

JUKAI ZHOU

zhoujk@umich.edu • (734)-276-0465 • 2117 Stone Road, Ann Arbor, MI 48105

EDUCATION

University of Michigan	Sep.2018 – present
M.S. Macromolecular Science and Engineering	GPA: 4.0/4.0
Sichuan University, China	
M.S. Candidate of Engineering in Biomedical Engineering	Sep.2017- Jul.2018
B.S. Macromolecular Materials and Engineering	Jun.2017
Overall GPA: 86.8/100 Major GPA: 87.5/100	
Awards:	
• Outstanding Undergraduate Student of Sichuan University	Jun.2017
• Outstanding Group Member of Undergraduate Innovation and Entrepreneurship Project	Apr.2017
• Comprehensive 3rd Class Scholarship of Sichuan University	Oct.2016
• National Computer Rank Examination Certificate of Level 2	Mar.2016
• Individual 1st Class Scholarship of Sichuan University	Oct.2015

PUBLICATION

- Song, X., An, J., He, C., **Zhou, J.**, et al. A bioinspired strategy towards super-adsorbent hydrogel spheres via self-sacrificing micro-reactors for robust wastewater remediation [J]. *J. Mater. Chem. A* *Accepted*
- Provided a new idea for fabricating super-adsorbent hydrogel spheres with ultra-short formation time
 - Developed a facile technique to overcome SEM issue of hydrogel particles
- Zhou, J.**, Zhang, S., Song, X., et al. Three-dimensional graphene oxide skeleton guided polyacrylic acid composite hydrogel particles with hierarchical pore structure for hemoperfusion [J]. *ACS Biomater. Sci. Eng.* 2019, 5, 8, 3987-4001
- Designed a novel method to fabricate the hydrogel particles with special pore structure
 - Examined and demonstrated various properties and performance of the particles
- Wei, R., Yang, F., Gu, R., Liu, Q., **Zhou, J.**, et al. Design of robust thermal and anion dual-responsive membranes with switchable response temperature [J]. *ACS Appl. Mater. Inter.* 2018, 10, 42, 36443-36455.
- Produced intelligent responsive membranes with thermal and anion dual-responsivity
 - Carried on SEM observing, FTIR and responsive property tests
- Wei, R., Song, W., Yang, F., **Zhou, J.**, et al. Bidirectionally pH-responsive zwitterionic polymer hydrogels with switchable selective adsorption capacities for anionic and cationic dyes [J]. *Ind. Eng. Chem. Res.* 2018, 57 (24), 8209-8219
- Developed pH-responsive hydrogels with selective adsorption capacities toward ionizable dyes
 - Measured pH-responsive behaviors, swelling ratios, desorption and resorption properties
- Zhang, X., Xu, S., **Zhou, J.**, et al. Anion-responsive poly(ionic liquid)s gating membranes with tunable hydrodynamic permeability [J]. *ACS Appl. Mater. Inter.* 2017, 9(37), 32237
- Investigated a novel strategy for anion-responsive membranes with functional gates
 - Determinated the morphology and the ion-responsive properties
- Zhang, X., **Zhou, J.**, Wei, R., et al. Design of anion species/strength responsive membranes via in-situ cross-linked copolymerization of ionic liquids [J]. *J. Membrane Sci.* 2017, 535:158-167.
- Prepared anion-responsive membranes via in-situ cross-linking polymerization
 - Evaluated the surface morphology, composition, functional performances and hydrophilic properties
- Zhou, J.**, Chen, S., Xu, S., et al. Graphene oxide-based polyethersulfone core-shell particles for dye uptake [J]. *RSC Advances* 2016, 6(104).
- Initiated a facile approach to fabricate a novel graphene oxide/polyethersulfone composite adsorbent
 - Performed adsorption column with the adsorbent and applied the adsorbent in industrial scale

PROJECT EXPERIENCE

- Direct, nozzle-free printing of functional nanomaterials using ultrasound bubble cavitation Jan.2019-Jul.2019
- Cooperative Research, Department of Electrical & Computer Engineering, University of Michigan, Guo Research Group
- Discovered the influence of coating parameters on efficiency of photoacoustic conversion
 - Improved image quality of bubble generation process visualized by laser-flash shadowgraphy

SKILLS

- Instruments:** TGA, XPS, ATR-FTIR, SEM, EDS, UV-vis Spectrometer, Electrospinning Machine, etc.
- Software:** 3D Studio Max, OriginLab, Chemdraw, Photoshop, Math Type, Microsoft Office, etc.