



Department: School of Chemistry & Molecular Engineering

Professional field: Colloid and interface chemistry

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Profile

Han Xia, associate professor, master supervisor. She received her PhD degree from the East China University of Science and Technology. After finishing her doctorate, she joined the School of Chemistry and Molecular Engineering in Prof. Liu Honglai's group. She published more than 50 SCI papers, applied 4 invention patents and directed five projects from NSFC.

Research Field

Polymer brushes and their applications in nonfouling coating;

Polymer Colloids and their applications in emulsions and drug delivery;

Zwitterionic hydrogels and their applications in drug delivery or cosmetic.

Research results and selected published papers

1. Xiaolu Chen, Yadan Zhai, Xia Han*, Honglai Liu, Ying Hu. Surface chemistry-dominated underwater superoleophobic mesh with mussel-inspired zwitterionic coatings for oil/water separation and self-cleaning. *Applied surface science*, 2019, 483, 399-408.
2. Xia Han,† Xiaolu Chen,† Mengfei Yan, Honglai Liu*. Synergetic effect of polydopamine particles and in-situ fabricated gold nanoparticles on the charge-dependent catalytic behaviours. *Particuology*, 2019, 44, 63-70.
3. Hui Sun, Jing Chen, Xia Han*, Honglai Liu. Multi-responsive hydrogels with UCST- and LCST-induced shrinking and controlled release behaviors of rhodamine B. *Materials Science & Engineering C*, 2018, 82C, 284-290.
4. Xia Han, Hsiang-Chieh Hung, Priyesh Jain, Fang Sun, Xuwei Xu, Wei Yang, Tao Bai, Shaoyi Jiang*. Sterilization, hydration-dehydration and tube fabrication of zwitterionic hydrogels. *Biointerphases*, 2017, 12, 02C411(1-6).
5. Hui Sun, Xiaolu Chen, Xia Han*, Honglai Liu. Dual-thermoreponsive aggregation of schizophrenic PDMAEMA-b-PSBMA copolymer with an unrepeatability pH response and a recycled CO₂/N₂ response. *Langmuir*, 2017, 33 (10), pp 2646–2654.
6. Xiaolu Chen, Hui Sun, Jun Hu, Xia Han , Honglai Liu, Ying Hu. Transferrin gated mesoporous silica nanoparticles for redox-responsive and targeted drug delivery. *Colloids and Surfaces B: Biointerphases* 152 (2017) 77–84.