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**Photovoltaic devices using inexpensive, abundant inorganic materials: experiences with copper zinc tin sulfide (CZTS)**

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For photovoltaics to be able to contribute a significant percentage of global electricity, we ideally desire a cheap, efficient, safe, and abundant solar cell that can be treated more as a construction material than as a delicate semiconductor. We are not quite there yet, though thin film polycrystalline solar cells on cheap substrates represent a potential way to accomplish this objective. I will describe some of the requirements for a solar cell with this application objective, describe some of the challenges when we desire to transform a “polycrystalline,” “mineral-like” absorber into an efficient p-n junction solar cell, and in this context will describe our results with the kesterite compound copper zinc tin sulfide (CZTS).