Yipeng Zhang

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EDUCATION

School of Engineering and Applied Sciences, University at Buffalo (SUNY)
B.S. in Chemical Engineering (Cum Laude)

Fu Foundation School of Engineering and Applied Science, Columbia University
M.S. in Chemical Engineering

RESEARCH EXPERIENCE

Institute of Chemistry Chinese Academy of Sciences, *Advisor: Dr. Kun Zheng*
May 2021 – October 2021

- Participated in the project aims to improve the Interfacial thermal conductance between filler and polymer matrix using surface treatments.
- Participated in the study of boron nitride nanosheet polymer composite with high out-of-plane thermal conductivity.
- Co-authored an article published in the *Journal of Physics: Conference Series*.

Chemical Engineering, Columbia University, *Advisor: Prof. Sanat K. Kumar*
September 2022 – Present

- Synthesized polymer grafted silica particles via atom transfer radical polymerization (ATRP) for gas permeation membranes and polymer-particle composite characteristic studies (DSC, XPCS, TEM).
- Synthesized quaternized poly (styrene-co-vinyl benzyl chloride) for anion exchange membrane.
- Reviewed literature and studied the kinetics of ATRP polymerization.
- Get trained on diverse techniques to characterize polymer and nanoparticle materials, including TGA, GPC, DLS, and SAXS. Analyzed data obtained from these instruments via Python and MATLAB.

PUBLICATION

Wei Yang, Yun Chen, **Yipeng Zhang**, YongSheng Fu, Kun Zheng, Kun Wang, YongMei Ma, "*Thermal conductance of epoxy/alumina interfaces*", presented on 2021 International Conference on Advanced Materials and Mechatronics, Kunming·China, publish on *Journal of Physics: Conference Series* (ISSN: 1742-6588)

STUDENT GROUP EXPERIENCE

Columbia Chinese Orchestra (CCO), Columbia University
May 2023 – Present
Suona (a traditional Chinese instrument) performer.

SKILLS

Laboratory: Thermogravimetric analyzer (TGA), gel permeation chromatography (GPC), dynamic light scattering (DLS), small angle x-ray scattering (SAXS), UV-Vis, and glovebox.
Programming and software: MATLAB, Python, Polymath, UniSim Design, Microsoft Office.