

Opening: Postdoctoral associate or research engineer

with experience in plasmas, sputtering, aerosol deposition, or gas-phase chemistry

The Holman Research Group at Arizona State University has an opening for an outstanding postdoctoral associate or research engineer in coatings deposition research. ASU has been awarded a Gordon and Betty Moore Foundation Inventor Fellowship to develop a versatile plasma deposition source that can deposit coatings of nearly any material with tunable stoichiometry and little or no plasma damage. ASU has further been charged by the Department of Energy's Solar Energy Technology Office to use this source to advance the state of the art in passivation and transparent conductive oxide layers for silicon heterojunction solar cells.

Candidates are sought with backgrounds in physics, chemistry, or materials science and either doctoral degrees (for postdoctoral associate positions) or bachelor or masters degrees and previous research experience (for research engineer positions). The successful candidate will work closely with semiconductor materials and solar cell experts to pioneer (primarily sputtering-based) plasma hardware design and testing, process development and materials characterization, and coating implementation in solar cells. Consequently, previous experience with vacuum equipment, CAD, sputtering, film deposition using plasmas, plasma characterization, plasma or multi-phase fluids simulation, oxide or ceramic coatings, or aerosols is highly desirable.

Outside of the lab, the researcher is expected to "own" the project and take on the primary leadership role. In particular, he or she will be responsible for communicating with all project members, leading meetings, writing quarterly reports (in addition to scientific manuscripts), and ensuring that the project meets its milestones. Technology commercialization is a focus of the Moore and DOE projects, and the researcher will also have the opportunity to, e.g., participate in the I-Corps customer discovery process and potentially in the growth of a start-up company, Swift Coat. All candidates must have the ability to conduct self-directed research, mentor graduate students, and work collaboratively with academic team members in related fields. Candidates should be creative and productive, as evidenced by unique scholarly or other technical contributions to research projects. Excellent writing and presentation skills are a must.

The postdoctoral associate or research engineer is expected to start in early 2019, though exceptions may be made for exceptional candidates. He or she will be offered a highly competitive salary and the opportunity to travel regularly to conferences and project meetings. The appointment is for two years and may be extended pending satisfactory performance and the continued availability of funds.

Interested applicants should send a cover letter with a summary of previous research experience, along with a curriculum vitae that includes three references, to Prof. Zachary Holman at zachary.holman@asu.edu.