Nanoerythroosome for Antigen
Sci. Adv., 5 (10), eaaw6870 (2019).
- Qian Chen*, Muchao Chen, and **Zhuang Liu***. -Assisted Cancer
Chem. Soc. Rev., 48 (22), 5506 26
(2019).
- Longlong Tian, Yaxing Wang, Lele Sun, Kai Yang, Shuao Wang, **Zhuang Liu**
Luminescence-Induced NO Release from ³²P-Labeled ZnFe(CN)₅NO Nanosheets to Enhance
Radioisotope- *Matter*,1(4),1061-76 (2019).
- Yu Chao, Qian Chen*, **Zhuang Liu**
Adv. Funct. Mater.,1902785 (2019).

- Liang Cheng*, Xianwen Wang, Fei Gong, Teng Liu, **Zhuang Liu**
Adv. Mater., 2019, 1902333 (2019).
- Fei Gong, Liang Cheng*, Nailin Yang, Oshra Betzer, Liangzhu Feng, Qiang Zhou, Yonggang Li, Ruihua Chen, Rachela Popovtzer and **Zhuang Liu** –Deficient Bimetallic Oxide MnWOX Nanoparticles for Depletion of Endogenous GSH and Enhanced Sonodynamic
Adv. Mater., (31)23, 1900730 (2019).
- Yu Chao, Ligeng Xu, Chao Liang, Liangzhu Feng, Jun Xu, Ziliang Dong, Longlong Tian, Xuan Yi, Kai Yang* and **Zhuang Liu***. "Combined Local Immunostimulatory Radioisotope Therapy and Systemic Immune Checkpoint Blockade Imparts Potent Antitumour Responses" *Nat. Biomed. Eng.*, 2, 611-621(2018).
- Guangbao Yang, Ligeng Xu, Yu Chao, Jun Xu, Xiaoqi Sun, Yifan Wu, Rui Peng, and **Zhuang Liu** as A Tumor-microenvironment-responsive Biodegradable Nano-platform for
Nat. Commun., 8, 902 (2017).
- Qian Chen, Chao Liang, Xiaoqi Sun, Jiawen Chen, Zhijuan Yang, He Zhao, Liangzhu Feng, and **Zhuang Liu** $^2\text{O}_2$ -responsive Liposomal Nanoprobe for Photoacoustic Inflammation
Proc. Natl. Acad. Sci. U.S.A., 114(21), 5343-5348 (2017).
- Qian Chen, Ligeng Xu, ChaoLiang, Chao Wang, Rui Peng, and **Zhuang Liu**
Therapy with Immune-adjuvant Nanoparticles Together with Checkpoint Blockade for Effective
Nat. Commun., 7, 13193 (2016).

- Associate Editor, Biomaterials (2014-)
- Editorial Board Member, Advanced NanoBiomed Research (2020-)
- Editorial Board Member, Drug Delivery and Translational Research (2019-)
- Editorial Board Member, Acta Chimica Sinica (2018-)
- Editorial Board Member, Particle & Particle Systems Characterization (2018-)
- Editorial Board Member, Advanced Healthcare Materials (2018-)
- Editorial Board Member, Science China Chemistry (2017-)
- Editorial Board Member, Frontiers in Chemistry (2017-)
- Editorial Board Member, Advanced Therapeutics (2017-)
- Editorial Board Member, Journal of Interdisciplinary Nanomedicine (2017-)
- Editorial Board Member, ChemMedChem (2016-)
- Editorial Board Member, Nano Research (2014-)
- Editorial Board Member, Scientific Reports (2013-2017)
- Editorial Board Member, American Journal of Nuclear Medicine and Molecular Imaging (2012-)
- Guest Editor, Nano Research (2018)
- Guest Editor, Nanoscale (2016)
- Guest Editor, Carbon (2015)
- Guest Editor, Advanced Healthcare Materials (2014)
- Guest Editor, Theranostics (2012)