

•••

•••



*Lecture Notes in Nanoscale Science and Technology*

*Science*

*Meteoritics & Planetary*

*Science*

*Meteoritics & Planetary*









*Physical Review*

*Journal of Applied Physics*

*MRS Proceedings,*

*Journal of Materials Science*

*Physical Review*

*Meteoritics and Planetary Sciences*

*p*

*Nano Energy*





*Meteoritics & Planetary Science*

*Philosophical Magazine*



!

*Physical Review Letters*

*Physica B*

*Condensed Matter from Space: Thermal  
and Physical Properties of CM2 Meteorites*

*Understanding  
Thermoelectric Materials: Experimental Determination of Phonon Thermal Conductivity  
and Lorenz Ratio of Single Crystal Bismuth Telluride*

*Sustainability and the Human Person*

*Iron Rich Stoichiometry for FeSb<sub>x</sub>  
Produces Higher Thermoelectric Figure of Merit*

*FeSb<sub>2</sub> Nanocomposite Yields Higher  
Thermoelectric Figure of Merit*

*Jesuits in Newton's Orbit -  
Influences on the Principia Mathematica*

*Jesuits  
and the Sciences at Georgetown University II, How do Jesuit Scientists find God in all  
things?*

*Physics Research and Impact of Post-Doc Experience  
on a Jesuit-Priest-Physicist*

*Ferromagnetic order found at 298 K in  
(Sn<sub>0.995</sub>Cr<sub>0.005</sub>)Te and is SnTe metallic?*

*Ferromagnetic order at 298 K in Cr<sub>0.005</sub>Sn<sub>0.995</sub>Te*

*When a Good Martensite Metal Goes Bad*

*Heavy Fermion and  
Antiferromagnetic Crossover Behaviors*

*Magneto-Striction and Charge Density Wave  
Behavior at the Pre-Martensite Transition in Ni<sub>2</sub>MnGa*

*Calorimetry of Ferromagnetic Heuslers in High Magnetic Fields: Observation of  
a Pseudo-gap in Ni<sub>2</sub>MnGa,*

*ARPES on U and the Pseudogap in Ni<sub>2</sub>MnGa*

*LEED, ARPES and WIEN2K Band  
Structure Calculation of*

*Uranium and Other New Results*

*Specific Heat, Antiferromagnetism and Quantum Critical Behavior in  
 $U(\text{Pt}_{1-x}\text{Pd}_x)_3$*

*Experimental Determination of Phonon Thermal Conductivity and  
Lorenz Ratio of Single Crystal Bismuth Telluride at Intermediate Temperatures.*

*Measurements of CM Carbonaceous Chondrites*

*Thermoelectric Properties of CuAgSe doped with Co, Cr*

SS11.22-

*Thermoelectric Properties of Co Doped CuAgSe*

204.03 – *Characterizing Asteroid Thermal Properties through the Laboratory Study of Meteorites*

*Separating Lattice and Electronic Thermal Conductivity in Bi<sub>2</sub>Se<sub>3</sub> and Bi<sub>2</sub>Te<sub>3</sub>*

*Nanostructured YbAgCu<sub>4</sub> for potential cryogenic thermoelectric cooling*

"y y

*Asteroid Population Characterization: Low-Temperature Thermal Conductivity and Heat Capacity Measurements of Ordinary and Carbonaceous Chondrites,*

CC7.02 *Separating Lattice and Electronic Contributions of Thermal Conductivity in Metals: Cu, Zn & Al*

*Thermoelectricity of Ce*



*Keynote Address: Energy Matters,*

*Magnetic and structural behaviors in  $(\text{Sr}_{1-x}\text{La}_x)_2\text{IrO}_4$*

*Destruction of  $J_e = 1/2$  Mott Phase by A-site doping in  $(\text{Sr}_{1-x}\text{La}_x)_3\text{Ir}_2\text{O}_7$*

*Magnetoresistance Measurements of Textured and Non-Textured Bismuth Thin Films*

*Enhancement of thermoelectric figure of merit of nanostructured  $\text{FeSb}_2$  by adding Cu nanoparticles,*

*Thermoelectric Study of Copper Selenide*

*Thermoelectric Properties of Nanostructured  $\text{CeCu}_6$*

*TT2.10 Magneto-Transport in Nano-Grained Thermoelectric Materials*

*Separating Lattice and Electronic Contributions of Thermal Conductivity in Cu and W*

*Combined Transport, Magnetization and Neutron Studies of Structural and Magnetic Behavior in  $\text{Ca}_3\text{Ir}_4\text{Sn}_{13}$*

*Transport Properties of Ce, Sm, and Ho Doped Bismuth Antimony*

*Enhanced thermoelectric figure of merit (ZT) of Te-doped  $\text{FeSb}_2$  nanocomposite,*

# *Evidence of Phonon Drag Effect in Nanocomposite  $\text{FeSb}_2$*

# *Transport Properties of Samarium Doped  $\text{Bi}_{88}\text{Sb}_{12}$*

# *Enhanced Thermoelectric Properties of  $\text{FeSb}_x$  Nanocomposites Through Stoichiometric Adjustment,*

# *Ce doped Bismuth Antimony,*

*Enhancing thermoelectric properties of  $\text{FeSb}_2$  by altering stoichiometry and nanostructure,*

*Experimental Determination of the Lorenz Number*

*Magnetotransport in thermoelectric materials*

*Characterization of Doped CeCoIn<sub>5</sub>,*

*Ho Doped Bi<sub>x</sub>Si<sub>y</sub> Nanopolycrystalline Alloys*

*Elastic collapse and avalanche criticality near a Mott transition*

*Uniaxial stress/strain of meteorites*

*Meteorites* *Thermal Conductivities of Two Basaltic Achondrite*

*Thermal Conductivities and Porosities of Stony Meteorites,*

*Ferromagnetic order at 298 K in Cr<sub>0.005</sub>Sn<sub>0.995</sub>Te,*

*Review* *Physical Properties Of Meteorites: A*

*Measurements of Meteorites: Implications for Asteroid Models* *New Thermal Conductivity*

*Martensite Transition in Ni<sub>50.5</sub>Mn<sub>34.4</sub>In<sub>15.1</sub> and Ni<sub>49.6</sub>Mn<sub>36.6</sub>Sn<sub>13.8</sub>*

*Quantum Fluctuation of the Order Parameter in a Structural Phase Transition*

*Pseudo-gap Formation and Magneto-Resistance at the Pre-Martensite Transition in Ni<sub>2</sub>MnGa*

*Magneto-Resistance at the Pre-Martensite Transition in Ni<sub>2</sub>MnGa*

*Pseudo-gap Observed at Martensite Transition in Ni<sub>2</sub>MnGa Single Crystal*

*Specific heat of tri-glycine sulfate in electric field*

*electronic structure of shape-memory alloy Ni<sub>2</sub>MnGa,*

*First Principles*

*Uranium*

*Recent Results on*

*Angle Resolved Photoemission Spectroscopy of Single Crystal Uranium (001)*

*Volume Collapse of Cerium*

*Photoemission Spectroscopy on Single Crystal Uranium (001)*

*Photoemission Spectroscopy on Single Crystal Uranium (001)*

*SR Study of Magnetism and Magnetic Inhomogeneity in (U,Th)Pt<sub>3</sub>*

*Crossover from  
Anomalous to Conventional Antiferromagnetism in Pd-Doped UPt<sub>3</sub> Studied via Cantilever  
Magnetometry*

*: Study of the Relationship Between Magnetic Order and  
Superconductivity in Heavy-Fermion (U,Th)Pt<sub>3</sub>*

*Characterization of the  
Normal State Transport Properties of U(Pt<sub>1-x</sub>Pd<sub>x</sub>)<sub>3</sub> Polycrystals 0 ≤ x ≤ 0.020*

*Normal State Magnetic  
Susceptibility and Antiferromagnetic Correlations in U(Pt<sub>1-x</sub>Pd<sub>x</sub>)<sub>3</sub> for 0 ≤ x ≤ 0.020*

*Susceptibility and  
Transport Studies of RuSr<sub>2</sub>GdCu<sub>2</sub>O<sub>8</sub>. (Ru1212)*

*Energy Matters”*

*Suppression of Pyroelectric Excitations with External Magnetic or Electric Fields*

*, Applied Physics Letters*









*Thermoelectric Property Studies of Nanostructured Bulk Materials*

*Muon Spin Resonance Study of Spin Dynamics in  $\text{LiY}_{1-x}\text{Ho}_x\text{F}_4$ ,*

*Power Factor Improvement and Thermal Conductivity Reduction by Band Engineering and Modulation-doping in Nanocomposites*

*Thermoelectric Transport Properties of Novel Nanoscaled Materials via Homemade and Commercial Apparatus Measurements*

*A Biologically Inspired Model of Bat Echolocation in a Cluttered Environment with Inputs Designed from Field Recordings,*

*Nanoimprint Lithography for Sensing Devices*

*degeneracies on the evolution of magnetism in  $\text{Na}_4\text{Ir}_3\text{O}_8$  and  $\gamma\text{-NaMnO}_2$*

*Iridates, Rutheno-Iridates*

*Electronic and Magnetic Properties of the Cuprates,*