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CURRENT ACADEMIC POSITION:

Associate Professor, Boston College, Physics Department (Tenured: March 2012).

RESEARCH INTERESTS:

- Meteorite/Asteroid Formation: Physical and thermal properties of meteorites. Characterization of meteorites via thermal conductivity, specific heat and resonant ultrasound spectroscopy at $5 < T < 300$ K. Collaborations: Specula Vaticana and U. Central Florida.
- Thermoelectric material synthesis and characterization. Nano-crystallization preparation techniques, (e.g. Bi_2Te_3 , PbTe , FeSb_2 and CeAl_3). Measuring: Seebeck coefficient, thermal conductivity, and electrical resistivity at $2 < T < 350$ K and $H \leq 90000$ Oe. High-temperature measurements of thermoelectric materials (bulk/thin-film) resistivity and Seebeck coefficient ($300 < T < 850$ K, $H = 0$).
- Exploration of Martinite materials and shape memory alloys (e.g. Ni_2MnGa , AuZn , via resistivity, magneto-resistivity, dilatometry, and specific heat. Collaboration: Los Alamos National Laboratory.

EDUCATION:

Postdoctoral Research Associate: Los Alamos National Laboratory, Los Alamos, New Mexico USA (May 2004 - May 2006) Project Topics: Uranium Electron Structure, ARPES and UHV Surface Spectroscopy. Postdoctoral Supervisors: Drs. J. L. Smith and R. K. Schulze.

Boston College Chestnut Hill, MA, USA Doctor of Philosophy in Physics, May 2004, Dissertation Title: "Crossover From Anomalous to Conventional Antiferromagnetism and Probing for Quantum Critical Behavior in $\text{U}(\text{Pt}_{1-x}\text{Pd}_x)_3$ with $0 \leq x \leq 0.020$ " Dissertation Advisor: Professor Michael J. Graf, Ph.D.

Santa Clara University/Graduate Theological Union: Jesuit School of Theology, Berkeley, CA, USA, Masters of Sacred Theology, September 1993 - May 1994, Thesis Title: "The Effects of Theodicy on the Anthropology of St. Gregory of Nyssa" Thesis Advisor: Professor M. A. Donovan, S.C., Ph.D.

Santa Clara University-Graduate Theological Union: Jesuit School of Theology, Berkeley, CA, USA, Masters of Divinity, September 1990 - May 1993.

University of Scranton Scranton, PA, USA, Bachelor of Science Electronics Engineering, September 1978 - May 1982, Honors: Dean's List 1979, May 1980 received the Professional Engineer's Scholarship for Outstanding Performance.

COURSES TAUGHT:

Undergraduate:

PH210 - Introduction to Physics with Calculus (S-2008, S-2009).
PHYS2101 - Introduction to Physics with Calculus (S-2018, S-2019).
PH183 - Foundations of Physics I with Algebra (F-2009, F-2010, F-2011).
PH184 - Foundations of Physics II with Algebra (S-2010, S-2011, S-2012).
PH409 - Contemporary Electronics Laboratory (F-2006, F-2007, F-2008).
PHYS3501 - Contemporary Electronics Laboratory (F-2018, F-2019)
PHYS4515 - The Physics of Conventional and Alternative Energy (F-2012, F-2013, F-2014, F-2016).
PHYS496102 - Senior Honors Thesis, Czajka (F-2015, S-2016).
PHYS496102 - Senior Honors Thesis, Noyes (F-2017, S-2018).
PHYS496102 - Senior Honors Thesis, Bonidie (S-2019).
PHYS496102 - Senior Honors Thesis, Tamburri (S-2020).
PHYS4350 – Experiment in Physics (S-2013, S-2014, S-2017).
PHYS535-99 – Readings and Research: Experimental Physics, Schlitt (F-2013).

Graduate:

PH79917- Readings and Research: H_{C2} Curves of Magnetically Doped V_3Si (S-2010).
PH79917- Readings and Research: T_c and Magnetization of $Ce(Co_x-Mn_y)In_5$ (S-2011).
PHYS7708- Graduate Seminar (S-2020).

Doctoral Students:

Doctoral Continuation PH99917, Kevin Lukas: F-2009 to F-2013
Doctoral Continuation PH99917, M. Pokharel: F-2010 to S-2015
Doctoral Continuation PH99917: M. Yao F-2011 to S-2017
Doctoral Continuation PH99917: N. Dahal: S-2013 to F-2014

Current Graduate Thesis Advisee: None at the present time.

Current Graduate Academic Advisees: Xinyue Zhang, Tyler Dodge, Xueyuan Wu

Current Undergraduate Research Fellows: Alex Wasilkoff

Current Undergraduate Thesis Advisee: None at the present time.

JOURNAL REFEREE:

Nature Communications, Applied Physics Letters, Nanoscale, New Journal of Physics, Physics Letters A, Philosophical Magazine & Philosophical Magazine Letters, International Journal of Mining, International Journal of Thermal Science, Materials Chemistry Physics, Metals, Journal of Electronic Materials, Journal of Physics Condensed Matter D: Applied Physics, Crystals, Transactions on Magnetics, Journal of Geophysical Research, Meteoritics and Planetary Science.

PUBLISHED BOOK CHAPTERS:

C. P. Opeil, and K. C. Lukas, "Cerium-, Samarium-, Holmium-Doped Bi₈₈Sb₁₂" Nanoscale Thermoelectrics, Chapter 8, *Lecture Notes in Nanoscale Science and Technology* Vol. 16, Ed. X. Wang and Z.M. Wang. Zurich, Switzerland: Springer International Publishing, 255-270, 2013. Hardcover, Print.

H-index = 22 (as of 18 July 2020)

REFEREED JOURNALS, PUBLISHED-ACCEPTED:

Citations numbers as of: 18 July 2020, average 35.92 citations per item, 2191 total citations.

66. "The Surprising Thermal Properties of CM Carbonaceous Chondrites"
C. P. Opeil, D. T. Britt, R. J. Macke and G. J. Consolmagno, *Meteoritics & Planetary Science* in press (2020).
Citations: 0
65. "Heat capacities of ordinary chondrite falls below 300 K"
R. J. Macke, SJ, C. Opeil, SJ and G. J. Consolmagno, SJ, *Meteoritics & Planetary Science* **54**, 2729–2743 (2019).
<https://doi/10.1111/maps.13385>
Citations: 0
64. "Experimental determination of phonon thermal conductivity and Lorenz ratio of single-crystal bismuth telluride"
Mengliang Yao, Cyril Opeil, Stephen Wilson and Mona Zebarjadi, *MRS Communications*, **7**, 922-927 (2017).
<http://dx.doi.org/10.1557/mrc.2017.118>
Citations: 1
63. "Experimental determination of phonon thermal conductivity and Lorenz ratio of single crystal metals: Al, Cu, and Zn"
Mengliang Yao, Mona Zebarjadi and Cyril P. Opeil, *J. Appl. Phys.* **122**, 135111 (2017).
<http://dx.doi.org/10.1063/1.4997034>
Citations: 1
62. "Low temperature thermoelectric properties of p-type copper selenide with Ni, Te and Zn dopants"
Mengliang Yao, W. Liu, X. Chen, Zhensong Ren, S. Wilson, Zhifeng Ren and C. Opeil *J. Alloy and Compd.* **669** 718-721 (2017).
<http://dx.doi.org/10.1016/j.jallcom.2016.12.400>
Citations: 6
61. "Anomalous CDW ground state in Cu₂Se: A wave-like fluctuation of the dc I-V curve near 50 K"
Mengliang Yao, W. Liu, X. Chen, Zhensong Ren, S. Wilson, Zhifeng Ren and C. Opeil *J. Materiomics* **3** 150-157 (2017).
<http://dx.doi.org/10.1016/j.jmat.2016.12.003>

Citations: 1

60. "Seven Billion and Counting: Paradise Crowded"
C. Opeil
Integritas **8.3**, 1-16 (Fall, 2016).
[doi: 10.6017/integritas.v8i3p1](https://doi.org/10.6017/integritas.v8i3p1)
Citations: 0
59. "Enhancement of Thermoelectric Performance of *n*-Type PbSe by Cr Doping with Optimized Carrier Concentration"
Q. Zhang, E. K. Chere, K. McEnaney, M. Yao, F. Cao, Y. Ni, S. Chen, C. Opeil, G. Chen, and Z. Ren,
Adv. Energy Mater. **5**, 1401977 (2015).
<http://dx.doi.org/10.1002/aenm.201401977>
Citations: 48
58. "n-type thermoelectric material $\text{Mg}_2\text{Sn}_{0.75}\text{Ge}_{0.25}$ for high power generation"
W. Liu, H. S. Kim, S. Chen, Q. Jie, B. Lv, M. Yao, Zhensong Ren, C. P. Opeil, S. Wilson, C.-W. Chu, and Zhifeng Ren,
Proc. Nat. Acad. of Sci. USA, **112**/11, 3269–3274 (2015).
<http://dx.doi.org/10.1073/pnas.1424388112>
Citations: 105
57. "Influence of electron doping on the ground state of $(\text{Sr}_{1-x}\text{La}_x)_2\text{IrO}_4$ "
X. Chen, T. Hogan, D. Walkup, W. Zhou, M. Pokharel, M. Yao, W. Tian, T. Z. Ward, Y. Zhao, D. Parshall, C. Opeil, J. W. Lynn, V. Madhavan, and S. D. Wilson,
Phys. Rev. B **92**, 075125 (2015).
<http://dx.doi.org/10.1103/PhysRevB.92.075125>
Citations: 59
56. "Enhancement of thermoelectric performance in *n*-type $\text{PbTe}_{1-y}\text{Se}_y$ by doping Cr and tuning Te:Se ratio"
E. K. Chere, Q. Zhang, K. McEnaney, M. Yao, F. Cao, J. Sun, S. Chen, C. Opeil, G. Chen, Z. Ren,
Nano Energy, Vol. **13**, April 2015, 113-122.
<http://dx.doi.org/10.1016/j.nanoen.2015.02.026>
Citations: 22
55. "Nanostructured YbAgCu_4 for Potentially Cryogenic Thermoelectric Cooling" M. Koirala, H. Wang, M. Pokharel, Y. Lan, C. Guo, C. Opeil, and Z. Ren,
Nano Lett. **14**, 5016-5020 (2014).
<http://dx.doi.org/10.1021/nl501436w>
Citations: 11
54. "Thermoelectric properties of CeAl_3 prepared by hot-press method" M. Pokharel, T. Dahal, Zhensong Ren, P. Czajka, S. Wilson, Zhifeng Ren, C. Opeil,

- Energ. Convers. Manage. **87**, 584-588 (2014).
<http://dx.doi.org/10.1016/j.enconman.2014.07.050>
 Citations: 5
53. “Induced electronic anisotropy in bismuth thin films” A. D. Liao, M. Yao, F. Katmis, M. Li, S. Tang, J. S. Moodera, C. Opeil, and M. S. Dresselhaus, *Appl. Phys. Lett.* **105**, (2014).
<http://dx.doi.org/10.1063/1.4893140>
 Citations: 6
52. “Bi₂S₃ nanonetwork as precursor for improved thermoelectric performance” W. Liu, C. Fei Guo, M. Yao, Y. Lan, H. Zhang, Q. Zhang, S. Chen, C. P. Opeil, Z. Ren *Nano Energy*, Volume **4**, March 2014, 113-122.
<http://dx.doi.org/10.1016/j.nanoen.2013.12.015>
 Citations: 35
51. “Thermoelectric properties of nanocomposite heavy fermion CeCu₆” M. Pokharel, T. Dahal, Z. Ren, C. Opeil, *Journal of Alloys and Compounds*, **609**, 228-232 (2014).
<http://dx.doi.org/10.1016/j.jallcom.2014.04.139>
 Citations: 0
50. “Enhanced Thermoelectric Performance of Te-doped FeSb₂ Nanocomposite” M. Pokharel, H. Z. Zhao, M. Koirala, Z. F. Ren, and C. Opeil, *Journal of Low Temperature Physics*, **176**, 122-130 (2014).
<http://dx.doi.org/10.1007/s10909-014-1148-y>
 Citations: 2
49. “Magnetic Properties of Hot-Pressed FeSb₂” M. Pokharel, H. Zhao, K. A. Modic, Z. Ren, and C. Opeil, *IEEE Transactions on Magnetics*, VOL. 50, NO. 5, 2400304, MAY 2014.
<http://dx.doi.org/10.1109/TMAG.2013.2292607>
 Citations: 0
48. "Carrier localization and electronic phase separation in a doped spin-orbit driven Mott phase in Sr₃(Ir_{1-x}Ru_x)₂O₇" C. Dhital, T. Hogan, W.-W. Zhou, X. Chen, Zhensong Ren, M. Pokharel, Y. Okada, M. Heine, W. Tian, Z. Yamani, J. Helton, J. Lynn, C. Opeil, Z. Wang, V. Madhavan, and S. Wilson, *Nature Communications* **5**, Article Number 3377, 25 Feb 2014.
<http://dx.doi.org/10.1038/ncomms4377>
 Citations: 29
47. “Increased thermoelectric performance by Cl doping in nanostructured AgPb₁₈SbSe_{20-x}Cl_x” Q. Zhang, Y. Lan, S. Yang, F. Cao, M. Yao, C. Opeil, D. Broido, G. Chen, Z. Ren *Nano Energy*, Volume **2**, Issue 6, November 2013, 1121-1127.

<http://dx.doi.org/10.1016/j.nanoen.2013.09.009>

Citations: 21

46. “Grain boundary Kapitza resistance analysis of nanostructured FeSb₂” M. Pokharel, H. Zhao, Z. Ren, and C. Opeil,
International Journal of Thermal Sciences **71**, 32-35 (2013).
<http://dx.doi.org/10.1016/j.ijthermalsci.2013.03.009>
Citations: 5
45. “Effect of Hf Concentration on Thermoelectric Properties of Nanostructured N-Type Half-Heusler Materials Hf_xZr_{1-x}NiSn_{0.99}Sb_{0.01}”
S. Chen, K. C. Lukas, W. Liu, C. P. Opeil, Z. Ren,
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Citations: 114
44. “Studies on the Bi₂Te₃–Bi₂Se₃–Bi₂S₃ system for mid-temperature thermoelectric energy conversion”
W. Liu, K. C. Lukas, K. McEnaney, S. Lee, Q. Zhang, C. P. Opeil, G. Chen and Z. Ren,
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43. “High thermoelectric performance by resonant dopant indium in nanostructured SnTe”
Q. Zhang, Bolin Liao, Y. Lan, K. Lukas, W. Liu, K. Esfarjani, C. Opeil, D. Broido, G. Chen, Z. Ren,
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<http://dx.doi.org/10.1073/pnas.1305735110>
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42. “Thermoelectric Property Enhancement by Cu nanoparticles in Nanostructured FeSb₂” M. Koirala, H. Zhao, M. Pokharel, S. Chen, T. Dahal, C. Opeil, G. Chen, and Z. Ren,
Appl. Phys. Lett. **102**, 213111 (2013).
<http://dx.doi.org/10.1063/1.4808094>
Citations: 22
41. “Phonon drag effect in nanocomposite FeSb₂” Mani Pokharel, Huaizhou Zhao, Kevin Lukas, Zhifeng Ren, Cyril Opeil,
MRS Communications **3**, 31-36 (2013).
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Citations: 19
40. “Study of the Thermoelectric Properties of Lead Selenide Doped with Boron, Gallium, Indium, or Thallium” Q. Zhang, F. Cao, K. Lukas, W. Liu, K. Esfarjani, C. Opeil, D. Broido, D. Parker, D. J. Singh, G. Chen, and Z. Ren,
J. Amer. Chem. Soc. **134** (42) 17731-17738, October 24, 2012.

<http://pubs.acs.org/doi/abs/10.1021/ja307910u>

Citations: 66

39. “Role of phonon dispersion in studying phonon mean free paths in skutterudites”
M. Zebarjadi, J. Yang, K. Lukas, B. Kozinsky, B. Yu, M. S. Dresselhaus, C. Opeil, Z. Ren, G. Chen,
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38. “Thermal Stability of Thermoelectric Materials via In Situ Resistivity Measurements”
K. C. Lukas, W.S. Liu, Q. Jie, Z.F. Ren, C.P. Opeil,
Review of Scientific Instruments **83**, 115114, 2012.
<http://dx.doi.org/10.1063/1.4767904>
Cited 2 times
37. “Figure-of-Merit Enhancement in Nanostructured $\text{FeSb}_{2-x}\text{Ag}_x$ with Nano-inclusions $\text{Ag}_{1-y}\text{Sb}_y$ ”
H. Zhao, M. Pokharel, S. Chen, B. Liao, K. Lukas, H. Wang, C. Opeil, G. Chen, Z. Ren
Nanotechnology **23**, 505402, 2012.
<http://dx.doi.org/10.1088/0957-4484/23/50/505402>
Citations: 11
36. “Enhancement of Thermoelectric Properties by Modulation-Doping in Silicon Germanium Alloy Nanocomposites”
B. Yu, M. Zebarjadi, Hu. Wang, K. Lukas, He. Wang, D. Wang, C. Opeil, M. Dresselhaus, G. Chen, Z.F. Ren,
Nano Letters **12**, 2077–2082, 2012.
<http://dx.doi.org/10.1021/nl3003045>
Citations: 283
35. “Cerium Doped Bismuth Antimony”
K.C. Lukas, H. Zhao, R.L. Stillwell, Z.F. Ren, C.P. Opeil,
MRS Proceedings, 1456, mrs12-1456-jj01-04 doi:10.1557/opl.2012.1368.
<http://dx.doi.org/10.1557/opl.2012.1368>
Citations: 0
34. “Heavy doping and band engineering by potassium to improve the thermoelectric figure of merit in p-type PbTe , PbSe , and $\text{PbTe}_{(1-y)}\text{Se}_{(y)}$ ”
Q. Zhang, F. Cao, W. Liu, K. Lukas, B. Yu, S. Chen, C. Opeil, D. Broido, G. Chen, Z. Ren
Journal of American Chemical Society **134**, 10031, May 24, 2012.
<http://dx.doi.org/10.1021/ja301245b>
Citations: 222

33. "Spin ordering and electronic texture in the bilayer iridate $\text{Sr}_3\text{Ir}_2\text{O}_7$ "
 C. Dhital, S. Khadka, Z. Yamani, C. de la Cruz, T. C. Hogan, S. M. Disseler, M. Pokharel, K. C. Lukas, W. Tian, C. P. Opeil, Z. Wang, and S. D. Wilson
Physical Review B **86**, 100401(R), 2012.
<http://dx.doi.org/10.1103/PhysRevB.86.100401>
 Citations: 35
32. "Transport properties of Ni, Co, Fe, Mn doped $\text{Cu}_{0.01}\text{Bi}_2\text{Te}_{2.7}\text{Se}_{0.3}$ for thermoelectric device applications"
 K. C. Lukas, W. S. Liu, Z. F. Ren, and C. P. Opeil
Journal of Applied Physics **112**, (2012).
<http://dx.doi.org/10.1063/1.4749806>
 Citations: 10
31. "Enhanced Thermoelectric Properties of FeSb_x Nanocomposites Through Stoichiometric Adjustment"
 M. Pokharel, H. Zhao, K. C. Lukas, Z. Ren and C. P. Opeil
MRS Proceedings, 1456, mrs12-1456-jj02-07 doi:10.1557/opl.2012.1505.
<http://dx.doi.org/10.1557/opl.2012.1505>
 Citations: 0
30. "Thermoelectric Properties of Ho Doped $\text{Bi}_{0.88}\text{Sb}_{0.12}$ "
 K. C. Lukas, W. S. Liu, G. Joshi, Z. F. Ren, C. P. Opeil
Journal of Materials Science **47** (15) 5729-5734 (2012).
<http://dx.doi.org/10.1007/s10853-012-6463-6>
 Citations: 6
29. "Experimental determination of the Lorenz number in $\text{Cu}_{0.01}\text{Bi}_2\text{Te}_{2.7}\text{Se}_{0.3}$ and $\text{Bi}_{0.88}\text{Sb}_{0.12}$ "
 K. C. Lukas, W. S. Liu, G. Joshi, M. Zebarjadi, M. S. Dresselhaus, Z. F. Ren, G. Chen, and C. P. Opeil
Physical Review B **85**, 205410 (2012).
<http://dx.doi.org/10.1103/PhysRevB.85.205410>
 Citations: 26
28. "Stony meteorite thermal properties and their relationship to meteorite chemical and physical states"
 C. P. Opeil S.J., G.J. Consolmagno S.J., D. J. Safarik, and D.T. Britt
Meteoritics and Planetary Sciences **47**, Issue 3, March, 319-329, 2012.
<http://dx.doi.org/10.1111/j.1945-5100.2012.01331.x>
 Citations: 53
27. "Suppression of grain growth by an additive in nanostructured *p*-type bismuth antimony tellurides"
 Qian Zhang, Qinyong Zhang, S. Chen, W. Liu, K. Lukas, X. Yan, H. Wang, D. Wang, C. P. Opeil, G. Chen, and Z. Ren
Nano Energy **1**, 183-189 (2012).

<http://dx.doi.org/10.1016/j.nanoen.2011.10.006>

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26. "Dramatic thermal conductivity reduction by nanostructures for large increase in thermoelectric figure-of-merit of FeSb₂"
H. Zhao, M. Pokharel, G. Zhu, S. Chen, K. Lukas, Q. Jie, C. Opeil, G. Chen, and Z. Ren
Applied Physics Letters **99**, 163101 (2011).
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25. "Neutron scattering study of magnetic phase separation in phase separation in nanocrystalline La^{5/8}Ca^{3/8}MnO₃"
C. Dhital, C. Dela Cruz, C. Opeil, A. Treat, K. F. Wang, J. Liu, Z. Ren, and S.D. Wilson
Physical Review B **84**, (2011).
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24. "Tin telluride: A weakly co-elastic metal"
E. K. H. Salje, D. J. Safarik, K. A. Modic, J. E. Gubernatis, J. C. Cooley, R. D. Taylor, B. Mihaila, A. Saxena, T. Lookman, J. L. Smith, R. A. Fisher, M. Pasternak, C. P. Opeil, T. Siegrist, P. B. Littlewood, and J. C. Lashley
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Citations: 28

23. "Band structure of SnTe studied by photoemission spectroscopy"
P.B. Littlewood, B. Mihaila, R.K. Schulze, D.J. Safarik, J.E. Gubernatis, A. Bostwick, E. Rotenberg, C. P. Opeil, T. Durakiewicz, and J.L. Smith, J.C. Lashley
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Citations: 73

22. "The thermal conductivity of meteorites: New measurements and analysis"
C. P. Opeil, G.J. Consolmagno, D.T. Britt
Icarus **208**, 449-454 (2010).
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Citations: 97

21. "Structural Phase Transition in AuZn Alloys" B. Winn, S. M. Shapiro, J. C. Lashley, C. Opeil, W. Ratcliff
Journal of Physics: Conference Series **251**, 012027 (2010).
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20. "Thermal Conductivities And Porosities Of Stony Meteorites"
G. J. Consolmagno, C. P. Opeil, D. T. Britt,
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19. "Influence of magnetic fields on structural martensite transitions"
X.-D. Yang, P. S. Riseborough, K. A. Modic, R. A. Fisher, C. P. Opeil, T. R.
Finlayson, J. C. Cooley, J. L. Smith, P. A. Goddard, A.V. Silhanek and J. C. Lashley
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18. "Thermal expansion and magnetostriction of a nearly saturated ^3He - ^4He mixture"
G. M. Schmiedeshoff, A.W. Lounsbury, S. W. Tozer, E. C. Palm, S. T. Hannahs,
T. P. Murphy, J. -H. Park, C. P. Opeil, and K. S. Bedell
Philosophical Magazine **89**, 2071-2078 (2009).
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17. "Angle-dependent magnetoresistance near the premartensitic phase of Ni_2MnGa "
C. P. Opeil, J. C. Lashley, J. L. Smith
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16. "Observation of a continuous phase transition in a shape-memory alloy"
J. C. Lashley, S. M. Shapiro, B. L. Winn, C. P. Opeil, M. E. Manley, A. Alatas, W.
Ratcliff, T. Park, R. A. Fisher, B. Mihaila, P. Riseborough, E. K. H. Salje, and J. L. Smith
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Citations: 22
15. "Combined experimental and theoretical investigation of the premartensitic transition in
 Ni_2MnGa "
C. P. Opeil, B. Mihaila, R. K. Schulze, L. Manosa, A. Planes, W. L. Hults, R. A. Fisher,
P. S. Riseborough P. B. Littlewood, J. L. Smith, and J. C. Lashley
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14. Reply to Comment on "Pinning frequencies of the collective modes in α -uranium"
J. C. Lashley, B. Mihaila, C. P. Opeil, F. R. Drymiotis, and J. L. Smith
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13. "Electronic instabilities in shape-memory alloys: Thermodynamic and electronic structure studies of martensitic transition"
J. C. Lashley, R. K. Schulze, B. Mihaila, W. L. Hults, J. C. Cooley, J. L. Smith, P. S. Riseborough, C. P. Opeil, R. A. Fisher, O. Svitelskiy, A. Suslov, T. R. Finlayson
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12. "Heat capacity in magnetic and electric fields near the ferroelectric transition in triglycine sulfate"
J. C. Lashley, M. F. Hundley, B. Mihaila, J. L. Smith, C. P. Opeil, T. R. Finlayson, R. A. Fisher and N. Hur
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11. "Angle-resolved photoemission and first-principles electronic structure of a-U(001)"
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Physical Review B, **75**, 045120 (2007).
<http://dx.doi.org/10.1103/PhysRevB.75.045120>
Citations: 12
10. "Tricritical phenomenon at the $g \rightarrow a$ transition in $Ce_{0.9-x}La_xTh_{0.1}$ alloys"
J. C. Lashley, A. C. Lawson, J. C. Cooley, B. Mihaila, C. P. Opeil, L. Pham, W. L. Hults, J. L. Smith, G. M. Schmiedeshoff, F. R. Drymiotis, G. Chapline, S. Basu, and P. S. Riseborough
Physical Review Letters, **97**, 235701 (2006).
<http://dx.doi.org/10.1103/PhysRevLett.97.235701>
Citations: 18
9. "Photoelectric effect in Uranium"
C. P. Opeil, R. C. Albers, K. B. Blagoev, M. Gulácsi, J. C. Lashley, P. B. Littlewood, M. E. Manley, B. Mihaila, P. S. Riseborough, R. K. Schulze, D. J. Thoma, H. M. Volz and J. L. Smith
Journal of the Physical Society of Japan, Vol. **75**, 56-57 (2006).
<http://dx.doi.org/10.1143/JPSJS.75S.56>
Citations: 2
8. "Valence-band UPS, 6p core-level XPS, and LEED of a uranium (001) single crystal"
C. P. Opeil, R. K. Schulze, M. E. Manley, J. C. Lashley, W. L. Hults, R. J. Hanrahan, Jr., J. L. Smith, B. Mihaila, K. B. Blagoev, R. C. Albers, P. B. Littlewood
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7. "Pinning frequencies of the collective modes in α -uranium"
B. Mihaila, C. P. Opeil, F. R. Drymiotis, J. L. Smith, J. C. Cooley, A. Migliori, C. Mielke, T. Lookman, A. Saxena, A. R. Bishop, K. B. Blagoev, D. J. Thoma, P. Goddard, and J. C. Lashley, B. E. Lang, J. Boerio-Goates, B. F. Woodfield, and G. M. Schmiedeshoff
Physical Review Letters **96**, 076401 (2006).
<http://dx.doi.org/10.1103/PhysRevLett.96.076401>
Citations: 17
6. "Low-dimensional phonon specific heat of titanium dioxide nanotubes"
C. Dames, B. Poudel, W. Z. Wang, J. Y. Huang, Z. F. Ren, Y. Sun, J. I. Oh, C. P. Opeil, M. J. Naughton and G. Chen
Applied Physics Letters **87**, 031901 (2005).
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Citations: 33
5. "Inhomogeneous magnetic order in Th doped $U\text{Pt}_3$ detected by mSR"
A. de Visser, M. J. Graf, C. P. Opeil, J. C. Cooley, J. L. Smith, A. Amato, C. Baines, F. Gygax, A. Schenck
Physica B **359-361**, 1063-1065 (2005).
<http://dx.doi.org/10.1016/j.physb.2005.01.287>
Citations: 0
4. "Magnetic anisotropy and de Haas-van Alphen oscillations in a Bi microwire array studied via cantilever magnetometry at low temperatures"
M. J. Graf, C. P. Opeil, T. Huber
Journal of Low Temperature Physics **134**, No. 5/6, 1055-1068, March 2004.
<http://dx.doi.org/10.1023/B:JOLT.0000016729.99257.25>
Citations: 2
3. "Crossover from anomalous to conventional antiferromagnetism in Pd-doped $U\text{Pt}_3$ studied via cantilever magnetometry"
C. P. Opeil, A. de Visser, M. J. Naughton, and M. J. Graf
Journal of Magnetism and Magnetic Materials **272-276**, 244-245 (2004).
<http://dx.doi.org/10.1016/j.jmmm.2003.11.100>
Citations: 0
2. "Onset of antiferromagnetism in $U\text{Pt}_3$ via Th-substitution: studied by muon spin spectroscopy"
M. J. Graf, A. de Visser, C. P. Opeil, J. C. Cooley, J. L. Smith, A. Amato, C. Baines, F. Gygax, and A. Schenck
Physical Review B **68**, 224421 (2003).
<http://dx.doi.org/10.1103/PhysRevB.68.224421>

Citations: 4

1. "Evidence for the existence of a magnetic quantum critical point in $U(\text{Pt}_{1-x}\text{Pd}_x)_3$ "
C. P. Opeil and M. J. Graf
Physica B **319**, 246-250 (2002).
[http://dx.doi.org/10.1016/S0921-4526\(02\)01125-0](http://dx.doi.org/10.1016/S0921-4526(02)01125-0)
Citations: 3

INVITED TALKS:

- 2019 University of Connecticut, Storrs, CT. Topic: *Condensed Matter from Space: Thermal and Physical Properties of CM2 Meteorites* (19 November 2019).
- 2017 Universidad Nacional de San Antonio Abad del Cusco, Peru, Topic: *Understanding Thermoelectric Materials: Experimental Determination of Phonon Thermal Conductivity and Lorenz Ratio of Single Crystal Bismuth Telluride* (01 June 2017).
- 2016 Boston College, MA, Topic: *Sustainability and the Human Person, Seven Billion and Counting: Paradise Crowded* (15 October 2016). The Boston College Roundtable Conference: Advancing the Mission of Catholic Higher Education.
- 2016 University of Central Florida, FL, Topic: *Thermo-Physical Properties of Carbonaceous Chondrites* (26 October 2016). CLASS: Center For Lunar And Asteroid Surface Science, SSERVI: Solar System Exploration Research Virtual Institute, NASA Webcast.
- 2016 Boston College, MA, Topic: *Scientific Research: Society and the Common Good* (27 January 2016) A presentation for Boston College STEM Graduate Students.
- 2015 Kirtland Air Force Base, NM, Topic: *Advances in Lanthanide based Thermoelectric Materials* (05 May 2015) Cryogenic Peltier Cooling Conference for the Department of Defense.
- 2015 University of Central Florida, FL, Topic: *Meteoritic: Thermal Conductivity, Heat Capacity and Young's Modulus* (14 January 2015) CLASS: Center For Lunar And Asteroid Surface Science, SSERVI: Solar System Exploration Research Virtual Institute.
- 2014 Boston College, Chestnut Hill, MA, Topic: *Seebeck's Effect: Electricity From Material Heat Differentials* (12 April 2014) Johns Hopkins Center for Talented Youth Conference.
- 2013 Boston College, Chestnut Hill, MA, Topic: *Thermoelectric Materials: Energy Production from Waste Heat* (25 September 2013) Sesquicentennial Symposium-Energy: From the Last to the Next 150 Years.
- 2012 Brown University, Providence, RI: Topic: *Advancing Low-Temperature Thermoelectric Efficiency in FeSb_2 by Stoichiometry, Grain-Size and Metallic Inclusions* (29 November 2012).

- 2011 University of Limerick, Limerick, Ireland, Topic: *Iron Rich Stoichiometry for FeSb_x Produces Higher Thermoelectric Figure of Merit* (23 November 2011).
- 2011 Trinity College Dublin, Dublin, Ireland, Topic: *FeSb₂ Nanocomposite Yields Higher Thermoelectric Figure of Merit* (24 November 2011).
- 2011 Boston College - Burns Library, Chestnut Hill, MA, Topic: *Jesuits in Newton's Orbit - Influences on the Principia Mathematica* (07 November 2011).
- 2011 Georgetown University - Woodstock Theological Center, Washington, DC, Topic: *Jesuits and the Sciences at Georgetown University II, How do Jesuit Scientists find God in all things?* (28 September 2011).
- 2011 Los Alamos National Laboratory, Los Alamos, NM, Keynote Address: Annual LANL Post-Doc Research Review, Topic: *Physics Research and Impact of Post-Doc Experience on a Jesuit-Priest-Physicist* (16 June 2011).
- 2010 University of Vermont, Burlington VT, Topic: *Ferromagnetic order found at 298 K in (Sn_{0.995}Cr_{0.005})Te and is SnTe metallic?* (27 November 2010).
- 2010 CalCon - The 65th Calorimetry Conference (July 17-23, 2010) Colorado Springs, CO, Topic: *Ferromagnetic order at 298 K in Cr_{0.005}Sn_{0.995}Te* (22 July 2010).
- 2008 Occidental College, Pasedena, CA, Topic: *When a Good Martensite Metal Goes Bad* (19 November 2008).
- 2008 Symposium on Correlated Electron Physics, Santa Fe, NM, Topic: *Heavy Fermion and Antiferromagnetic Crossover Behaviors* (27 August 2008).
- 2007 Bryn Mawr College, Bryn Mawr, PA, Topic: *Magneto-Striction and Charge Density Wave Behavior at the Pre-Martensite Transition in Ni₂MnGa* (26 October 2007).
- 2007 CalCon - The 62nd Calorimetry Conference (August 4 - 9, 2007) Honolulu, HI, Topic: *Calorimetry of Ferromagnetic Heuslers in High Magnetic Fields: Observation of a Pseudo-gap in Ni₂MnGa*, 06 August 2007.
- 2006 University of Barcelona, Spain, Topic: *ARPES on U and the Pseudogap in Ni₂MnGa*, 03 June 2006.
- 2006 Georgetown University Science Lecture Series, Topic: *LEED, ARPES and WIEN2K Band Structure Calculation of α - Uranium (001)* 31 January 2006, Georgetown University, Reiss Science Building.
- 2005 LANL Workshop on Correlated Electron Effects for Anomalous Properties of Elemental Actinides (May 23-25, 2005) Los Alamos, NM Topic: *ARPES on Single Crystal*

Uranium and Other New Results (Workshop Organizers: K. B. Blagoev, B. Mihaila, C.P. Opeil & J. L. Smith)

2004 CalCon - The 59th Calorimetry Conference (June 27 - July 1, 2004) Santa Fe, NM,
Topic: *Specific Heat, Antiferromagnetism and Quantum Critical Behavior in*
 $U(Pt_{1-x}Pd_x)_3$

CONFERENCE ABSTRACTS:

- 2020 NASA Exploration Science Virtual Forum 2020 (8-10 July 2020):
Abstract: NESF2020-082, Linear Thermal Expansion of CM2 Carbonaceous Chondrites.
C. P. Opeil, D. T. Britt, R. J. Macke and G. J. Consolmagno. Audio/Visual presentation
by Opeil. https://www.youtube.com/watch?v=A9PiV_pP_Pw&feature=youtu.be
- 2019 American Physical Society Conference (Boston, MA, USA, 3-8 March 2019):
Abstract: R04.00001, Physical and Thermal Properties of Iron Meteorites below 300 K.
M. Bonidie, C. Noyes, D. Britt, G. Consolmagno, R. Macke, G. Schmiedeshoff, C. Opeil
(Bull. Am. Phys. Soc. Vol. 63, No. 1, 2019). Oral presentation by Bonidie, Opeil: non-
presenting co-author.
- 2018 American Physical Society Conference (Los Angeles, LA, USA, 5-9 March 2018):
Abstract: L29.00010, *Experimental Determination of Phonon Thermal Conductivity and*
Lorenz Ratio of Single Crystal Bismuth Telluride at Intermediate Temperatures. M. Yao,
S. Wilson, M. Zebarjadi, C. Opeil (Bull. Am. Phys. Soc. Vol. 63, No. 1, 2018). Oral
presentation (Opeil) at conference.
- Materials Research Society Conference (Boston, MA, USA, 25-30 November 2018):
Abstract: TP02.12.06, *Determining the Mechanical and Thermodynamic Properties of*
Iron Meteorites Below 300 K, M. Bonidie, R. Forestano, C. Noyes, D. Britt, R. Macke, G.
Consolmagno and C. Opeil. Oral presentation by Bonidie, Opeil: non-presenting co-
author.
- 2017 American Physical Society Conference (New Orleans, LA, USA, 13-17 March 2017):
Abstract: G1.088, *Low temperature thermoelectric properties of hot pressed composite*
samples of CrSb₂: evidence for possible phonon-drag effect. M. Pokharel, M. Koirala, Z.
Ren, C. Opeil (Bull. Am. Phys. Soc. Vol. 62, No. 1, 2017). Poster presentation, non-
presenting co-author.
- 2017 Lunar and Planetary Science Conference (The Woodlands, TX, 20-24 March 2017)
Quantifying Weathering In Ordinary Chondrite Finds Using Heat Capacity, R. J. Macke,
C. P. Opeil, and G. J. Consolmagno, Oral Presentation with Conference Proceeding,
<https://www.hou.usra.edu/meetings/lpsc2017/pdf/1486.pdf>
- 2016 Asia Oceania Geosciences Society (Beijing, China, 31 July-05 August 2016) Abstract
No. PS11-A018, *Thermal Expansion, Heat Capacity and Thermal Conductivity*

- Measurements of CM Carbonaceous Chondrites*, C. Opeil and D. Britt, Poster presentation.
- 2016 American Physical Society Conference (Baltimore, MD, USA, 14-18 March 2016): Abstract No.: V11.00008, *Thermoelectric Properties of CuAgSe doped with Co, Cr* P. Czajka, M. Yao, C. Opeil, (Bull. Am. Phys. Soc. Vol. 61, No. 1, 2016). Oral presentation, non-presenting co-author.
- 2015 MRS Fall Meeting (Boston, MA, USA 29 November-04 December 2015) *SS11.22- Thermoelectric Properties of Co Doped CuAgSe*, P. Czajka, M. Yao and C. P. Opeil, Poster presentation, non-presenting co-author.
- 2015 American Astronomical Society (AAS), Division of Planetary Science (DPS) 47th Annual Meeting, National Harbor, MD (08-13 November 2015) *204.03 – Characterizing Asteroid Thermal Properties through the Laboratory Study of Meteorites*, R. Macke, G. J. Consolmagno, C. P. Opeil, D. T. Britt, Oral presentation, non-presenting co-author.
- 2015 American Physical Society Conference (San Antonio, TX, USA, 02-06 March 2015): Abstract: V1.00248 *Separating Lattice and Electronic Thermal Conductivity in Bi₂Se₃ and Bi₂Te₃* C. Opeil, M. Yao, S. Wilson, M. Zebarjadi, (Bull. Am. Phys. Soc. Vol. 60, No. 1, 2015). Poster presentation, presenting co-author.
- 2015 American Physical Society Conference (San Antonio, TX, USA, 02-06 March 2015): Abstract: B12.00005 *Nanostructured YbAgCu₄ for potential cryogenic thermoelectric cooling*, M. Koirala, Hui Wang, M. Pokharel, C. Opeil, Z. Ren, (Bull. Am. Phys. Soc. Vol. 60, No. 1, 2015). Oral presentation, presenting co-author.
- 2015 American Physical Society Conference (San Antonio, TX, USA, 02-06 March 2015): Abstract: L12.00009 *Enhancement of Thermoelectric Performance in n-type PbTe_{1-y}Se_y by Cr Doping*, E. Chere, Qian Zhang, K. McEnaney, F. Cao, C. Opeil, G. Chen, Z. Ren (Bull. Am. Phys. Soc. Vol. 60, No. 1, 2015). Oral presentation, presenting co-author.
- 2015 NASA Exploration Science Forum (Moffett Field, CA, USA: 21-23 July 2015) *Asteroid Population Characterization: Low-Temperature Thermal Conductivity and Heat Capacity Measurements of Ordinary and Carbonaceous Chondrites*, C. P. Opeil, G. J. Consolmagno, R. Macke, J. C. Lashley, T. Hogan, S. Wilson, D. T. Britt, Poster Presentation.
- 2014 MRS Fall Meeting (Boston, MA, USA 01-05 December 2014): *CC7.02 Separating Lattice and Electronic Contributions of Thermal Conductivity in Metals: Cu, Zn & Al*, M. Yao, M. Zebarjadi, Z. Ren, C. Opeil, Oral presentation, non-presenting co-author.
- 2014 International Conference on Thermoelectrics, ICT2014 (Nashville, TN, USA 06-10 July 2014) *Thermoelectricity of Ce-based heavy Fermion compounds CeCu₆ and CeAl₃*, M. Pokharel, T. Dahal, Zhensong Ren, P. Czajka, S. Wilson, Zhifeng Ren and C. Opeil, Poster presentation, non-presenting co-author.

- 2014 New England Section of the American Physical Society, NES-APS, Spring 2014 (Chestnut Hill, MA, USA 04-05 April 2014) *Keynote Address: Energy Matters*, C. Opeil, Oral Presentation.
- 2014 American Physical Society Conference (Denver, CO, USA, 02-08 March 2014):
 A4.00003: *Magnetic and structural behaviors in $(\text{Sr}_{1-x}\text{La}_x)_2\text{IrO}_4$* X. Chen, T. Hogan, C. Dhital, Z. Ren, M. Pokharel, M. Yao, C. Opeil, S. Wilson, (Bull. Am. Phys. Soc. Vol. 59, No. 1, 2014). Oral presentation, non-presenting co-author.
- A4.00011: *Destruction of $J_e = 1/2$ Mott Phase by A-site doping in $(\text{Sr}_{1-x}\text{La}_x)_3\text{Ir}_2\text{O}_7$* T. Hogan, C. Dhital, Z. Yamini, C. Opeil, S. Wilson, (Bull. Am. Phys. Soc. Vol. 59, No. 1, 2014). Oral presentation, non-presenting co-author.
- T25.00007: *Magnetoresistance Measurements of Textured and Non-Textured Bismuth Thin Films* A. Liao, M. Yao, F. Katmis, S. Tang, J. Moodera, C. Opeil, M. Dresselhaus (Bull. Am. Phys. Soc. Vol. 59, No. 1, 2014). Oral presentation, non-presenting co-author.
- Y25.000010 *Enhancement of thermoelectric figure of merit of nanostructured FeSb_2 by adding Cu nanoparticles*, M. Koirala, H. Zhao, M. Pokharel, S. Chen, C. Opeil, G. Chen, Z. Ren (Bull. Am. Phys. Soc. Vol. 59, No. 1, 2014). Oral presentation, non-presenting co-author.
- Y25.000012 *Thermoelectric Study of Copper Selenide* M. Yao, W. Liu, Z. REN, C. Opeil, (Bull. Am. Phys. Soc. Vol. 59, No. 1, 2014). Oral presentation, non-presenting co-author.
- Y25.000013 *Thermoelectric Properties of Nanostructured CeAl_3* M. Pokharel, T. Dahal, Z. Ren, C. Opeil, (Bull. Am. Phys. Soc. Vol. 59, No. 1, 2014). Oral presentation, non-presenting co-author.
- 2013 MRS Fall Meeting (Boston, MA, USA 01-06 December 2013)
 BB11.26: *Thermoelectric Properties of Nanostructured CeCu_6* M. Pokharel, T. Dahal, Z. Ren, C. Opeil, Poster presentation, non-presenting co-author.
- TT2.10 *Magneto-Transport in Nano-Grained Thermoelectric Materials* M. Zebarjadi, M. Dresselhaus, C. Opeil, Oral presentation, non-presenting co-author.
- TT3.22 *Separating Lattice and Electronic Contributions of Thermal Conductivity in Cu and W* M. Yao, Z. Ren, C. Opeil, Poster presentation, non-presenting co-author.
- 2013 American Physical Society Conference (Baltimore, MD, USA, 18-22 Mar 2013):
 B17.00006: *Electronic and magnetic phase evolution in $\text{Sr}_3(\text{Ir}_{1-x}\text{Ru}_x)_2\text{O}_7$* C. Dhital, T. Hogan, K. Lukas, S. Dissler, C. Opeil, S. Wilson (Bull. Am. Phys. Soc. Vol. 58, No. 1, 2013). Oral presentation, non-presenting co-author.

F22.00015: *Combined Transport, Magnetization and Neutron Studies of Structural and Magnetic Behavior in $\text{Ca}_3\text{Ir}_4\text{Sn}_{13}$* , Zhensong Ren, M. Pokharel, T. Hogan, A. Sefat, C. de la Cruz, H. Cao, B. Li, C. Opeil, S. Wilson (Bull. Am. Phys. Soc. Vol. 58, No. 1, 2013). Oral presentation, non-presenting co-author).

T12.00010: *Transport Properties of Ce, Sm, and Ho Doped Bismuth Antimony* K. C. Lukas, H. Zhao, M. Yao, Z. F. Ren, C. P. Opeil (Bull. Am. Phys. Soc. Vol. 58, No. 1, 2013). Oral presentation, non-presenting co-author.

V1.00312: *Enhanced thermoelectric figure of merit (ZT) of Te-doped FeSb_2 nanocomposite*, M. Pokharel, H. Zhao, M. Koirala, Z. Ren, C. P. Opeil, (Bull. Am. Phys. Soc. Vol. 58, No. 1, 2013). Poster presentation, non-presenting co-author.

2012 MRS Fall Meeting (Boston, MA, USA 25-30Nov2012)

Abstract #1425007: *Evidence of Phonon Drag Effect in Nanocomposite FeSb_2* , M. Pokharel, H. Zhao, K. Lukas, Z. Ren, C. Opeil, Oral presentation, non-presenting co-author.

Abstract #1521087: *Transport Properties of Samarium Doped $\text{Bi}_{88}\text{Sb}_{12}$* , K. Lukas, H. Zhao, Z. Ren, C. Opeil Oral presentation, non-presenting co-author.

2012 MRS Spring Meeting (San Francisco, CA, USA 9-13Apr2012)

Abstract #1274199: *Enhanced Thermoelectric Properties of FeSbx Nanocomposites Through Stoichiometric Adjustment*, M. Pokharel, H. Zhao, K. Lukas, Z. Ren, C. Opeil, Oral presentation, non-presenting co-author.

Abstract #1373119: *Ce doped Bismuth Antimony*, K. Lukas, Z. Ren, C. Opeil, Oral presentation, non-presenting co-author.

2012 American Physical Society Conference (Boston, MA, USA, 27 Feb-02Mar2012):

A17.002 *Enhancing thermoelectric properties of FeSb_2 by altering stoichiometry and nanostructure*, M. Pokharel, H. Zhao, K. Lukas, Z. Ren, C.P. Opeil (Bull. Am. Phys. Soc. Vol. 57, No. 1, 2012). Oral presentation, non-presenting co-author.

H17.002 *Experimental Determination of the Lorenz Number* K. C. Lukas, W. S. Liu, G. Joshi, M. Zebarjadi, M. S. Dresselhaus, Z. F. Ren, G. Chen, and C. P. Opeil (Bull. Am. Phys. Soc. Vol. 57, No. 1, 2012). Oral presentation, non-presenting co-author.

H17.004 *Magnetotransport in thermoelectric materials* M. Zebarjadi, K. C. Lukas, C. P. Opeil, G. Chen, and C. P. Opeil, M. S. Dresselhaus (Bull. Am. Phys. Soc. Vol. 57, No. 1, 2012). Oral presentation, non-presenting co-author.

- 2011 American Physical Society Conference (Portland, OR, USA, 21-25Mar2011):
 C1 175 *Characterization of Doped CeCoIn₅*, A.R. Treat, J.C. Cooley, C.P. Opeil (Bull. Am. Phys. Soc. p. 163, 2011). Poster presentation.
- Y20 5 *Ho Doped Bi_xSi_y Nanopolycrystalline Alloys*, K.C.Lukas, G. Joshi, D. Wang, Z.F. Ren, C. P. Opeil (Bull. Am. Phys. Soc. p. 593, 2011). Oral presentation.
- Y22 7 *Elastic collapse and avalanche criticality near a Mott transition*, J.L. Smith, D.J. Safarik, E.K.H. Salje, C.P. Opeil, P.S. Riseborough (Bull. Am. Phys. Soc. p. 595, 2011). Oral presentation.
- 2011 European Planetary Science Congress-Division of Planetary Science Joint Meeting 2011 (Nantes, France 02-07 October 2011) *Uniaxial stress/strain of meteorites* Vol. 6, EPSC-DPS2011-574-1, 2011.
- 2010 Division for Planetary Sciences of the American Astronomical Society - 42st Conference (Pasadena, CA, 03-08 October 2010) 48.03 *Thermal Conductivities of Two Basaltic Achondrite Meteorites*, G. Consolmagno, C. P. Opeil, D. T. Britt, Poster presentation, non-presenting co-author.
- 2010 Meteoritical Society 73rd Annual Meeting (New York, NY, USA, 26-30 July 2010) *Thermal Conductivities and Porosities of Stony Meteorites*, G. J. Consolmagno, C. P. Opeil, D. T. Britt, Oral presentation, non-presenting co-author. Abstract: Meteoritics and Planetary Science, Vol. 45, Supplement S, A38, 5167 (2010). <http://dx.doi.org/10.1111/j.1945-5100.2010.01051.x>
- 2010 American Physical Society Conference (Portland, OR, USA, 12-19Mar2010): A24.05 *Ferromagnetic order at 298 K in Cr_{0.005}Sn_{0.995}Te*, J. C. Lashley, J. L. Smith, J. E. Gubernatis, R. K. Schulze, B. Mihaila, R. D. Field, C.P. Opeil, P. B. Littlewood, E. Rotenberg, A. Bostwick (Bull. Am. Phys. Soc. p. 90, 2010). Oral presentation.
- 2009 Bolides and Meteorite Falls International Conference (Prague, Czech Republic, 10-15 May 2009) G. Consolmagno, D. Britt, R. Macke, and C. Opeil, “*Physical Properties Of Meteorites: A Review*” (Invited talk) Oral presentation, non-presenting co-author.
- 2009 Division for Planetary Sciences of the American Astronomical Society 41st Conference (Fahardo, Puerto Rico, USA, 4-9 October 2009) 50.05 - *New Thermal Conductivity Measurements of Meteorites: Implications for Asteroid Models*, C. P. Opeil SJ, G.J. Consolmagno SJ, D.T. Britt, Poster presentation, non-presenting co-author.
- 2009 American Physical Society Conference (Pittsburgh, PA, USA, 14-19Mar2009):
 D23.10 *Martensite Transition in Ni_{50.5}Mn_{34.4}In_{15.1} and Ni_{49.6}Mn_{36.6}Sn_{13.8}*
 C. P. Opeil, J. C. Lashley, J. L. Smith, L. Mañosa and A. Planes (Bull. Am. Phys. Soc. p. 172, 2009). Oral presentation.

K1.48 The Superconducting Phase Diagram of $V_{0.98}Si_{0.02}$ with X=Mn, Fe, Co, Ni, Cu

M. D. Almeida, C. P. Opeil, J. C. Lashley, J. L. Smith, (Bull. Am. Phys. Soc. p. 268, 2009). Poster presentation, non-presenting co-author.

T41.9 *Quantum Fluctuation of the Order Parameter in a Structural Phase Transition* J. L. Smith, K. A. Modic, J. C. Cooley, J. C. Lashley, C. P. Opeil, S. M. Shapiro, E. K. H. Salje, P. B. Littlewood, N. Dilley, D. E. Graf, Ju-Hyun Park, M. Kano, T. Murphy, E. C. Palm, and S. W. Tozer (Bull. Am. Phys. Soc. p. 446, 2009). Oral presentation, non-presenting co-author.

2008 25th International Conference on Low Temperature Physics- Leiden Institute of Physics (Amsterdam, The Netherlands) *Pseudo-gap Formation and Magneto-Resistance at the Pre-Martensite Transition in Ni_2MnGa* C. P. Opeil, J. C. Lashley, and J. L. Smith. Poster Presentation, PC-Fr210, C9, LT2632.

2008 American Physical Society Conference (New Orleans, LA, USA): A40.12 *Magneto-Resistance at the Pre-Martensite Transition in Ni_2MnGa* C. P. Opeil, J. C. Lashley, and J. L. Smith (Bull. Am. Phys. Soc. p. 93, 2008). Oral presentation.

2007 American Physical Society Conference (Denver, CO, USA):

W23.02 *Pseudo-gap Observed at Martensite Transition in Ni_2MnGa Single Crystal* C. P. Opeil, J. C. Lashley, R. K. Schulze, B. Mihaila, W. L. Hulst, J. L. Smith, P. S. Riseborough, L. Manosa, A. Planes (Bull. Am. Phys. Soc. p. 510, 2007). Oral presentation.

J20.11 *Specific heat of tri-glycine sulfate in electric field* J. C. Lashley, N. Hur, M. Hundley, W. L. Hulst, J. C. Cooley, B. Mihaila, J. L. Smith, T. Finlayson, C. P. Opeil, R. Fisher (Bull. Am. Phys. Soc. Series II, Vol. 52, No.1, p. 226, 2007). Oral presentation, non-presenting co-author.

2007 American Physical Society Conference (Denver, CO, USA): W23.03 *First Principles electronic structure of shape-memory alloy Ni_2MnGa* , B. Mihaila, A. Acatrinei, C. D. Taylor, C. P. Opeil, L. Manosa, (Bull. Am. Phys. Soc. Series II, Vol. 52, No.1, p. 510, 2007). Oral presentation, non-presenting co-author.

2006 Materials Research Society Conference (Boston, MA, USA): OO2.5 *Recent Results on Uranium*, J. L. Smith, J. C. Lashley, M. E. Manley, B. Mihaila, C. P. Opeil, and R. K. Schulze, (Mater. Res. Soc. Sym. Proc. Series Vol. 986E, p. 365, 2006). Oral presentation, non-presenting co-author.

2006 American Physical Society Conference (Baltimore, MD, USA):

H15.001 *Angle Resolved Photoemission Spectroscopy of Single Crystal Uranium (001)* C. P. Opeil, R. K. Schulze, R. C. Albers, B. Mihaila, K. B. Blagoev, M. E. Manley, J. C. Lashley, J. L. Smith, P. B. Littlewood (Bull. Am. Phys. Soc. Series II, Vol. 51, No.1, Part 1, p. 325, 2006). Oral presentation.

Z23:013 *Volume Collapse of Cerium*, J. L. Smith, J. C. Lashley, C. P. Opeil, A. C. Lawson, P. S. Riseborough, (Bull. Am. Phys. Soc. Series II, Vol. 51, No.1, Part 2, p. 1033, 2006). Oral presentation, non-presenting co-author.

2005 Journées des Actinides, Schloss Weikersdorf, Baden/Wien, Austria, April 23-26, 2005, *Photoemission Spectroscopy on Single Crystal Uranium (001)* R. K. Schulze, C. P. Opeil, R. C. Albers, B. Mihaila, K. B. Blagoev, M. E. Manley, J. C. Lashley, J. L. Smith, P. B. Littlewood. Oral presentation, non-presenting co-author.

2005 American Physical Society Conference (Los Angeles, CA, USA):
V28.006 *Photoemission Spectroscopy on Single Crystal Uranium (001)* C. P. Opeil, R. K. Schulze, R. C. Albers, B. Mihaila, K. B. Blagoev, M. E. Manley, J. C. Lashley, J. L. Smith, P. B. Littlewood, (Bull. Am. Phys. Soc. Series II, Vol. 50, No.1, Part 2, p. 1271-1272, 2005). Oral presentation.

N38.13 *Photon-stabilized Electron Distributions in Uranium* Michael Manley, Roland Schulze, Cyril Opeil, Robert Hanrahan, James Smith, (Bull. Am. Phys. Soc. Series II, Vol. 50, No.1, Part 2, p. 902, 2005). Oral presentation, non-presenting co-author.

2004 American Society of Mechanical Engineers 3rd Integrated Nanosystems Conference September 2004, Pasadena, CA, *Low-Dimensional Phonon Heat Capacity of Titanium Dioxide Nanotubes* (NANO2004-46080), Authors: C. Dames, G. Chen, B. Poudel, W. Wang, J. Huang, Z. Ren, Y. Sun, J. I. Oh, C. P. Opeil, M. J. Naughton. Oral presentation, non-presenting co-author.

2004 SCES, The International Conference on Strongly Correlated Electron Systems (Universität Karlsruhe, Germany) *Inhomogeneous magnetic order in Th doped UPt₃ detected by μ SR*, A. de Visser, M. J. Graf, C. P. Opeil, J. C. Cooley, J. L. Smith, A. Amato, C. Baines, F. Gygax, and A. Schenck, Oral Presentation, non-presenting co-author.

2004 American Physical Society Conference (Montréal, Canada):
C1.193 *Specific heat of $U(Pt_{1-x}Pd_x)_3$ for $0 \leq x \leq 0.10$* M. E. Scannell, C. P. Opeil, M. J. Graf, J. D. Hettinger, A. de Visser (Bull. Am. Phys. Soc. Series II, Vol. 49, No.1, Part I, p. 259, 2004). Poster presentation.

K1.57 *Magnetic anisotropy and de Haas - van Alphen oscillations in Bi microwire and nanowire arrays via cantilever magnetometry* M. J. Graf, C. P. Opeil, T. E. Huber (Bull. Am. Phys. Soc. Series II, Vol. 49, No.1, Part I, p. 537, 2004). Poster presentation.

2003 American Physical Society Conference (Austin, TX):
R01.241 *Crossover from Anomalous to Conventional Antiferromagnetism in Pd-Doped UPt₃ Studied via Cantilever Magnetometry* C.P. Opeil, A. de Visser, M. J. Naughton and M. J. Graf (Bull. Am. Phys. Soc. Series II, Vol. 48, No.1, Part III, p. 33, 2003). Poster presentation.

R01.263 μ SR Study of Magnetism and Magnetic Inhomogeneity in $(U,Th)Pt_3$ M. J. Graf, A. de Visser, C. P. Opeil, J. C. Cooley, J. L. Smith, A. Amato, C. Baines, F. Gyax and A. Schenck (Bull. Am. Phys. Soc. Series II, Vol. 48, No.1, Part III, p. 37). Non-presenting co-author.

2003 International Conference on Magnetism (Rome, Italy, July 2003): *Crossover from Anomalous to Conventional Antiferromagnetism in Pd-Doped UPT_3 Studied via Cantilever Magnetometry* C. P. Opeil, A. de Visser, M. J. Naughton and M. J. Graf. Non-presenting co-author.

2002 ICMSRR: 9th International Conference on Muon Spin Rotation/Relaxation/Resonance (Williamsburg, VA, June 2002): *Study of the Relationship Between Magnetic Order and Superconductivity in Heavy-Fermion $(U,Th)Pt_3$* M. J. Graf, C. P. Opeil, A. de Visser, J. C. Cooley, J. L. Smith, A. Amato, C. Baines, F. N. Gyax and A. Schenck. Non-presenting co-author.

2002 American Physical Society Conference (Indianapolis, IN): H33.127 *Characterization of the Normal State Transport Properties of $U(Pt_{1-x}Pd_x)_3$ Polycrystals $0 \leq x \leq 0.020$* C. P. Opeil, A. de Visser, M. J. Naughton and M. J. Graf (Bull. Am. Phys. Soc. Series II, Vol. 47, No.1, Part I, p. 472). Poster presentation.

2001 American Physical Society Conference (Seattle, WA): Z16.002 *Normal State Magnetic Susceptibility and Antiferromagnetic Correlations in $U(Pt_{1-x}Pd_x)_3$ for $0 \leq x \leq 0.020$* C. P. Opeil, J. Moser, J. I. Oh, M. J. Naughton, M. J. Graf and A. de Visser (Bull. Am. Phys. Soc. Series II, Vol. 46, No.1, Part II, p. 1218). Oral presentation.

2000 American Physical Society Conference (Minneapolis, MN): M12.005 *Susceptibility and Transport Studies of $RuSr_2GdCu_2O_{8.5}$ ($Ru1212$)* J. Moser, J. I. Oh, Z. Sun, H. I. Ha, C. Opeil-S.J., M. J. Graf, D. Z. Wang, S. X. Yang, Y. Tu, Z. F. Ren, and M. J. Naughton (Bull. Am. Phys. Soc. Series II, Vol. 45, No.1, Part II, p. 172). Non-presenting co-author.

CONFERENCE ORGANIZATION: Spring 2014 Meeting of the New England Section of the American Physical Society, "Energy Matters" at Boston College, April 4-5, 2014, Conference Chairman.

PHOTOGRAPHY CREDITS:

"Uranium Atoms Don't Share the Vibe" J. R. Minkel, Phys. Rev. Focus **17**, No. 11, (31 March 2006).

U. S. PATENTS:

United States Patent 7,687,775 - Granted on 30 March 2010 to Lashley, Opeil and Smith, *Suppression of Pyroelectric Excitations with External Magnetic or Electric Fields*. This work is associated with: "Heat capacity in magnetic and electric fields near the ferroelectric transition in triglycine sulfate" J. C. Lashley, M. F. Hundley, B. Mihaila, J. L. Smith, C. P. Opeil, T. R. Finlayson, R. A. Fisher and N. Hur, *Applied Physics Letters* **90**, 052910 (2007).

NSF GRANT PANEL REFEREE:

National Science Foundation: Integrative Graduate Education and Research Trainee Program (IGERT), Prog. Dir. C. Van Hartesveldt (December 2-3, 2010).

National Science Foundation: Pan-American Advanced Studies Institutes Program (PASI) NSF Electronic Proposal Review Request, Prog. Manager: Marjorie Lueck, May 2012.

NSF-REU PROGRAM: Mentored students in an NSF sponsored summer program for undergraduate physics students. Supervising students from other universities/colleges in laboratory research projects at Boston College. Project participants: Alex Handin (2009) and Kristen Collar (2010).

GRANTS/AWARDS:

+++ NASA (National Air and Space Administration): CLASS 2.0, SSERVI: Center for Lunar and Asteroid Surface Science; PI-Daniel Britt, coPI-Opeil, U. Central Florida, USA, Funding Term 2019-2024, Grant Award \$100,000. Status: Funding begins February 2020.

Boston College RADS (Research Departments and Schools) Grant Program, "Surface-Mediated Ionic Transport: A New Design Concept for Multivalent Cation Transport" PI: Dunwei Wang (Chemistry); Co-PI: Cyril Opeil (Physics), May 2017 - May 2018, Grant total: \$50,000, Wang - \$25,000 and Opeil - \$25,000. Grant ended May 2018. Status: Award ended, grant requirements complete.

NASA (National Air and Space Administration) SSERVI: Center for Lunar and Asteroid Surface Science; PI-Daniel Britt, U. Cent. Florida, USA, Funding Term May 2014-February 2019, Grant Award \$93,084. Status: Grant ends February 2019.

Research Expense Grant (REG): "Low-Temperature Thermoelectric Properties of YbAl_3 " Grant Request \$2000. Grant Award: \$2000. September 2013- September 2014. Status: Award ended, grant requirements complete.

Research Incentive Grant (RIG): "Young's Modulus Low-Temperature Probe for Meteoritical Studies" Grant request \$15,000. Grant Award: \$15,000. September 2014-September 2015. Status: Award ended, grant requirements complete.

National Science Foundation: Major Research Instrumentation - Acquisition of SQUID Magnetometer for the Exploration of the Next Generation of Materials and the Study of Complex Spin Phenomena PI: S. D. Wilson, Co-PIs- M. Naughton, M. Graf, J. Byers, C. Opeil, Equipment Grant September 2013, Award #1337567, Grant Award, \$344,257. Status: Award ended, grant requirements complete.

DOD (Department of Defense) Multi-University Research Initiative (MURI BAA 10-002, Solid State Cooling), Project Title: *Cryogenic Peltier Cooling*, Grant is in collaboration with J. P. Heremans, PI (Ohio State University), co-PI's: G. J. Snyder (California Institute of Technology), M. S. Dresselhaus and Gang Chen (Massachusetts Institute of Technology), R. J. Cava (Princeton University), D. T. Morelli (Michigan State University), and Boston College (R. J. Ren

and C. P. Opeil (Boston College), Funding term 2010-2015, Grant Award \$1,400,000. Status: Grant completed. July 2016.

DOE (Department of Energy) Energy Frontier Research Center Grant (S3TEC), Project Title: *Measurement and Development of Moderate Temperature Thermoelectric Materials*, Funding term 2009-2014, Grant Award \$1,200,000. Status: Grant completed, July 2014.

Undergraduate Research Fellowships from Boston College: Funding Total: \$76,210
Supervised undergraduate student research: 2006 (\$1,500), 2007 (\$4,800), 2008 (\$9,000), 2009 (\$8,460), 2010 (\$9180), 2011 (\$6030), 2012 (\$3100), 2013 (\$1140), 2014 (\$7000), 2016 (\$8000), 2017 (\$8000), 2018 (\$8000), 2019 (\$2000), 2020 (\$5000).

Sigma Xi Grant-In-Aid of Research Award: Received grant support of research at the Van der Waals-Zeeman Institute at the University of Amsterdam, The Netherlands, December 1999: \$600.

Donald White Award: For 'Excellence in Teaching' at Boston College, May 1999. Delivered the acceptance speech on behalf of all the graduate students honored that day: \$1000.

PUBLISHED INTERVIEWS:

"Finding God in Complex Things" by William Boles, photographs Lee Pelligrino, *National Jesuit News*, April 2014.

"Interview with Fr. Cyril P. Opeil, S.J: Priest and Scientist" by Fr. Julio Gonzalez, S.F., *Holy Family Magazine*, No. 38, Sept.- Oct. 2007.

"Physicists Among Us: Physics and Faith" by Steve Davolt, *Interactions: Across Physics and Education*, Vol. 37, No. 4, Sept. – Oct. 2007.

NATIONAL LABORATORY COMMITTEE:

National High Magnetic Field Laboratory, Florida State University, Tallahassee, FL
Experimental User Committee Member, Elected to serve 2008-2011.
NHMFL DC Facility Proposal Review Committee: 2010-present

UNIVERSITY COMMITTEES/ACTIVITIES:

Provost Council Advisory Committee, elected member (2012-2015)
Church in the 21st Century Advisory Committee, appointed member (2009-2015)
University Traffic and Parking Committee (2010-2014)
ASN, Jesuit Honor Society, Moderator (2016 to present)
Faculty Tech Contacts Committee, member (2017 to present)
Faculty Library Advisory Committee, member (2017 to present)

ARTS AND SCIENCE COLLEGE COMMITTEES:

Radiation Safety Committee, member (2010-2018), Chair (2019)
Chemical Hygiene Committee, Chairman and member (2008-2014)
Graduate Academic Integrity Committee, member (2008-2009, 2017 to present)

DEPARTMENTAL COMMITTEES:

Undergraduate Program Director (2019-2020)
Physics Department Merit Committee, member (2013, 2017, Chair 2018)
Physics Department Space Committee, member (2013-2015)
Physics Department Library Committee, Chair (2008-present)
Physics Department Space Committee, member (2007-2008)
Physics Department Undergraduate Academic Affairs Committee (2007, 2009-2012, 2016, 2017)
Physics Department Society of Physics Students Advisor (2011-2014)
Physics Department Faculty Search Committee (2014, 2015)
Physics Department Graduate Affairs Committee (2016)

DOCTORAL EXAMINATION COMMITTEES:

1. P. Raul Serrano Chura, Ph.D. *A Phenomenological Approach for the Half-Metallic Ferromagnets*. (August 2007) Advisor: K. S. Bedell, Committee Members: K. Kempa, M. J. Graf, C. Opeil.
2. Yi Ma, Ph.D. *Study of Enhanced Thermoelectric Properties in Nanostructured Bismuth Telluride Alloys with Different Compositions*. (June 2008) Advisor: Zhifeng Ren, Committee Members: M. Graf, D. Broido, C. Opeil.
3. Xiaowei Wang, Ph. D. *Thermoelectric property studies on nanostructured n-type Si-Ge materials*, June 2009. Advisor: Zhifeng Ren, Committee Members: M. Graf, D. Broido, C. Opeil
4. John Feldman, Ph.D. *New thermodynamic models in Fermi-liquid theory*. (November 2009) Advisor: K. S. Bedell, Committee Members: M. Graf, D. Broido, C. Opeil.
5. Xiao Yan, Ph.D. *Thermoelectrics of High-Temperature Bismuth Antimony Compounds*. (June 2010) Advisor: Zhifeng Ren, Committee Members: D. Broido, M. J. Graf, C. Opeil and G. Chen.
6. Jian Yang, Ph. D. *Thermoelectric Properties of CoSb₃ Based Skutterudites*, July 2010, Advisor: Zhifeng Ren, Committee Members: D. Broido, M. J. Graf, C. P. Opeil and G. Chen.
7. Giri Joshi, Ph. D. *Enhanced Thermoelectric Figure of Merit in p-type Nanostructured Silicon Germanium Bulk Alloys*. (October 2010) Advisor: Zhifeng Ren, Committee Members: D. Broido, M. J. Graf, C. P. Opeil and G. Chen.
7. Ming Tang, Ph. D. (at Massachusetts Institute of Technology) *Low-temperature theoretical modeling of nano-structured bismuth antimony telluride alloys* 22 August 2011. M. Dresselhaus (Advisor/Chair), C. Opeil (Research Supervisor), Committee Members: G. Chen, C. Opeil.
8. Chang-Sheng Mei, Ph. D. *Accelerated MR Thermometry for High Intensity Focused Ultrasound Therapy* (September 2011) Advisor: M.J. Graf, Committee Members: C. Opeil, K. Kempa, Research Supervisor: Prof. Nathan J. McDannold, Prof. Lawrence P. Panych, and Prof. Bruno Madore.

9. Gaohua Zhu, Ph.D., *Thermoelectric Property Studies of Nanostructured Bulk Materials* November 2011, Advisor: Zhifeng Ren, Committee Members: M. Graf, D. Broido, C. Opeil.
10. Ryan Johnson, Ph. D., *Muon Spin Resonance Study of Spin Dynamics in $LiY_{1-x}Ho_xF_4$* , March 2012, Advisor: M. J. Graf, Committee Members: C. Opeil, V. Madhavan.
11. Bo Yu, Ph. D., *Power Factor Improvement and Thermal Conductivity Reduction by Band Engineering and Modulation-doping in Nanocomposites*, April 2012, Advisor: Zhifeng Ren, Committee Members: Z. Ren, M. Graf, D. Broido, C. Opeil.
12. Kevin C. Lukas, Ph. D. *Thermoelectric Transport Properties of Novel Nanoscaled Materials via Homemade and Commercial Apparatus Measurements*, December 2012, C. Opeil (Chair/Advisor) Committee Members: M. Dresselhaus, Z. Ren, M. Graf.
13. Kristen Teczar Loncich, Ph. D. *A Biologically Inspired Model of Bat Echolocation in a Cluttered Environment with Inputs Designed from Field Recordings*, August 2014, C. Opeil (Committee Chair), D. Mountain (Advisor-Boston U.), W. Padilla, K. Kempa, and K. Burch.
14. Binod Rizal, Ph.D. *Nanoimprint Lithography for Sensing Devices*, July 2014, M. Naughton (Advisor/Chair), K. Kempa, S. Wilson, C. Opeil.
15. Muna Aryal Rizal, Ph. D. *Transient Disruption of Vascular Barriers Using Focused Ultrasound and Microbubbles for Targeted Drug Delivery in the Brain*, October 2014, C. Opeil (Committee Chair), N. McDannold (Advisor, Brigham & Women's Hosp. - Harvard Med. School), K. Kempa, S. Wilson.
16. Mani Pokharel, Ph. D., *Thermoelectric Transport Properties of Nanostructured $FeSb_2$ and Ce-based Heavy-Fermions $CeCu_6$ and $CeAl_3$* , January 2015, C. Opeil (Chair/Advisor), S. Wilson, M. Graf.
17. Thomas Hogan, Ph.D., October 2016, *Probing the spin-orbit Mott State in $Sr_3Ir_2O_7$ via electron doping*, S. Wilson (Chair/Advisor), C. Opeil, M. Graf, Z. Wang.
18. Shenghan Jiang, Ph.D., May 2017, *Symmetric topological phases and tensor network states*, Y. Ran (Advisor/Chair), Committee Members: C. Opeil, K. Bedell, Z. Wang.
19. Mengliang Yao, Ph. D., June 2017, *Thermal And Electrical Transport Study On Thermoelectric Materials Through Nanostructuring And Magnetic Field*, C. Opeil (Chair/Advisor), Committee Members: M. Naughton, K. Kempa and M. Zebarjadi.
20. Kun Jiang, Ph.D., March 2018, *Strong Correlation, Topology in Unconventional Superconductors and Quantum Magnets*, Z. Wang (Chair/Advisor), Committee Members: C. Opeil, D. Broido, and K. Kempa.
21. Rebecca Dally, Ph.D., July 2018, *The implications of geometric frustration and orbital*

degeneracies on the evolution of magnetism in Na₄Ir₃O₈ and α-NaMnO₂, S. Wilson (Chair/Advisor), Committee Members: C. Opeil, M. Graf, F. Tafti.

22. Thomas Mion, Ph.D., March 2019, *Electronic and Magnetic Properties of the Cuprates, Iridates, Rutheno-Iridates*, M. Naughton (Chair/Advisor), Committee Members: C. Opeil, M. Graf.

UNDERGRADUATE SENIOR HONORS THESIS ADVISEES:

Peter A. Czaika (BS, 2016), "Low Temperature Thermoelectric Properties of Co- and Cr-doped CuAgSe".

Olivia Elsaid (BA, 2017) "Undergraduate Education on Climate Change: Powering Our Future at Boston College".

Christopher Noyes (BS, 2018) "Thermal Diffusivity and Inertia of Metal and Stony Meteorites below 300 K".

Matthew Bonidie (BS, 2019) "Crystal structure, Young's modulus and Grüneisen parameter of Iron Meteorites below 300 K".

Cole Tamburri (BS, 2020) "A Piecewise Approach to Understanding the Physical Dynamics and Composition of Earth's Ionosphere".

CORPORATE BOARD/TRUSTEE AFFILIATIONS:

Boston College, Chestnut Hill, MA, Board of Directors, Member 2020 to present.

Addiction Treatment Center of New England, Board of Directors, Member, 2015-2017, Chairman of Board 2017-2020, Member, 2020 to present.

Jesuit Community at Boston College, Board Chair, 2020 to present.

Jesuit Community at Boston College, Board Member and Secretary to the Board, 2018-2020.

Jesuit Community at Boston College, Board of Directors, Member, 2009-2017.

Jesuit Community at Boston College, Board Member and Secretary to the Board, 2000-2004.

Canisius College, Buffalo, NY, Board of Directors, Finance Committee, Member, 2017-2018.

Canisius College, Buffalo, NY, Board of Directors, Finance and Audit Committees, Member, 2018-2020.

Cheverus High, Portland, ME, Board of Directors & Academic Affairs Committee Member, 2019 to present.

PROFESSIONAL AND HONOR SOCIETIES:

American Physical Society, member (1999-present)

Materials Research Society, member (2006-present)

Sigma Pi Sigma-National Physics Honor Society, inducted 1982.

Alpha Sigma Nu, National Jesuit Honor Society, inducted 2017.

