

JOSHUA L. COHN

CURRICULUM VITAE

Date: Feb. 25, 2022

PERSONAL

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Current Academic Rank: Professor

HIGHER EDUCATION

Institutional: 1989 PhD. in Physics, with distinction,
University of Michigan
Doctoral Thesis: "Low Temperature Electronic Transport in
Homogeneous and Semicontinuous Thin Bismuth Films"
Advisor: Professor Ctirad Uher, Ph.D

1983 B.A., with honors in Physics,
Wesleyan University, Middletown, CT
Honors Thesis: "Phase Transitions and Molecular Motion
in Ethylene, Ethane, and Methane Thin Films Physisorbed
on Grafoil:an NMR Study"
Advisor: Professor Robert Rollefson, Ph.D

EXPERIENCE

Academic:	2022-	Senior Associate Dean for Research and Graduate Education, College of Arts and Sciences, Professor, Physics Department, University of Miami
	2013-21	Professor and Chair, Physics Department, University of Miami
	2010-13	Professor and Assoc. Chair, Physics Department, University of Miami
	2004-10	Professor, Physics Department, University of Miami
	1998-04	Associate Professor, Physics Department, University of Miami
	1992-98	Assistant Professor, Physics Department, University of Miami
	1985-89	Research Assistant, Department of Physics, University of Michigan Conducted research on low temperature transport properties of disordered thin films, metallic multilayers, and high- T_c superconductors.
	1983-86	Teaching Assistant, Department of Physics, University of Michigan Conducted and graded undergraduate laboratory courses.
	1981-83	Research Assistant, Department of Physics, Wesleyan University Conducted honors thesis research on physisorbed hydrocarbon thin films using pulsed NMR spectroscopy.
	1981-83	Teaching Assistant, Department of Physics, Wesleyan University Supervised undergraduate laboratory courses.
Non-Academic:	1989-92	Postdoctoral Fellow, Naval Research Laboratory Conducted independent research on fundamental transport properties of high- T_c cuprate superconductors.

RESEARCH INTERESTS

Transport, magnetic, and dielectric studies of correlated and low-dimensional systems: transition-metal oxides, thin films.

Superconducting and magnetic oxides: electronic and thermal conduction, electron-lattice, lattice-spin interactions, phase behavior.

Thermoelectrics: electrical and thermal transport in semiconducting clathrates and skutterudites.

PUBLICATIONS

Refereed Journal Articles (78 total, Google Scholar h-index=32; total citations=5603):

- 1) “Design of Pd-Decorated SrTiO₃/BiOBr Heterojunction Materials for Enhanced Visible-Light-Based Photocatalytic Reactivity,” Mary O. Olagunju, Elsayed M. Zahran, Elnaz Zeynaloo, Dharmendra Shukla, Joshua L. Cohn, Bapurao Surnar, Shanta Dhar, Leonidas G. Bachas, and Marc R. Knecht, *Langmuir* **37**, 11986 (2021).
- 2) “Halide Effects in BiVO₄/BiO_x Heterostructures Decorated with Pd Nanoparticles for Photocatalytic Degradation of Rhodamine B as a Model Organic Pollutant,” Mary O. Olagunju, Elsayed M. Zahran, Jacqueline M. Reed, Elnaz Zeynaloo, Dharmendra Shukla, Joshua L. Cohn, Bapurao Surnar, Shanta Dhar, Leonidas G. Bachas, and Marc R. Knecht, *ACS Appl. Nano Mater.* **4**, 3262 (2021).
- 3) “Cu₂O Cubes Decorated with Azine-Based Covalent Organic Framework Spheres and Pd Nanoparticles as Tandem Photocatalyst for Light-Driven Degradation of Chlorinated Biphenyls,” Ahmed E. ElMetwally, Elnaz Zeynaloo, Dharmendra Shukla, Bapurao Surnar, Shanta Dhar, Joshua L. Cohn, Marc R. Knecht, and Leonidas G. Bachas, *ACS Appl. Nano Mater.* **4**, 2795 (2021).
- 4) “Size-Controlled SrTiO₃ Nanoparticles Photodecorated with Pd Cocatalysts for Photocatalytic Organic Dye Degradation,” Mary O. Olagunju, Xavier Poole, Patricia Blackwelder, Melonie P. Thomas, Beth S. Guiton, Dharmendra Shukla, Joshua L. Cohn, Bapurao Surnar, Shanta Dhar, Elsayed M. Zahran, Leonidas G. Bachas, and Marc R. Knecht, *ACS Appl. Nano Mater.* **3**, 4904 (2020).
- 5) “Magnetic-field dependence of low-energy magnons, anisotropic heat conduction, and spontaneous relaxation of magnetic domains in the cubic helimagnet ZnCr₂Se₄,” D. S. Inosov, Y. O. Onykiienko, Y. V. Tymoshenko, A. Akopyan, D. Shukla, N. Prasai, M. Doerr, S. Zherlitsyn, D. Voneshen M. Boehm, V. Tsurkan, V. Felea, A. Loidl, and J. L. Cohn, *Phys. Rev. B* **102**, 184431 (2020).
- 6) “Electrohydrodromodulation for phosphate recovery from wastewater,” Mahamalage Kusumitha Perera, James D. Englehardt, Joshua L. Cohn, Edward A Dauer, Dharmendra Shukla, *Separation and Purification Technology* **247**, 116909 (2020).
- 7) “Spin-Seebeck effect in Cu₂OSeO₃: Test of bulk magnon spin-current theory,” A. Akopyan, N. Prasai, B. Trump, G. Marcu, T. L. McQueen, and J. L. Cohn, *Phys. Rev. B* **101**, 100407 (R), *Rapid Communications* (2020).
- 8) “Biomimetic strategies to produce catalytically reactive CuS nanodisks,” D. C. Bell, C. J. Munro, J. M. Slocik, D. Shukla, A. D. Parab, J. Cohn, and M. Knecht, *Nanoscale Adv.* **1**, 2857-2865 (2019).
- 9) “Amino Acids for Sustainable Production of Cu₂ Materials: Effects on Morphology and Photocatalytic Reactivity,” C. J. Munro, E. C. Bell, M. O. Olagunju, J. L. Cohn, E. M. Zahran, L. G. Bachas, and M. R. Knecht, *ACS Sustain. Chem. Eng.* **7**, 17055-17064 (2019).
- 10) “Anisotropic Heat Conduction in the Metal Organic Framework Perovskites [C(NH₂)₃]X(HCOO)₃ (X=Cu, Zn),” D. Shukla, N. Prasai, T. M. Carlino, M. M. A. Mazza, A. M. Scott, and J. L. Cohn, *Appl. Phys. Lett.* **114**, 081907 (2019).

- 11) "Spin phases of the helimagnetic insulator Cu_2OSeO_3 probed by magnon heat conduction," N. Prasai, A. Akopyan, B. A. Trump, G. G. Marcus, S. X. Huang, T. M. McQueen, and J. L. Cohn, *Phys. Rev. B* **99**, 020403 (Rapid Commun) (2019).
- 12) "Resonant scattering of phonons in the quasi-one-dimensional spin-chain compounds AB_2O_6 ($A = \text{Ni, Co}$; $B = \text{Sb, Ta}$)," N. Prasai, A. B. Christian, J. J. Neumeier, and J. L. Cohn, *Phys. Rev. B* **98**, 134449 (2018).
- 13) "Ballistic magnon heat conduction and possible Poiseuille flow in the helimagnetic insulator Cu_2OSeO_3 ," N. Prasai, B. A. Trump, G. G. Marcus, A. Akopyan, S. X. Huang, T. M. McQueen, and J. L. Cohn, *Phys. Rev. B* **95**, 224407 (2017). (Editor's Choice)
- 14) "Anisotropic transport in the quasi-one-dimensional semiconductor $\text{Li}_{0.33}\text{MoO}_3$," S. Moshfeghyeganeh, A. N. Cote, J. J. Neumeier and J. L. Cohn, *J. Appl. Phys.* **119**, 095105 (2016).
- 15) "Converting Light Energy to Chemical Energy: A New Catalytic Approach for Sustainable Environmental Remediation," Michelle A. Nguyen, Elsayed M. Zahran, Azaan S. Wilbon, Alexander V. Besmer, Vincent J. Cendan, William A. Ranson, Randy L. Lawrence, Joshua L. Cohn, Leonidas G. Bachas, and Marc R. Knecht, *ACS Omega* **1**, 41-51 (2016).
- 16) "Heat capacity, thermal expansion and heat transport in the Han Blue ($\text{BaCuSi}_4\text{O}_{10}$): Observation of structural phase transitions," S. H. Masunaga, A. Rebello, A. T. Schye, N. Prasai, J. J. Neumeier, and J. L. Cohn, *J. Phys. Chem. Sol.* **85**, 69 (2015).
- 17) "Phonon-spin scattering and magnetic heat transport in the quasi-one-dimensional spin-1/2 antiferromagnetic chain compound CuSb_2O_6 ," N. Prasai, A. Rebello, A. B. Christian, J. J. Neumeier, and J. L. Cohn, *Phys. Rev. B* **91**, 054403 (2015).
- 18) "Extreme Thermopower Anisotropy and Interchain Transport in the Quasi-One-Dimensional Metal $\text{Li}_{0.9}\text{Mo}_6\text{O}_{17}$," J. L. Cohn, S. Moshfeghyeganeh, C. A. M. dos Santos, and J. J. Neumeier, *Phys. Rev. Lett.* **112**, 186602 (2014).
- 19) "Persistent patterns in microtubule dipole Lattices," S. Nandi, N. F. Johnson, and J. L. Cohn, *Adv. Complex Syst.* **16**, 1350033 (2013).
- 20) "Stoichiometry, structure, and transport in the quasi-one-dimensional metal $\text{Li}_{0.9}\text{Mo}_6\text{O}_{17}$," J. L. Cohn, P. Boynton, J. S. Triviño, J. Trastoy, B. D. White, C. A. M. dos Santos, and J. J. Neumeier, *Phys. Rev. B* **86**, 195143 (2012).
- 21) "Strain-controlled band engineering and self-doping in ultrathin LaNiO_3 films," E. J. Moon, J. M. Rondinelli, N. Prasai, B. A. Gray, M. Kareev, J. Chakhalian, and J. L. Cohn, *Phys. Rev. B* **85**, 121106(R) (2012).
- 22) "Giant Nernst Effect and Bipolarity in the Quasi-One-Dimensional Metal $\text{Li}_{0.9}\text{Mo}_6\text{O}_{17}$," J. L. Cohn, B. D. White, C. A. M. dos Santos, and J. J. Neumeier, *Phys. Rev. Lett.* **108**, 056604 (2012).
- 23) "Asymmetric Orbital-Lattice Interactions in Ultrathin Correlated Oxide Films," J. Chakhalian, J. M. Rondinelli, Jian Liu, B. A. Gray, M. Kareev, E. J. Moon, N. Prasai, J. L. Cohn, M. Varela, I. C. Tung, M. J. Bedzyk, S. G. Altendorf, F. Strigari, B. Dabrowski, L. H. Tjeng, P. J. Ryan, and J. W. Freeland, *Phys. Rev. Lett.* **107**, 116805 (2011).

- 24) “Physical properties of quasi-one-dimensional $\text{SrNbO}_{3.41}$ and Luttinger liquid analysis of electrical transport,” A. de Campos, M. S. da Luz, C. A. M. dos Santos, A. T. Rice, A. M. Deml, B. D. White, J. J. Neumeier, and J. L. Cohn, *Phys. Rev. B* **82**, 125117 (2010).
- 25) “Anisotropic in-plane strain and transport in epitaxial $\text{Nd}_{0.2}\text{Sr}_{0.8}\text{MnO}_3$ thin films,” K. Neupane, J. J. Neumeier, and J. L. Cohn, *J. Appl. Phys.* **106**, 123904 (2009).
- 26) “Magnetic, transport, and thermodynamic properties of CaMn_2O_4 single crystals,” B. D. White, J. A. Souza, C. Chiorescu, J. J. Neumeier, and J. L. Cohn, *Phys. Rev. B* **79**, 104427/1-9 (2009).
- 27) “Giant Electrothermal Conductivity and Spin-Phonon Coupling in an Antiferromagnetic Oxide,” C. Chiorescu, J. J. Neumeier, and J. L. Cohn, *Phys. Rev. Lett.* **101**, 257202/1-4 (2008).
- 28) “Impurity conduction and magnetic polarons in antiferromagnetic oxides,” C. Chiorescu, J. L. Cohn, and J. J. Neumeier, *Phys. Rev. B* **76**, 020404(R)/1-4 (2007).
- 29) “Doping dependence of polaron hopping energies in $\text{La}_{1-x}\text{Ca}_x\text{MnO}_3$ ($0 \leq x \leq 0.15$),” K. P. Neupane, J. L. Cohn, H. Terashita, and J. J. Neumeier, *Phys. Rev. B* **74**, 144428/1-5 (2006).
- 30) “Role of oxygen vacancies in the magnetic and dielectric properties of the high-dielectric-constant system $\text{CaCu}_3\text{Ti}_4\text{O}_{12}$: An electron-spin-resonance study,” M. A. Pires, C. Israel, W. Iwamoto, R. R. Urbano, O. Agüero, I. Torriani, C. Rettori and P. G. Pagliuso, Z. Le, J. L. Cohn, and B. Oseroff, *Phys. Rev. B* **73**, 224404/1-7 (2006).
- 31) “Magnetic inhomogeneity and magnetotransport in electron-doped manganites $\text{Ca}_{1-x}\text{La}_x\text{MnO}_3$ ($0 \leq x \leq 0.10$),” C. Chiorescu, J. J. Neumeier, and J. L. Cohn, *Phys. Rev. B* **73**, 014406/1-6 (2006).
- 32) “Polaron transport in the paramagnetic phase of electron-doped manganites,” J. L. Cohn, C. Chiorescu, and J. J. Neumeier, *Phys. Rev. B* **72**, 024422/1-6 (2005).
- 33) “Giant Dielectric Permittivity of Electron-Doped Manganite Thin Films, $\text{Ca}_{1-x}\text{La}_x\text{MnO}_3$ ($0 \leq x \leq 0.03$),” J. L. Cohn, M. Peterca, and J. J. Neumeier, *J. Appl. Phys.* **97**, 034102 (2005).
- 34) “Diosmium(III) Compounds Supported by 2-Anilinopyridinate and Novel Alkynyl Derivatives,” Y.-H. Shi, W.-Z. Chen, K. D. John, R. E. Da Re, J. L. Cohn, G.-L. Xu, J. L. Eglin, A. P. Sattelberger, C. R. Hare, and T. Ren, *Inorg. Chem.* **44**, 5719-5727 (2005).
- 35) “Low-temperature Permittivity of Insulating Perovskite Manganites,” J. L. Cohn, M. Peterca, and J. J. Neumeier, *Phys. Rev. B* **70**, 214433/1-6 (2004).
- 36) “Low temperature transport properties of polycrystalline $\text{Ba}_8\text{Ga}_{16}\text{Sn}_{30}$,” G.S. Nolas, J.L. Cohn, J. S. Dyck, C. Uher, G. A. Lamberton, Jr., and T.M. Tritt, *J. Mater. Res.* **19**, 3556 (2004).
- 37) “Ferroelectric and Ferrimagnetic Iron-Doped Thin-Film BaTiO_3 : Influence of Iron on Physical Properties,” R. Maier and J. L. Cohn, *J. Appl. Phys.* **92**, 5429 (2002).
- 38) “Heat conduction and magnetic phase behavior in electron-doped $\text{Ca}_{1-x}\text{La}_x\text{MnO}_3$ ($0 \leq 0.2 \leq 0.2$),” J. L. Cohn and J. J. Neumeier, *Phys. Rev. B* **66**, 100404R (2002).

- 39) "Temperature dependent structural and transport properties of the type II clathrates $A_8Na_{16}E_{136}$ ($A=Cs$ or Rb and $E=Ge$ or Si)," G. S. Nolas, D. G. Vanderveer, A. P. Wilkinson, and J. L. Cohn, *J. Appl. Phys.* **91**, 8970-73 (2002).
- 40) "Transport properties of polycrystalline type-I Sn clathrates," G. A. Nolas, J. L. Cohn, A. B. Dyck, C. Uher, and J. Yang, *Phys. Rev. B* **65**, 165201-1 (2002).
- 41) "Ferroelectricity and ferrimagnetism in iron-doped $BaTiO_3$," R. Maier, J. L. Cohn, J. J. Neumeier, and L. A. Bendersky, *Appl. Phys. Lett.* **78**, 2536 (2001).
- 42) "Possible signatures of magnetic phase segregation in electron-doped antiferromagnetic $CaMnO_3$," J. J. Neumeier and J. L. Cohn, *Phys. Rev. B* **61**, 14319-14322 (2000).
- 43) "Electrical and Thermal Transport in Perovskite Manganites," J. L. Cohn, *J. Supercond.: Incorp. Novel Mag.* **13**, 291-304 (2000).
- 44) "Structural studies of pulsed-laser-deposited $Ba_4Fe_4Ti_3O_{16}$ oxide films," L. A. Bendersky, R. Maier, J. L. Cohn, and J. J. Neumeier, *J. Mater. Res.* **15**, 1389-1396 (2000).
- 45) "Structural properties and thermal conductivity of crystalline Ge clathrates," G. S. Nolas, T. J. R. Weakley, J. L. Cohn, and R. Sharma, *Phys. Rev. B* **61**, 3845-3850 (2000).
- 46) "Structural, chemical and transport properties of a new clathrate compound: $Cs_8Zn_4Sn_{42}$," G.S. Nolas, T.J.R. Weakley, and J.L. Cohn, *Chem. of Mater.*, **11**, 2470-2473 (1999).
- 47) "Glass-like heat conduction in high-mobility semiconductors," J. L. Cohn, G. S. Nolas, V. Fessatidis, T. H. Metcalf, and G. A. Slack, *Phys. Rev. Lett.* **82**, 779-782 (1999).
- 48) "Hole localization in underdoped superconducting cuprates near 1/8 doping," J. L. Cohn, C. P. Popoviciu, Q. M. Lin, and C. W. Chu, *Phys. Rev. B* **59**, 3823-3826 (1999).
- 49) "Thermal Transport as a Probe of Localized Charge and Lattice Distortions in Manganites and Cuprates," J. L. Cohn, *J. Supercond.* **12**, 281-284 (1999).
- 50) "Anisotropic in-plane thermal conductivity of single-crystal $YBa_2Cu_4O_8$," J. L. Cohn and J. Karpinski, *Phys. Rev. B* **58**, 14617-14620 (1998).
- 51) "Semiconducting Ge clathrates: Promising candidates for thermoelectric applications," G. S. Nolas, J. L. Cohn, G. A. Slack, and S. B. Schujman, *Appl. Phys. Lett.* **73**, 178-180 (1998).
- 52) "Effect of partial void filling on the lattice thermal conductivity of skutterudites," G. S. Nolas, J. L. Cohn, and G. A. Slack, *Phys. Rev. B* **58**, 164-170 (1998).
- 53) "Local lattice distortions and thermal transport in perovskite manganites," J. L. Cohn, J. J. Neumeier, K. J. McClellan, and Th. Leventouri, *Phys. Rev. B* **56**, R8495 (1997).
- 54) "Thermal transport in $YBa_2Cu_3O_{6+x}$: Doping dependence across the phase diagram," C. P. Popoviciu and J. L. Cohn, *Phys. Rev. B* **55**, 3155 (1997).
- 55) "The Possibility of Flux Flow Spectroscopy," S. E. Barnes, J. L. Cohn, and F. Zuo, *Phys. Rev. Lett.* **77**, 3252 (1996).

- 56) “Low-temperature transport properties of the filled and unfilled IrSb₃ skutterudite system,” T. M. Tritt, G. S. Nolas, G. A. Slack, A. C. Erlich, D. J. Gillespie, and J. L. Cohn, *J. Appl. Phys.* **79**, 8412 (1996).
- 57) “Superconducting-state enhancement of in-plane thermal conductivity in the cuprates: Correlation with the pair density,” J. L. Cohn, *Phys. Rev. B* **53**, R2963 (1996).
- 58) “Anomalous Phonon Damping and Thermal Conductivity of Insulating Cuprates,” J. L. Cohn, C. K. Lowe-Ma, and T. A. Vanderah, *Phys. Rev. B* **52**, R13134 (1995).
- 59) “Anomalous Phonon Damping in Insulating Cuprates,” J. L. Cohn, *J. Supercond.* **8**, 457 (1995).
- 60) “Influence of the Josephson Junction on the Impedance and Noise of a Resistive Quantum Interference Device,” R. J. Soulen, Jr., W. E. Fogle, J. H. Colwell, J. L. Cohn, and H. Seppä, *J. Appl. Phys.* **74**, 5241 (1993).
- 61) “Superconducting-State Thermal Transport in YBa₂Cu₃O_{7- δ} ,” J. L. Cohn, V. Z. Kresin, M. E. Reeves, and S. A. Wolf, *Phys. Rev. Lett.* **71**, 1657 (1993).
- 62) “Thermoelectric and Thermo-Coulomb Effects in Tunnel Junctions,” M. Amman, E. Ben-Jacob, and J. L. Cohn, *Phys. Letts. A* **171**, 389 (1992).
- 63) “In-Plane Thermal Conductivity of Nd_{2-x}Ce_xCuO_{4-y},” J. L. Cohn, M. S. Osofsky, J. L. Peng, Z. Y. Li, and R. L. Greene, *Phys. Rev. B* **46**, 12053 (1992).
- 64) “Thermal Conductivity in the ab-Plane of Untwinned YBa₂Cu₃O_{7- δ} ,” J. L. Cohn, E. F. Skelton, S. A. Wolf, J. Z. Liu, and R. N. Shelton, *Phys. Rev. B* **45**, 13144 (1992).
- 65) “In-Plane Thermoelectric Power of Untwinned YBa₂Cu₃O_{7- δ} ,” J. L. Cohn, E. F. Skelton, S. A. Wolf, and J. Z. Liu, *Phys. Rev. B* **45**, 13140 (1992).
- 66) “Lattice Thermal Conductivity of YBa₂Cu₃O_{7- δ} ,” J. L. Cohn, S. A. Wolf, T. A. Vanderah, V. Selvamanickam, and K. Salama, *Physica* **192C**, 435 (1992).
- 67) “Percolation Effects and Oxygen Inhomogeneities in YBa₂Cu₃O_{7- δ} Crystals,” M. S. Osofsky, J. L. Cohn, E. F. Skelton, M. M. Miller, R. J. Soulen, Jr., and S. A. Wolf, *Phys. Rev. B* **45**, 4916 (1992).
- 68) “Evidence for Strong Electron-Phonon Coupling in Thermal Conductivity of YBa₂Cu₃O_{7- δ} ,” J. L. Cohn, S. A. Wolf, and T. A. Vanderah, *Phys. Rev. B* **45**, 511 (1992).
- 69) “Thermoelectric and Thermo-Coulomb Effects in Tunnel Junctions,” M. Amman, E. Ben-Jacob, and J. L. Cohn, *Z. Phys. B* **85**, 405 (1991).
- 70) “Effect of Magnetic Field on Thermal Conductivity of YBa₂Cu₃O_{7- δ} Single Crystals,” S. D. Peacor, J. L. Cohn, C. Uher, *Phys. Rev. B* **43**, 8721 (1991).
- 71) “Thermoelectric Power of YBa₂Cu₃O_{7- δ} : Phonon-drag and Multiband Conduction,” J. L. Cohn, S. A. Wolf, V. Selvamanickam, and K. Salama, *Phys. Rev. Lett.* **66**, 1098 (1991).
- 72) “Low Temperature Electronic Transport and the Coulomb Blockade in Oxidized Films of Bismuth,” J. L. Cohn, E. Ben-Jacob, and C. Uher, *Phys. Letts. A* **148**, 110 (1990).

- 73) “Electrical Resistance and Time-Dependent Oxidation of Semicontinuous Bismuth Films,” J. L. Cohn and C. Uher, *J. Appl. Phys.* **66**, 2045 (1989).
- 74) “Anomalous Thermal Conductivity of $\text{La}_{2-x}\text{Sr}_x\text{CuO}_{4-y}$ at Very Low Temperatures,” C. Uher and J. L. Cohn, *J. Phys.* **C21**, L957 (1988).
- 75) “Thermal Conductivity of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ Below 1K: Evidence for Normal-Carrier Transport Well Below T_c ,” J. L. Cohn, S. D. Peacor, C. Uher, *Phys. Rev.* **B38**, 2892 (1988).
- 76) “Upper Critical Fields of Periodic and Quasiperiodic Nb/Ta Superlattices,” J. L. Cohn, J.-J. Lin, F. Lamelas, H. He, R. Clarke and C. Uher, *Phys. Rev.* **B38**, 2326 (1988).
- 77) “Electrical, Structural and Superconducting Properties of Hydrogenated Nb-Ta Superlattices,” Ctirad Uher, Joshua L. Cohn, Paul F. Miceli and Hartmut Zabel, *Phys. Rev.* **B36**, 815 (1986).
- 78) “Upper Critical Field in Anisotropic Superconductors,” Ctirad Uher, Joshua L. Cohn and Ivan K. Schuller, *Phys. Rev.* **B34**, 4906 (1986).

Conference Proceedings (14 total):

- 79) “Ferroelectricity and ferrimagnetism in iron-doped BaTiO_3 ,” R. Maier, J. L. Cohn, J. Neumeier, and L. A. Bendersky, *Magnetoresistive and Related Oxides*, ed. by M. Rzchowski, M. Kawasaki, A. J. Millis, M. Rajeswari, S. von Molnár, MRS Conference Proceedings, Vol. 602, 29-33 (2000).
- 80) “Heat Conduction and Charge Ordering in Perovskite Manganites, Nickelates and Cuprates,” J. L. Cohn, *Thermal Conductivity 25, Thermal Expansion 13*, ed. by C. Uher and D. T. Morelli, (Technomic Publishing, Lancaster, PA, 2000), pp. 87-97.
- 81) “Glass-like Heat Conduction in Crystalline Semiconductors,” George S. Nolas, Joshua L. Cohn, Bryan C. Chakoumakos, and Glen A. Slack, *Thermal Conductivity 25, Thermal Expansion 13*, ed. by C. Uher and D. T. Morelli, (Technomic Publishing, Lancaster, PA, 2000), pp. 122-129.
- 82) “1/8 Doping Anomalies and Oxygen Vacancies in Underdoped Superconducting Cuprates,” J. L. Cohn, in *High Temperature Superconductivity*, edited by S. E. Barnes, J. Ashkenazi, J. L. Cohn, and F. Zuo, AIP Conference Proceedings, Vol. 483, pp. 213-218 (1999).
- 83) “Expanding the Investigation of the Thermoelectric Properties of Rare-Earth-Filled Skutterudites,” G. S. Nolas, H. B. Lyon, J. L. Cohn, T. M. Tritt, and G. A. Slack, *Proceedings of the Sixteenth International Conference on Thermoelectrics*, (American Institute of Physics, 1998).
- 84) “Low Temperature Transport Properties of IrSb_3 ,” T. M. Tritt, D. J. Gillespie, A. C. Erlich, G. Nolas, G. Slack, and J. L. Cohn, *Proceedings of the XIV International Conference on Thermoelectrics* (American Institute of Physics, New York, 1996).
- 85) “Thermal conduction in the cuprates: Changes with doping across the phase diagram,” J. L. Cohn, in *Oxide Superconductor Physics and Nano-Engineering II*, ed. by I. Bozovic and D. Pavuna, (SPIE, Bellingham, WA, 1996), Vol. **2697**.

- 86) “Effects of Oxygen Inhomogeneities on the Physical Properties of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ Single Crystals,” M. S. Osofsky, J. L. Cohn, E. F. Skelton, M. M. Miller, R. J. Soulen, Jr., and S. A. Wolf, in *Materials Science Forum*, (Trans Tech, Switzerland, 1993), Vol. 137-139, p. 229.
- 87) “Evidence for Strong Electron-Phonon Coupling in Thermal Conductivity of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$,” J. L. Cohn, S. A. Wolf, and T. A. Vanderah, in *Phenomenology and Applications of High Temperature Superconductors*, ed. by K. S. Bedell, M. Inui, D. Meltzer, J. R. Schrieffer, and S. Doniach, (Plenum, New York, 1992), p. 526.
- 88) “Normal-state Transport Properties of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$: Conventional Metallic Picture,” J. L. Cohn, S. A. Wolf, V. Selvamanickam, and K. Salama, in *High-Temperature Superconductivity: Physical Properties, Microscopic Theory, and Mechanisms*, edited by J. Ashkenazi, S. Barnes, F. Zuo, G. Vezzoli, and B. Klein, (Plenum, New York, 1992), p. 235.
- 89) “Growth and Characterization of $\text{La}_{2-x}\text{Sr}_x\text{CuO}_{4-y}$ and $\text{Bi}_{2+x}\text{Sr}_{2-z}\text{CuO}_4$ Crystals,” M. S. Osofsky, J. L. Cohn, W. L. Lechter, E. F. Skelton, S. Qadri, and V. M. Browning, in *High-Temperature Superconductors: Fundamental Properties and Novel Materials Processing*, Mat. Res. Soc. Symp. Proc. **169**, (1990).
- 90) “Structural and Superconducting Properties of Periodic and Quasiperiodic Nb-Ta Superlattices,” C. Uher, J. L. Cohn, J.J. Lin, F. J. Lamelas, H. He, and R. Clarke, Materials Research Society Symposium, Tokyo, June 1988.
- 91) “Transport Properties and Superconductivity in Hydrogenated Nb-Ta Superlattices,” C. Uher, J. L. Cohn, P. F. Miceli and H. Zabel, in *Metallic Multilayers and Epitaxy*, edited by M. Hong, S. Wolf, and D. C. Gubser, Trans. Metall. Soc., Denver, CO, Feb. 1987, p. 97.
- 92) “Upper Critical Field of Mo-Ni Heterostructures,” Ctirad Uher, W. J. Watson, J. L. Cohn, and I. K. Schuller, Mat. Res. Soc. Symp. Proc. **56**, 455 (1986).

Abstracts and Contributed Presentations:

- 1) “Anisotropic heat conduction in the spin-spiral state of the cubic helimagnet ZnCr_2Se_4 ,” Joshua L Cohn, Artem Akopyan, Dharmendra Shukla, Narayan Prasai, Dmytro S. Inosov, Yevhen Onykienko, Yuliia Tymoshenko, Mathias Doerr, Sergei Zherlitsyn, David J Voneshen, Martin Boehm, Vladimir Tsurkan, Viorel Felea, Alois Loidl, Bull. Amer. Phys. Soc. **66**, Abstract U71.00203 (2021).
- 2) “Anisotropic and electric-field dependent heat conduction in CuO ,” Artem Akopyan, Narayan Prasai, A. Rebello, John J. Neumeier, Joshua L Cohn, Bull. Amer. Phys. Soc. **66**, Abstract X53.00010 (2021).
- 3) “Low-temperature heat conduction in the Metal-Organic Framework Perovskite $[\text{C}(\text{NH}_2)_3]\text{Ni}(\text{HCOO})_3$,” Dharmendra Shukla, Thomas M. Carlino, Amy M. Scott, and Joshua Cohn, Bull. Amer. Phys. Soc. **65**, Abstract S21.00011 (2020).

- 4) “Spin Seebeck Effect in Helimagnetic Cu₂OSeO₃: Test of Bulk Magnon Spin Current Theory,” Artem Akopyan, Narayan Prasai, Benjamin Trump, Guy G. Marcus, Sunxiang Huang, Tyrel McQueen, and Joshua Cohn, *Bull. Am. Phys. Soc.* **65**, Abstract F47.00013 (2020).
- 5) “Anisotropic heat conduction in the metal-organic framework perovskites,” Dharmendra Shukla Narayan Prasai, Thomas M. Carlino, Mercedes M. A. Mazza, Amy M. Scott, and Joshua Cohn, *Bull. Am. Phys. Soc.* **64**, Abstract V20.00007, March 48, 2019; Boston, Massachusetts.
- 6) “Signatures of novel spin phases in thermal conductivity of the chiral skyrmion material Cu₂OSeO₃,” Artem Akopyan, Narayan Prasai, Benjamin Trump, Guy G. Marcus, Sunxiang Huang, Tyrel McQueen, Joshua Cohn *Bull. Am. Phys. Soc.* **64**, Abstract X41.00011, March 48, 2019; Boston, Massachusetts.
- 7) “Tunable spin-phonon scattering in low-D spin chain compounds AB₂O₆ (A= Co, Ni; B= Sb, Ta),” Narayan Prasai, Joshua Cohn, Aaron Christian, and John Neumeier, *Bull. Am. Phys. Soc.* **63**, Abstract A19.00002, March 59, 2018; Los Angeles, California.
- 8) “Low-temperature spin-Seebeck effect in the helimagnetic insulator Cu₂OSeO₃,” Artem Akopyan, Narayan Prasai, Joshua Cohn, Benjamin Trump, Guy Marcus, Tyrel McQueen, *Bull. Am. Phys. Soc.* **63**, Abstract B22.00005, March 59, 2018; Los Angeles, California.
- 9) “Transverse Peltier effect in single crystals of the quasi-one-dimensional conductor, Li_{0.9}Mo₆O₁₇,” Saeed Moshfeghyeganeh, Joshua Cohn, John Neumeier, *Bull. Am. Phys. Soc.* **63**, Abstract C21.00006, March 59, 2018; Los Angeles, California.
- 10) “Low-temperature thermal conductivity of the frustrated S=3/2 Heisenberg helimagnet ZnCr₂Se₄,” *Bull. Am. Phys. Soc.* **63**, Dharmendra Shukla, Joshua Cohn, Dmytro Inosov, Vladimir Tsurkan, Alois Loidl, Abstract C24.00011, March 59, 2018; Los Angeles, California.
- 11) “Ballistic low-temperature magnon heat conduction in the helimagnetic insulator Cu₂OSeO₃,” Narayan Prasai, Artem Akopyan, Sunxiang Huang, Joshua L. Cohn, Benjamin Trump, Guy G. Marcus, Tyrel M. McQueen, *Bull. Am. Phys. Soc.* **62**, Abstract H47.00007, March 1317, 2017; New Orleans, Louisiana.
- 12) “Low-temperature spin-Seebeck effect in the helimagnetic insulator Cu₂OSeO₃,” Artem Akopyan, Narayan Prasai, Sunxiang Huang, Joshua L. Cohn, Benjamin Trump, Guy G. Marcus, Tyrel M. McQueen, *Bull. Am. Phys. Soc.* **62**, Abstract H47.00008, March 1317, 2017; New Orleans, Louisiana.
- 13) “Low-temperature thermal conductivity of the metal-organic perovskite [C(NH₂)₃][Cu(HCOO)₃],” Dharmendra Shukla, Narayan Prasai, Joshua L. Cohn, Mercedes M. A. Mazza, Amy M. Scott, *Bull. Am. Phys. Soc.* **62**, Abstract P38.00015, March 1317, 2017; New Orleans, Louisiana.
- 14) “Low-temperature magneto-thermal conductivity of the helimagnet Cu₂OSeO₃,” Narayan Prasai, Sunxiang Huang, Joshua L. Cohn, University of Miami, Benjamin Trump, Guy G. Marcus, Tyrel M. McQueen, Chia Ling Chen, *Bull. Am. Phys. Soc.* **61**, Abstract A20.00010, March 1418, 2016, Baltimore, MD.

- 15) “Anisotropic transport and structure of single-crystal molybdenum bronze, $\text{Li}_{0.33}\text{MoO}_3$,” Saeed Moshfeghyeganeh, Joshua L. Cohn, John J. Neumeier, Bull. Am. Phys. Soc. **61**, Abstract C17.00015, March 1418, 2016, Baltimore, MD.
- 16) “Ambipolar transport in the field-suppressed superconducting state of quasi-one-dimensional $\text{Li}_{0.9}\text{Mo}_6\text{O}_{17}$,” Joshua L. Cohn, Carlos A. M. Dos Santos, John J. Neumeier, Bull. Am. Phys. Soc. **61**, Abstract B27.00015, March 1418, 2016, Baltimore, MD.
- 17) “Thermoelectric effects in the field-suppressed superconducting state of quasi-one-dimensional $\text{Li}_{0.9}\text{Mo}_6\text{O}_{17}$,” Joshua Cohn, Carlos A.M. dos Santos, and John J. Neumeier, Bull. Am. Phys. Soc. **60**, Abstract S22.00002, March 26, 2015, San Antonio, TX.
- 18) “Heat transport in the frustrated spin-ladder compound, BiCu_2PO_6 ,” Narayan Prasai, Alwyn Rebello, Joshua L. Cohn, Sueli H. Masunaga, and John J. Neumeier, Bull. Am. Phys. Soc. **60**, Abstract: M31.00001, March 26, 2015, San Antonio, TX.
- 19) “Anisotropic transport in single-crystal molybdenum bronze, $\text{Li}_{0.33}\text{MoO}_3$,” Saeed Moshfeghyeganeh, Joshua Cohn, and John J. Neumeier, Bull. Am. Phys. Soc. **60**, Abstract L12.00002, March 26, 2015, San Antonio, TX.
- 20) “Thin-film growth of the quasi-one-dimensional metal $\text{Li}_{0.9}\text{Mo}_6\text{O}_{17}$,” Alexandra Cote, Saeed Moshfeghyeganeh, Joshua Cohn, and John J. Neumeier, Bull. Am. Phys. Soc. **60**, Abstract F8.00011, March 26, 2015, San Antonio, TX.
- 21) “Large transverse thermoelectric effects in single crystals of the quasi-one-dimensional metal $\text{Li}_{0.9}\text{Mo}_6\text{O}_{17}$,” Saeed Moshfeghyeganeh, Joshua Cohn, Carlos A.M. dos Santos, and John J. Neumeier, Bull. Am. Phys. Soc. **59**, Abstract F34.00009, March 3-7, 2014, Denver, CO.
- 22) “Extreme Seebeck Anisotropy in the quasi-one-dimensional metal $\text{Li}_{0.9}\text{Mo}_6\text{O}_{17}$,” Bull. Am. Phys. Soc. **59**, Joshua Cohn, Saeed Moshfeghyeganeh, Carlos A.M. dos Santos, and John J. Neumeier, Abstract F34.00011, March 3-7, 2014, Denver, CO.
- 23) “Thermal transport and spin-phonon coupling in the one-dimensional antiferromagnetic spin chain compound CuSb_2O_6 ,” Narayan Prasai, Joshua Cohn, Alwyn Rebello, Michael Smith, and John J. Neumeier, Bull. Am. Phys. Soc. **59**, Abstract F7.00007, March 3-7, 2014, Denver, CO.
- 24) “Inter-chain transport in the quasi-one-dimensional metal, $\text{Li}_{0.9}\text{Mo}_6\text{O}_{17}$,” Joshua Cohn, Benjamin D. White, Carlos A.M. dos Santos, and John J. Neumeier, Bull. Am. Phys. Soc. **58**, Abstract A22.00007, March 1822, 2013, Baltimore, MD.
- 25) “Heat conduction in the one-dimensional AF spin chain compound CuSb_2O_6 ,” Narayan Prasai, Joshua L. Cohn, Michael G. Smith, Alwyn Rebello, and John J. Neumeier, Bull. Am. Phys. Soc. **58**, Abstract U16.00009, March 1822, 2013, Baltimore, MD.
- 26) “Strain-controlled band engineering and Self-doping in Ultrathin LaNiO_3 films,” X. Liu, E.J. Moon, J.M. Rondinelli, N. Prasai, B.A. Gray, M. Kareev, J. Chakhalian, and J.L. Cohn, Bull. Am. Phys. Soc. **58**, Abstract Y20.00011, March 1822, 2013, Baltimore, MD.
- 27) “Giant Bipolar Nernst Effect in the Quasi-One-Dimensional Metal, $\text{Li}_{0.9}\text{Mo}_6\text{O}_{17}$,” Joshua L. Cohn, Benjamin D. White, Carlos A. M. dos Santos, and John J. Neumeier, Bull. Am. Phys. Soc. **57**, Abstract H173.00011, Feb. 27Mar. 2, 2012, Boston, MA.

- 28) "Thermal Transport in CuSb_2O_6 single crystals," Narayan Prasai, Joshua L. Cohn, Michael G. Smith, Alwyn Rebello, John J. Neumeier, *Bull. Am. Phys. Soc.* **57**, Abstract L13.00005, Feb. 27Mar. 2, 2012, Boston, MA.
- 29) "Strain-modulated asymmetric orbital-lattice interactions in correlated oxide heterostructures," J. Chakhalian, J. Rondinelli, Jian Liu, B. Gray, M. Kareev, E.J. Moon, J. Cohn, M. Varela, S.G. Altendorf, F. Strigari, B. Dabrowski, L.H. Tjeng, P.J. Ryan, J.W. Freeland, *Bull. Am. Phys. Soc.* **56**, Abstract B34.00001, Mar. 21-25, 2011, Dallas, TX.
- 30) "Strain-modified thermopower of ultrathin LaNiO_3 films," Narayan Prasai, Joshua Cohn, Eun Ju Moon, Jian Liu, Michael Kareev, Benjamin, Gray, Jak Chakhalian, James Rondinelli, *Bull. Am. Phys. Soc.* **56**, Abstract P34.00008, Mar. 21-25, 2011, Dallas, TX.
- 31) "Thermal transport in the Quasi-one-dimensional Luttinger liquid candidate, $\text{Li}_{0.9}\text{Mo}_6\text{O}_{17}$," J. L. Cohn, C. A. M. dos Santos, M. S. da Luz, and J. J. Neumeier, 2010 International Conference on Strongly Correlated Electron Systems (SCES 2010), June 27-July 2, 2010, Santa Fe, NM.
- 32) "Thermopower of $[\text{LaNiO}_3/\text{LaAlO}_3]$ Superlattices," J. L. Cohn, N. Prasai, M. Kareev, Jian Liu, B. Gray, V. Kunets, J. Chakhalian, J. Freeland *Bull. Am. Phys. Soc.* **55**, Abstract T37.00010, March 15 - 19, 2010, Portland, Oregon.
- 33) "Giant electro-thermal conductivity and spin-phonon interactions in CaMnO_3 ," J. L. Cohn, Gordon Research Conference on Correlated Electron Systems, Jun. 8 - 13, 2008, Univ. New England, Biddeford, ME.
- 34) "Electrical, Thermal, and Magnetic Properties of Single Crystal CaMn_2O_4 Marokite," B.D. White, J.J. Neumeier, J.A. Souza, C. Chiorescu, J.L. Cohn, *Bull. Am. Phys. Soc.* **53**, Abstract D23.00008, March 10-14, 2008, New Orleans, LA.
- 35) "Linear Crack Arrays and Resistive Anisotropy in $\text{Nd}_{0.2}\text{Sr}_{0.8}\text{MnO}_3$ Thin Films Under Tensile Strain," K. P. Neupane, J. J. Neumeier, and J. L. Cohn, *Bull. Am. Phys. Soc.* **53**, Abstract U23.00006, March 10 - 14, 2008, New Orleans, LA.
- 36) "Doping Dependence of Polaron Hopping Energies in $\text{La}_{1-x}\text{Ca}_x\text{MnO}_3$ ($0 \leq x \leq 0.15$)," K. Neupane, J. J. Neumeier, and J. L. Cohn, *Bull. Am. Phys. Soc.* **52**, Abstract B13.00008, March 5 - 9, 2007, Denver, CO.
- 37) "Low-electric-field Tuned Mobile Carrier Density and Heat Conduction in SrMnO_3 ," J. L. Cohn, C. Chiorescu, and J. Neumeier, *Bull. Am. Phys. Soc.* **52**, Abstract U13.00010, March 5 - 9, 2007, Denver, CO.
- 38) "Low-Electric-Field Tuned Impurity Conduction in Antiferromagnetic Manganites," C. Chiorescu, J. L. Cohn, and J. Neumeier, *Bull. Am. Phys. Soc.* **52**, Abstract W13.00011, March 5 - 9, 2007, Denver, CO.
- 39) "Exchange Striction and Heat Conduction in $\text{Ca}_{1-y}\text{Sr}_y\text{MnO}_3$ ($0 \leq y \leq 0.5$)," J. L. Cohn, C. Chiorescu, and J. Neumeier, *Bull. Am. Phys. Soc.* **51**, Abstract U20.00003, March 13 - 17, 2006, Baltimore, MD.
- 40) "Strong current dependence of resistivity in CaMnO_3 ," C.Chiorescu, J. Neumeier, and J. L. Cohn, *Bull. Am. Phys. Soc.* **51**, Abstract U20.00004, March 13 - 17, 2006, Baltimore, MD.

- 41) "Anomalous Transport in $\text{Ca}_{1-y}\text{Sr}_y\text{MnO}_3$ ($0 \leq y \leq 0.75$)," J. L. Cohn, C. Chiorescu, and J. Neumeier, Bull. Am. Phys. Soc. **50**, March 21 - 25, 2005, Los Angeles, CA.
- 42) "Polaron Transport in Electron-Doped $\text{Ca}_{1-x}\text{La}_x\text{MnO}_3$ ($0 \leq x \leq 0.10$)," J. L. Cohn, C. Chiorescu, and J. Neumeier, Bull. Am. Phys. Soc. **49**, Abstract W24.006, March 18 - 22, 2004, Montreal, Canada.
- 43) "Magnetotransport and Intrinsic Inhomogeneity in Electron-Doped $\text{Ca}_{1-x}\text{La}_x\text{MnO}_3$ ($0 \leq x \leq 0.10$)," C. Chiorescu, J. L. Cohn, and J. Neumeier, Bull. Am. Phys. Soc. **49**, Abstract W24.005, March 22 - 26, 2004, Montreal, Quebec, Canada.
- 44) "The role of O-vacancy in the properties of high dielectric constant system $\text{CaCu}_3\text{Ti}_4\text{O}_{12}$: An Electron Spin Resonance study," C. Israel, R. R. Urbano, O. Aguero, I. Torriani, C. Rettori, P.G. Pagliuso, Zheng Le, J. L. Cohn, A. P. Ramirez, L. Walmsley, and S.B. Oseroff, Bull. Am. Phys. Soc. **49**, Abstract P21.008, March 22 - 26, 2004, Montreal, Quebec, Canada.
- 45) "Carrier Hopping and Dielectric Response in Insulating and Electron-Doped Manganites," M. Peterca, J. Cohn, and J. Neumeier, Bull. Am. Phys. Soc. **48**, Abstract X30.009, March 3 - 7, 2003, Austin, TX.
- 46) "Polaron Hopping and Giant Dielectric Response in the Electron-Doped Manganite $\text{Ca}_{1-x}\text{La}_x\text{MnO}_3$ ($0 \leq x \leq 0.03$)," M. Peterca, J. L. Cohn, and J. J. Neumeier, International Workshop on Oxide Electronics, October 20 - 23, 2002, Tradewinds Sirata Beach Resort, St. Petersburg, FL.
- 47) "Thermal Conductivity as a Probe of Structural and Magnetic Correlations in Electron-Doped $\text{Ca}_{1-x}\text{La}_x\text{MnO}_3$ ($0 \leq x \leq 0.2$)," J. Cohn, B. Zawilski, R. Maier, and J. Neumeier, Bull. Am. Phys. Soc. **47** Abstract J16.010, March 18 - 22, 2002 Indianapolis, IN.
- 48) "Giant Dielectric Constant in the Electron-Doped Manganite $\text{Ca}_{1-x}\text{La}_x\text{MnO}_3$ ($0 \leq x \leq 0.2$)," B. Zawilski, M. Peterca, J. Cohn, and J. Neumeier, Bull. Am. Phys. Soc. **47**, Abstract G16.007, March 18 - 22, 2002 Indianapolis, IN.
- 49) "Coexistence of Magnetism and Ferroelectricity in a New Pseudocubic Perovskite Phase of Thin-Film $\text{BaFe}_x\text{Ti}_{1-x}\text{O}_3$ ($0.5 \leq x \leq 0.75$)," Roland Maier, Joshua L. Cohn, John J. Neumeier, and Leonid A. Benderski, Bull. Am. Phys. Soc. **45**, Abstract S26.161, Mar. 20 - 24, 2000, Minneapolis, MN.
- 50) "New Cubic Phase of Thin-Film Fe-doped BaTiO_3 Grown by Pulsed Laser Deposition," D. Kukuruznyak, R. Maier, J. L. Cohn, J. J. Neumeier, and L. A. Bendersky, Bull. Am. Phys. Soc. **44**, Abstract JC36.05, March 20 - 26, 1999, Atlanta, GA.
- 51) "Glass-like heat conduction in crystalline clathrate semiconductors," George Nolas, Joshua Cohn, Michael Kaeser, Terry Tritt, Sandra Schujman, and Glen Slack, Bull. Am. Phys. Soc. **44**, Abstract IC23.11, March 20 - 26, 1999, Atlanta, GA.
- 52) "New Magnetic And Ferroelectric Cubic Phase Of Thin-Film Fe-Doped BaTiO_3 ," Materials Research Society Symposium JJ, Nov. 29 - Dec. 3, 1999, Boston, MA.
- 53) "Phase Behavior of the Superconducting-State Enhancement of Thermal Conductivity in Hg-Cuprates," C. P. Popoviciu, J. L. Cohn, Q. M. Lin, and C. W. Chu, Bull. Am. Phys. Soc. **42**, Abstract N10.08, March 17 - 21, 1997, Kansas City, MO.

- 54) "Cuprate Thermal Conductivity and Superconducting Phase Behavior," J. L. Cohn, Gordon Research Conference on Superconductivity, Ventura, CA, Jan. 12 - 17, 1997.
- 55) "Superconducting-State Enhancement of In-plane Thermal Conductivity in the Cuprates: Correlation with the Pair Density," J. L. Cohn, Bull. Am. Phys. Soc. **41**, Abstract F12.07, March 17 - 22, 1996, St. Louis, MO.
- 56) "Systematic Study of the Thermal Conductivity in $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$," C. Popoviciu and J. L. Cohn, Bull. Am. Phys. Soc. **41**, Abstract F12.06, March 17 - 22, 1996, St. Louis, MO.
- 57) "Anomalous Phonon Damping in Insulating Cuprates," J. L. Cohn, Bull. Am. Phys. Soc. **40**, Abstract B13.07, March 20 - 24, 1995, San Jose, CA.
- 58) "Lattice Contribution to the Superconducting-State Enhancement of Thermal Conductivity in the Cuprates," J. L. Cohn, C. K. Lowe-Ma, T. A. Vanderah, and M. S. Osofsky, Bull. Am. Phys. Soc. **39**, 920 (1994).
- 59) "Superconducting-State Thermal Transport in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$: What Causes The Enhancement for $T < T_c$?" J. L. Cohn, Bull. Am. Phys. Soc. **38**, 475 (1993).
- 60) "Thermal Conductivity of $\text{Nd}_{2-x}\text{Ce}_x\text{CuO}_{4-y}$," J. L. Cohn, J. L. Peng, Z. Y. Li, and R. L. Greene, Bull. Am. Phys. Soc. **37**, 475 (1992).
- 61) "Thermoelectric Power of Untwinned $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$," J. L. Cohn, E. F. Skelton, S. A. Wolf, and J.-Z. Liu, Gordon Research Conference on Superconductivity, Jan. 6 - 10, 1992, Oxnard, CA.
- 62) "Evidence for Strong Electron-Phonon coupling in Thermal Conductivity of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$," J. L. Cohn, S. A. Wolf, T. A. Vanderah, J.-Z. Liu, V. Selvamanickam, and K. Salama, Materials Research Society Symposium H, Dec. 2 - 6, 1991, Boston, MA.
- 63) "Thermoelectric Power of Untwinned $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$," J. L. Cohn, E. F. Skelton, S. A. Wolf, and J.-Z. Liu, Materials Research Society Symposium H, Dec. 2 - 6, 1991, Boston, MA.
- 64) "Normal-State Transport in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$: Phonon Scattering and Multiband Conduction," J. L. Cohn, S. A. Wolf, V. Selvamanickam, and K. Salama, High- T_c Superconductor Technologies Symposium, Proceedings of the Electrochemical Society, May 5 - 10, 1991, Washington, DC.
- 65) "Phonon Scattering and Normal-State Transport in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$," J. L. Cohn, S. A. Wolf, V. Selvamanickam, and K. Salama, Bull. Am. Phys. Soc. **36**, 673 (1991).
- 66) "Phonon Scattering in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$: Thermal Conductivity and Thermopower," J. L. Cohn, V. Selvamanickam, and K. Salama, Materials Research Society Symposium H, Nov. 26 - Dec. 2, 1990, Boston, MA.
- 67) "Low-Temperature Transport Properties of Single-Crystal $\text{Bi}_{2+x}\text{Sr}_{2-y}\text{CuO}_{6\pm\delta}$," J. L. Cohn, W. L. Lechter, and M. S. Osofsky, Bull. Am. Phys. Soc. **35**, 424 (1990).
- 68) "Low-Temperature Electronic Transport in Percolating 2-D Films of $\text{Bi}/\text{Bi}_2\text{O}_3$," J. L. Cohn, and C. Uher, Bull. Am. Phys. Soc. **34**, 458 (1989).

- 69) “Low Temperature Thermal Conductivity of $\text{YBa}_2\text{Cu}_3\text{O}_7$ Superconductors,” J. L. Cohn and C. Uher, Bull. Am. Phys. Soc. **33**, 466 (1988).
- 70) “Thermoelectric Power and Coulomb Gap in Thin Bismuth Films,” J. L. Cohn, J.-J. Lin, and C. Uher, Bull. Am. Phys. Soc. **32**, 816 (1987).
- 71) “Transport Properties of Oxidized Thin Films of Bismuth,” J. L. Cohn and C. Uher, Bull. Am. Phys. Soc. **31**, 546 (1986).

PROFESSIONAL

Funded Research:

Department of Energy, Basic Energy Sciences, 9/15/21-9/14/24, \$492,696
 “Thermoelectric Effects and Spin-mediated Heat Transport in Novel Materials
 Principal Investigator: J. L. Cohn

Department of Energy, Basic Energy Sciences, 9/15/18-9/14/21, \$492,696
 “Thermoelectric Effects and Spin-mediated Heat Transport in Novel Materials
 Principal Investigator: J. L. Cohn

Department of Energy, Basic Energy Sciences, 9/15/15-9/14/18, \$455,823
 “Thermoelectric Effects and Spin-mediated Heat Transport in Oxide
 Conductors and Insulators”
 Principal Investigator: J. L. Cohn

Department of Energy, Basic Energy Sciences, 9/15/12-9/14/15, \$395,000
 “Extreme Thermoelectric Behavior in Low-Dimensional Oxide Conductors”
 Principal Investigator: J. L. Cohn

Research Corporation Opportunity Award, 11/6/05-12/31/09, \$75,000
 “Dielectric Studies of Low-Dimensional and Competing-Order
 Ground States in Transition-Metal Oxides
 Principal Investigator: J. L. Cohn

National Science Foundation, 9/1/00-8/31/04, \$297,000
 “Transport and Magnetic Studies of Phase Separation
 and Electron Correlations in Magnetic and
 Superconducting Oxides,”
 Principal Investigator: J. L. Cohn

National Science Foundation, 9/1/98-12/31/02, \$360,000
 “Molecular Materials from Complexes with Bipyridine-like
 Ligands: Novel Electrides,”
 Principal Investigator: L. Echegoyen (Chemistry Department)
 Co-Principal Investigator: J. L. Cohn

National Science Foundation, 9/1/96-8/31/00, \$235,000,
 “Thermal Transport in Copper and Manganese Oxides:
 Lattice Interactions and the Superconducting and
 Magnetic Phase Behavior,”
 Principal Investigator: J. L. Cohn

Defense Advanced Research Projects Admin. through the Office of Naval Research, 12/20/98-12/19/99, \$5,000

“University of Miami Conference on High-Temperature Superconductivity and Related Topics, 7-13 January, 1999,”

Principal Investigator: J. L. Cohn

Co-PI's: J. Ashkenazi, S. Barnes, F. Zuo

Marlow Industries, Inc., 8/1/98-7/31/99, \$9,000

Financial Agreement between UM and Marlow for measurements of transport properties of thermoelectrics,

Project Coordinator for UM: J. L. Cohn

Naval Research Laboratory, 9/1/95-10/31/97, \$20,000,

“Development and Application of an AC-Technique for Measuring Thermal Conductivity of Superconducting and Cryocooling Materials,”

Principal Investigator: J. L. Cohn

National Science Foundation, 6/1/95-5/31/96, \$130,000,

“Acquisition of a Pulsed Laser Deposition System and an X-ray Diffractometer,”

Principal Investigator: J. L. Cohn

Office of Naval Research, 12/15/94-12/14/95, \$7,673

“University of Miami Workshop on High-Temperature Superconductivity: *Physical Properties and Mechanisms*,”

Jan. 5-11, 1995 Coral Gables, FL,

Principal Investigator: J. L. Cohn

Co-PI's: J. Ashkenazi, S. Barnes, F. Zuo

Editorial Responsibilities:

- 2021 Co-editor, Frontiers Research Topic: “Lattice Vibrations in Organic-Inorganic Hybrid Materials,”
with Giovanna D'Angelo (Univ. of Messina), Claudio Quarti (Univ. of Mons),
and Luisa Whittaker-Brooks (The Univ. of Utah).
- 2019- Associate Editor, Condensed Matter Physics,
specialty section of Frontiers in Physics
- Co-editor, Proceedings of the University of Miami Conference on High-Temperature Superconductivity and Related Topics 7-13 January, 1999, (American Institute of Physics, Woodbury, NY), Vol. 483.
- Co-editor, Proceedings of the University of Miami Workshop on High-Temperature Superconductivity: *Physical Properties and Mechanisms*, *Journal of Superconductivity*, Vol. 8, No.'s 4 and 5 (1995).

Professional Organizations:

Co-Founder, University of Miami Center
for Advanced Microscopy (UMCAM)

Societies:

Member, American Physical Society
Member, Materials Research Society
Member, American Association of Physics Teachers

Honors, Awards:

- 2010 University of Miami 2011 Provost Research Award
- 2009 Outstanding Referee, American Physical Society (240 selected out of 40,000)
- 2005 University of Miami Research Council Summer Research Award
- 1994 University of Miami Research Council General Research Award
- 1994 University of Miami Research Council Summer Research Award
in Natural Sciences and Engineering
- 1993 University of Miami Research Council Summer Research Award
in Natural Sciences and Engineering
- 1992 Knight Faculty Fellow, University of Miami
- 1992 Co-author of “Understanding Superconductivity in
the Cuprates: Theory and Experiment,” selected as
most outstanding article in the annual Naval
Research Laboratory Review
- 1989 Nominee for outstanding Ph.D thesis in Physics,
University of Michigan
- 1983 Bertman Prize in Physics, Wesleyan University
- 1983 Inducted Member, Sigma Xi, Wesleyan University

Conferences:

- 1999 Co-organizer, University of Miami HTS99,
Conference on High-Temperature Superconductivity and,
other Oxides, Jan. 7-13, Coral Gables, FL.
- 1995 Co-organizer, University of Miami Workshop on
High-Temperature Superconductivity: *Physical
Properties and Mechanisms*, Jan. 5-11, Coral Gables, FL.

Invited Presentations:

- 2021 “Magnon heat conduction and spin-Seebeck effect in insulating helimagnets,”
Institute Seminar, May 4, 2021,
Technische Universität Dresden (virtual presentation).

- “Magnon heat conduction and spin-Seebeck effect in insulating helimagnets,”
DOE-BES, Division of Materials Sciences and Engineering,
Physical Behavior of Materials Program,
Principle Investigators’ Meeting, March 10-12, 2021 (Virtual Program).
- 2019 “Magnon heat conduction and spin-Seebeck effect in helimagnetic Cu_2OSeO_3 ,”
Spintronics Meets Topology in Quantum Materials Conference,
Kavli Insititute of Theoretical Physics, Santa Barbara, CA, Nov. 12-15, 2019.
- “Introductory Physics for Life Sciences Students
at UM: SCALE-UP Pedagogy,”
Wilkes Honors College–Florida Atlantic University,
March 14, 2019, Jupiter, FL.
- “Spin-Mediated Heat Conduction and Low-Temperature Spin-Seebeck
Effect in the Helimagnetic Insulator Cu_2OSeO_3 ,”
DOE-BES, Division of Materials Sciences and Engineering,
Physical Behavior of Materials Program,
Principle Investigators’ Meeting, March 19-21, 2019, Gaithersburg, MD.
- 2017 “Thermoelectric Effects and Spin-Mediated Thermal Properties of
Oxide Conductors and Insulators,”
DOE-BES, Division of Materials Sciences and Engineering,
Physical Behavior of Materials Program,
Principle Investigators’ Meeting, May 2-4, 2017, Gaithersburg, MD.
- 2016 “Magnon heat conduction in the insulating helimagnet Cu_2OSeO_3 ,”
Gordon Research Conference on Correlated Electron Systems,
Mount Holyoke College, South Hadley, MA, Jun. 26-July 1, 2016.
- 2015 “My Love Affair with Lithium Purple Bronze: Low Dimensionality
and Extreme Thermoelectric Properties,”
Clark University Physics Department,
Worcester, Massachusetts, Oct. 8, 2015
- “Thermoelectric Effects in quasi-one-dimensional Mo-oxide conductors,”
DOE-BES, Division of Materials Sciences and Engineering,
Physical Behavior of Materials Program,
Principle Investigators’ Meeting, March 30-April 1, 2015, Gaithersburg, MD.
- 2013 “Extreme Thermoelectric Behavior in Low-Dimensional Oxide Conductors,”
DOE-BES, Division of Materials Sciences and Engineering,
Physical Behavior of Materials Program,
Principle Investigators’ Meeting, April 14-17, 2013, Bolger Center,
Potomac, MD
- 2012 “Unusual thermoelectric effects in the quasi-one-dimensional metal,
 $\text{Li}_{0.9}\text{Mo}_6\text{O}_{17}$,” IX Brazilian School of Superconductivity (EBS2012)
and IV Workshop on Frontiers of Superconductivity and
Magnetism (IV WFSM), Olinda, PE Brazil, December 15, 2012

- “Introduction to the thermopower of metals”
IX Brazilian School of Superconductivity (EBS2012) and IV Workshop on
Frontiers of Superconductivity and Magnetism (IV WFSM)
Olinda, PE Brazil, December 10, 2012
- “Giant Bipolar Nernst Effect in the quasi-one-dimensional metal, $\text{Li}_{0.9}\text{Mo}_6\text{O}_{17}$ ”
Condensed Matter Physics, Statistical Physics, and Mathematics Seminar
Florida International University, Miami, FL Sept. 21, 2012.
- 2011 “Giant Bipolar Nernst Effect in a quasi-one-dimensional metal,”
International Conference on Thermoelectrics
Traverse City, Michigan, July 17-21, 2011.
- “Introduction to Heat Conduction in Solids,”
Sao Paulo Advanced School on Anisotropic Conductors and Superconductors
Lorena Sao Paulo, Brazil, Aug. 9.
- “Thermoelectric Properties,”
Sao Paulo Advanced School on Anisotropic Conductors and Superconductors
Lorena Sao Paulo, Brazil, Aug. 11.
- “Measuring Thermal Conductivity and Thermopower,”
Sao Paulo Advanced School on Anisotropic Conductors and Superconductors
Lorena Sao Paulo, Brazil, Aug. 15.
- “Giant Nernst Effect in the Quasi-One-Dimensional Metal, $\text{Li}_{0.9}\text{Mo}_6\text{O}_{17}$,”
Sao Paulo Advanced School on Anisotropic Conductors and Superconductors
Lorena Sao Paulo, Brazil, Aug. 17.
- 2008 “Giant electro-thermal conductivity and spin-phonon interactions in CaMnO_3 ,”
Gordon Research Conference on Correlated Electron Systems,
Univ. New England, Biddeford, ME, Jun. 8-13, 2008.
- 2005 “Transport Anomalies in $\text{Ca}_{1-y}\text{Sr}_y\text{MnO}_3$: Induced Surface Polarization?”
Telluride Workshop on Physics of Novel Oxides,
Telluride, CO, Aug. 2-6, 2005.
- 2004 “Thermal Transport in Novel Materials for Technology
and Basic Research, Physics Department Colloquium,
Montana State University, Jan. 23, 2004.
- 2003 “Giant Dielectric Permittivity of Electron-Doped
 $\text{Ca}_{1-x}\text{La}_x\text{MnO}_3$ ($x \leq 0.03$) Thin Films,”
International Symposium on Inhomogeneous and Strongly
Correlated Materials with Novel Electronic Properties,
Study of Matter at Extreme Conditions 2003 Meeting,
Florida International University, March 24-28, 2003.
- “Giant Dielectric Permittivity of Electron-Doped
 $\text{Ca}_{1-x}\text{La}_x\text{MnO}_3$ ($x \leq 0.03$) Thin Films,”
2003 Joint Symposium of the Florida Society for
Microscopy and the Florida Chapter of the American
Vacuum Society, University of Central Florida, March 17, 2003.

- 2002 “Heat Conduction and Magnetic Phase Behavior in Electron-Doped $\text{Ca}_{1-x}\text{La}_x\text{MnO}_3$ ($0 \leq x \leq 0.2$),” Materials Science Division, Argonne National Laboratory, Jun. 3, 2002.
- 2000 “Thermal Transport as a Probe of Electronic Phase Separation in Superconducting and Magnetic Oxides,” Physics Department Colloquium, Florida Atlantic University, Feb. 4, 2000.
- 1999 “Heat Conduction and Charge Ordering in Perovskite Manganites, Nickelates and Cuprates,” 25th International Thermal Conductivity Conference, June, 1999, Ann Arbor, MI.
- 1998 “Thermal Transport as a Probe of Localized Charge and Lattice Distortions in Cuprates and Manganites,” Euroconference, *Polarons: Condensation, Pairing, Magnetism*, June, 1998, Erice, Sicily.
- 1996 “Thermal Transport in the Cuprates: Changes with Doping Across the Phase Diagram,” Florida Atlantic University Physics Department, Oct., 1996.
- “Thermal Transport in the Cuprates: Changes with Doping Across the Phase Diagram,” SPIE Conference on Oxide Superconductors: Physics and Nano-Engineering II, Jan. 27-Feb.2, 1996, San Jose, CA.
- 1995 “Anomalous Phonon Damping in Insulating Cuprates,” University of Miami Workshop on Superconductivity, Jan., 1995, Coral Gables, FL.
- 1992 “Thermal and Thermoelectric Transport in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$,” Physics Department, April, 1992, University of Miami.
- “Electronic Transport in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$: Chains and Planes,” April, 1992, Georgia State University.
- “Chain and Plane Transport in Untwinned $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$,” March 1992 Meeting of the American Physical Society, Indianapolis, IN.
- 1991 “Normal-State Transport Properties of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$: Conventional Metallic Picture,” Jan. 3-9, 1991, University of Miami Workshop on Electronic Structure and Mechanisms For High-Temperature Superconductivity
- 1988 “Percolation and Localization Effects in Homogeneous and Semicontinuous Thin Bismuth Films,” Nov. 1998, AT&T Bell Laboratories
- “Low-Temperature Electronic Transport in Homogeneous and Semicontinuous Thin Bismuth Films,” Nov. 1988, Naval Research Laboratory

Post-Doctoral Fellowships:

Office of Naval Technology and American Society
for Engineering Education Postdoctoral Fellow,
Naval Research Laboratory, 1989-1992

TEACHING

Courses: Undergraduate honors sections of Introductory Mechanics,
Electromagnetism, SCALE-UP College Physics
Conceptual Physical Science for Nonscientists,
Modern Physics
Condensed Matter Physics Seminar
Special Topics in Condensed Matter Physics
Advanced Solid State Physics

Advising:

2019-20 Jordane Bloomfield, Undergraduate Research
2019 Alejandra Zavala, Undergraduate Research
2016 Nathaniel Aden, Graduate Research
2015-16 Juan Bohorquez, Undergraduate Research
2015-20 Dharmendra Shukla, Graduate Research
2014-19 Artem Akopyan, Graduate Research
2014-15 Alexandra Cote, Undergraduate Research
2013-14 Christine Chesley, Undergraduate Research
2013 Christian Perez, Undergraduate Research
2012-18 Saeed Moshfeghyeganeh, Graduate Research
2009-15 Narayan Prasai, Graduate Research
2010 Juan Trastoy Quintella, Undergraduate Research
2009-10 Yue Yu, Graduate Research
2009-10 Paul Boynton, Undergraduate Research
2008-10 Jacob Trivino, Undergraduate Research
2004-09 Krishna Neupane, Graduate Research (Ph.D., May, 2009)
2001-08 Corneliu Chiorescu, Graduate Research (Ph.D., May, 2008)
2004-06 Xing Zhang, Graduate Research
2001-03 Mihai Peterca, Graduate Research (M.S., Aug. 2005)
2001-02 Bartosz Zawilski, Postdoctoral Fellow
1998-02 Roland Maier, Graduate Research (Ph.D., May, 2002)
1999-00 Simon Schuler, Undergraduate Research
1997-99 Dmitry Kukuruznyak, Graduate Research
1997-98 Michelle Belfort, Undergraduate Research
1994-97 Ciprian Popoviciu, Graduate Research (Ph.D., Dec. 1997)
1996-97 Bogdan Alexandreanu, Graduate Research
1994-95 Gonzalo Salgueiro, Graduate Research
1993-94 Dmitri Litvinov, Graduate Research
1993-95 Michael Rivera, Undergraduate Research
1994-95 Sergio Carmet, Undergraduate Research

SERVICE

College: BIL/CHM Visiting Assistant Professor Search Committee, Chair (2015)
CHM Energy/Materials Faculty Search Committee (2015/16)
New Science Building (MESA Initiative) Committee

Community: Regular physics presentations to school groups,
including Miami Mission class *Creative Living*, Kids 'N Culture
Prior Member, David Fairchild Elementary School Educational
Excellence School Advisory Council
Prior David Fairchild Elementary School Science Fair Judge
Prior Advisory panel member, Miami Museum of Science,
exhibit proposal, "The Atoms Family"