

Postdoctoral Researcher/ Research Scientist Position in Chemical Engineering, Sustainable Materials, Catalytic Process, or Asphalt Materials

Position Summary:

The Sustainable Materials and Advanced Resources Transformation (SMART) group, led by Dr. Jinghao Li in the Department of Chemical and Paper Engineering at Western Michigan University, is seeking a highly motivated postdoctoral researcher/Research Scientist with expertise in chemical engineering, chemistry, or asphalt materials science.

The successful candidate will work on projects focused on the development of sustainable feedstocks, with an emphasis on **catalytic conversion**, **biomass-derived asphalt additives**, and **environmentally friendly binders** for construction and transportation applications.

Key Responsibilities:

- Conduct independent and collaborative research on the development of functionalized biomass-based materials, asphalt rejuvenators, or bio-based thermoset/thermoplastic systems.
- Design and perform experiments related to chemical modification, materials processing, and property testing (e.g., rheology, thermal, and mechanical behavior).
- Prepare manuscripts for peer-reviewed journals and present research findings at national/international conferences.
- Collaborate with industrial and academic partners on technology development and commercialization efforts.
- Support graduate and undergraduate student mentorship and project management in the lab.

Qualifications:

- Ph.D. in Civil Engineering (Asphalt materials), Chemical Engineering, Chemistry, Materials Science, or related disciplines.
- Strong background in **biomass conversion**, **asphalt modification**, **polymer synthesis**, or **surface/interface chemistry**.
- Experience with chemical characterization techniques is required.
- Excellent communication and teamwork skills.
- Demonstrated track record of peer-reviewed publications.

Position Details:

- Start date: Nov. 1st 2025
- Location: Western Michigan University, Kalamazoo, MI, USA
- Duration: Renewable based on performance and funding availability
- Salary: Commensurate with experience and university standards

Opportunities:

- Collaborate with renowned academic research laboratories on asphalt materials projects.
- Conduct joint research with one of the largest companies in the construction and materials industry.
- Potential opportunities for recommendation to work with partner companies, depending on project progress and individual performance.

Application Process:

Interested candidates should email the following materials to jinghao.li@wmich.edu:

- Curriculum Vitae (CV)
- Cover letter
- Names and contact information of at least three references

Review of applications will begin immediately and continue until the position is filled.