Master's Thesis on Chemical Recovery of Critical Metals for High-Efficiency Solar Cells

We are offering a thesis project focused on designing a chemical process to selectively target, dissolve, and convert critical metals (Ag, In, Ga, Cs) from thin-layer devices such as solar cells, III–V solar cells, display screens, or LEDs. The goal is to reclaim the industry-critical metals and reuse them to fabricate high-performance photovoltaic devices—silver and indium for contacts, and cesium for new perovskite layers.

Who We're Looking For

- Background in chemistry, materials science, or related fields.
- Interest in developing and scaling selective chemical extraction processes.
- Motivation to apply recovered metals in advanced solar cell architectures.

Project Tasks

- Develop and optimize chemical processes to extract and purify Ag, In, Ga, and Cs.
- Evaluate reaction efficiency, energy consumption, and purity of recovered metals.
- Demonstrate re-integrated metals in functional solar cells and assess device performance.
- Compare reclaimed-metal–based devices to those made from commercial sources.

Starting date

Immediate start is possible.

Contact Details

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