JOB TITLE:
Postdoctoral Researcher

DESCRIPTION SUMMARY:

The Pritzker School for Molecular Engineering (PME), established in 2011 by the University of Chicago in partnership with Argonne National Laboratory, is a transformational academic unit exploring the intersection of science and engineering. In 2019, in recognition of our success, impact, and expansion, and the support of the Pritzker Foundation, the institute was elevated to the Pritzker School of Molecular Engineering—the first school in the nation dedicated to this emerging field. PME will lead engineering research and education in new directions, solve technological problems of major significance, and continually inspire creative applications of molecular-level science.

The Esser-Kahn Lab is looking for one postdoctoral position in materials science and materials chemistry broadly defined. The focus will be on projects related to piezo-controlled polymerization of polymeric materials and development of novel micro and nano-structures. Applicants with a broad background in materials chemistry and science (soft or hard) are encouraged to apply as this project will bridge traditional disciplinary boundaries.

With support from the NSF, ARO and AFOSR, the candidates will have the opportunity to investigate problems in diverse fields to address the challenge of creating materials that sense their environment and adapt their crosslinking and microstructure in a continuous fashion. Of particular interest are skills in piezoelectric sensors, radical polymerization, capacitize sensors, and a working knowledge of conductivity and electro-chemistry. These skills are beneficial, but not required.

DUTIES:

1) Performs experiments and collects and analyzes data. Participates in cutting edge research project.

2) Participates in the preparation and writing of grant applications and reports, and co-authors/authors scientific research manuscripts. Provides peer review of grant applications and scientific manuscripts.

3) Leads and collaborates on development of new research projects with academic and community-based organizations.

4) Other responsibilities include presentation of research results at weekly lab meetings and at national or international scientific meetings; including preparation and submission of papers that result in peer-reviewed journals.

5) Support the training research staff, graduate or undergraduate students within the lab.
**REQUIREMENTS:**
Minimum qualifications for this position are a PhD or expected PhD in chemistry, polymer science, electrical engineering, mechanical engineering, bio-medical engineering, or a related field. The individual must be able to work in a group setting and be able to write up the results in a format suitable for publications.

A working knowledge of scripting languages, electrochemistry, and/or polymerization will be viewed favorably, but are not required. The interdisciplinary nature of the project means that few applicants are expected to completely meet these requirements and those interested, but perhaps lacking one area, are still encouraged to apply. Women and members of underrepresented groups are encouraged to apply.

Interested applicants should contact Professor Aaron Esser-Kahn via email at aesserkahn@uchicago.edu. Please include: 1) cover letter, describing interest and qualifications for pursuing interdisciplinary research; 2) curriculum vitae (including publications list); 3) contact information for two scholars who are willing to write letters of reference; 4) one or more examples of software written (optional).