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High-temperature Thermoelectric Properties of $\mathbf{Ag_2Se_{0.5}Te_{0.5}}$ FIVOS DRYMIOTIS, TRISTAN DAY, DAVID BROWN, NICHOLAS HEINZ, G. JEFFREY SNYDER, California Institute of Technology — We will be presenting the high-temperature thermoelectric properties of $Ag_2Se_{0.5}Te_{0.5}$. This particular alloy displays very low thermal conductivity and competitive thermoelectric performance. Specifically, in the temperature region from 520 K to 620 K we observe non-hysteretic behavior between the heating and cooling curves and zT values ranging from 1.2 to 0.8. Higher zT values are observed at lower temperatures on cooling. Our results suggest that this alloy is a competitive thermoelectric material for intermediate temperature power generation applications. The authors would like to thank the U.S. Air Force Office of Scientific Research for supporting this work.

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