

Abstract Submitted
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Thermoelectric **Prop-**
erties of Lead Telluride/Polymer Nanocomposites¹ GARRETT MAY, YI
WANG, JIYE FANG, KEVIN STOKES, Advanced Materials Research Institute,
University of New Orleans, New Orleans, LA — The thermoelectric properties of
lead telluride/conducting polymer nanocomposites are investigated and evaluated
as possible thermoelectric materials. The lead telluride nanoparticles are synthe-
sized using high-temperature organometallic chemical techniques and have diameter
less than 20 nm. The lead telluride nanoparticles are combined with a conducting
polymer in varying volume fractions with >95 wt. % semiconducting material. The
resulting composite is cold-pressed into a solid. Electrical conductivity and See-
beck coefficient are measured from room temperature to 100°C. The thermoelectric
properties are reported as a function of lead telluride/polymer ratio.

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