Geneva Laurita: Publications

https://www.bates.edu/faculty-expertise/profile/geneva-laurita/

Submitted or In Press

Names underlined indicate Bates undergraduate student.

H. H. Nguyen, G. Laurita, R. Macaluso, Covalency and Lone Pair Driven Distortions in Sulfur Doped Tin Niobate Pigments.

Appeared

Names underlined indicate Bates undergraduate student.

36. H. H. Nguyen, M. Bozlar, G. Laurita, R. Macaluso, Covalency and Lone Pair Driven Distortions in Sulfur Doped Tin Niobate Pigments. *Inorg. Chem* (2025) [DOI:10.1021/acs.inorgchem.2c03031]

35. U Dang, J. O'Hara, H. A. Evans, D. Olds, J. Chamorro, G. Laurita†, and R. T. Macaluso, Vacancy driven disorder and elevated dielectric response in the pyrochlore $Pb_{1.5}Nb_2O_{6.5}$. *Inorg. Chem.* **61** (2022) 18601-18610[DOI:10.1021/acs.inorgchem.2c03031]

34. D. Hickox-Young, G. Laurita, Q. N. Meier, D. Olds, N. A. Spaldin, M. R. Norman, and J. M. Rondinelli. Local structure and its implications for the relaxor ferroelectric $Cd_2Nb_2O_7$. *Phy. Rev. Res.* **4** (2022) 033187 [DOI:10.1103/PhysRevResearch.4.033187]

33. *Invited contribution to the Emerging Investigators 2022 issue*: O. Bailey, S. Husremovic, M. Murphy, J. Ross, J. Gong, D. Olds, and G. Laurita†. Compositional Influence of Local and Long-Range Polarity in the Frustrated Pyrochlore System $Bi_{2-x}RE_xTi_2O_7$ ($RE = Y^{3+}$, Ho^{3+}). *J. Mater. Chem. C*. **10** (2022) 13886 - 13895 (2022) [DOI:10.1039/D2TC01328B]

32. *Invited contribution*: C. Chepkemboi*, K. Jorgensen*, J. Sato*, and G. Laurita†. [*equal contributions] Strategies and considerations for least squares analysis of total scattering data. *ACS Omega* **7** (2022) 14402-–14411. [DOI:10.1021/acsomega.2c01285]

31. G. Laurita and R. Seshadri. Chemistry, Structure, and Function of Lone Pairs in Extended Solids. *Acc. Chem. Res.* **55** (2022) 1004–1014 [DOI:10.1021/acs.accounts.1c00741]

30. Q. N. Meier, D. Hickox-Young, G. Laurita, N. A. Spaldin, J. M. Rondinelli, and M. R. Norman. Leggett Modes Accompanying Crystallographic Phase Transitions. *Phys. Rev. X* **12** (2022) 011024 [DOI:]10.1103/PhysRevX.12.011024]

29. M. Saber, M. Preefer, S. Kolli, W. Zhang, G. Laurita, B. Dunn, R. Seshadri, ans A. Van der Ven. The role of electronic structure on Li-ordering and chemical strain in the fast charging Wadsley-Roth phase PNb_9O_{25}. *Chem. Mater.* **33** (2021) 7755–7766.[DOI:10.1021/acs.chemmater.1c02059]

28. E. Zoghlin, J. Schmehr, C. Holgate, R. Dally, G. Laurita, C. Levi, and S. D. Wilson. Evaluating the Effects of Structural Disorder on the Magnetic Properties of $Nd_2Zr_2O_7$, *Phys. Rev. Mater.*, **5** (2021) 084403. [DOI:10.1103/PhysRevMaterials.5.084403]

27. E. Zoghlin, Z. Porter, **S. Britner**, **S. Husremovic**, Y. Choi, D. Haskel, G. Laurita, and S. Wilson, Mapping the structural, magnetic and electronic behaviour of $(Eu_{1-x}Ca_x)_2Ir_2O_7$ across a metal-insulator transition, *J. Phys. Condens. Matter*, **33** (2020) 055601. [DOI:10.1088/1361-648X/abbf2b]

26. J. N. Tang, D. M. Crook, G. Laurita, and M. A. Subramanian, Vacancy tuning in Li, V-substituted lyonsites, *Solvent Extr. Ion Exc.* **38**, (2020) 656-680. [DOI:10.1080/07366299.2020.1780705]

25. U. Dang, W. Zaheer, **W. Zhou**, **A. Kandel**, M. Orr, R. Schwenz, G. Laurita, S. Banerjee, R. Macaluso, Lattice Anharmonicity of Stereochemically Active Lone Pairs Controls Thermochromic Band Gap Reduction of $PbVO_3Cl$. *Chem. Mater.* **32** (2020) 7404–7412. [DOI:10.1021/acs.chemmater.0c02342]

24. **M. L. Robinson**, **E. Whitaker**, L. Jin, M. A. Hayward, and G. Laurita, Evidence of paracrystalline cation order in the Ruddlesden-Popper phase $LaSr_3NiRuO_8$ through total scattering techniques, *Inorg. Chem.* **59** (2020) 3026-3033. [DOI:10.1021/acs.inorgchem.9b03382]

23. G. Laurita, D. Puggioni, D. Hickox-Young, M. W. Gaultois, L. K. Lamontagne, K. Page, J. Rondinelli, and R. Seshadri, Uncorrelated Bi off-centering and the insulator-to-metal transition in ruthenium $A_2Ru_2O_7$ pyrochlores. *Phys. Rev. Mater.* **3** (2019) 095003. [DOI:10.1103/PhysRevMaterials.3.095003]

22. G. Laurita, D. Hickox-Young, **S. Husremovic**, J. Li, A. W. Sleight, R. T. Macaluso, J. M. Rondinelli, and M. A. Subramanian, Covalency-Driven Structural Evolution in the Polar Pyrochlore Series $Cd_2Nb_2O_{7-x}S_x$. *Chem. Mater.* **31** (2019) 7626–7637. [DOI:10.1021/acs.chemmater.9b02466]

21. Z. Porter, E. Zoghlin, **S. Britner**, **S. Husremovic**, J. P. C. Ruff, Y. Choi, D. Haskel, G. Laurita, and S. Wilson, Evolution of structure and magnetism across the metal-insulator transition in the pyrochlore iridate $(Nd_{1-x}Ca_x)_2Ir_2O_7$, *Phys. Rev. B.* **100** (2019) 054409. [DOI:10.1103/PhysRevB.100.054409]

20. E. Schueller, G. Laurita, D. Fabini, C. Stoumpos, M. Kanatzidis, and R. Seshadri, Crystal structure evolution and notable thermal expansion in hybrid perovskites formamidinium tin iodide and formamidinium lead bromide, *Inorg. Chem.* **57** (2018) 695–701. [DOI:10.1021/acs.inorgchem.7b02576]

19. D. Fabini, T. A. Siaw, C. Stoumpos, G. Laurita, D. Olds, K. Page, J. Hu, M. Kanatzidis, S. Han, and R. Seshadri, Universal dynamics of molecular reorientation in hybrid lead iodide perovskites, *J. Am. Chem. Soc.* **139** (2017) 16875–16884. [DOI:10.1021/jacs.7b09536]

18. C. Cozzan, G. Laurita, M. W. Gaultois, M. Cohen, A. A. Mikhailovsky, M. Balasubramanian, and R. Seshadri, Compositional control of emission color and thermal stability in the green-emitting β-SiAlON:Eu^{2+} phsophor, *J. Mater. Chem. C* **5** (2017) 10039–10046. [DOI:10.1039/C7TC03039H]

17. J. Buchanan, D. B. Fast, B. E. Hanken, T. J. Mustard, G. Laurita, T.-H. Chiang, D. Keszler, M. Subramanian, J. F. Wager, M. Dolgos, J. R. Rustad, and P. H. Y. Cheong, Structural convergence properties of amorphous $InGaZnO_4$ from simulated liquid-quench methods, *Dalton Trans.* **46** (2017) 15311–15316 . [DOI:10.1039/C7DT02181J]

16. M. L. C. Buffon, G. Laurita, L. Lamontagne, E. Levin, S. Mooraj, D. L. Lloyd, N. White, T. M. Pollock, and R. Seshadri, Thermoelectric performance and the role of anti-site disorder in the 24-electron Heusler $TiFe_2Sn$, *J. Phys. Condensed Matt.* **29** (2017) 405702(1–7). [DOI:10.1088/1361-648X/aa81e7]

15. G. Laurita, D. H. Fabini, C. C. Stoumpos, M. G. Kanatzidis, and R. Seshadri, Chemical tuning of dynamic cation off-centering in the cubic phases of hybrid tin and lead halide perovskites, *Chem. Sci.* **8** (2017) 5628–5635. [doi:10.1039/C7SC01429E]

14. L. Devys, G. Dantelle, G. Laurita, E. Homeyer, I. Gautier-Luneau, C. Dujardin, R. Seshadri, and T. Gacoin, A strategy to increase phosphor brightness: application with Ce^{3+}-doped $Gd_3Sc_2Al_3O_{12}$, *J. Lumin.* **190** (2017) 62–68. [doi:10.1016/j.jlumin.2017.05.035]

13. L. K. Lamontagne, G. Laurita, M. Knight, H. Yusuf, J. Hu, R. Seshadri, and K. Page, The role of structural and compositional heterogeneities in the insulator-to-metal transition in the hole-doped $A_{1-x}Na_xPd_3O_4$ (A = Ca, Sr), (*Inorg. Chem.*), **56** (2017) 5158–5164. [doi:10.1021/acs.inorgchem.7b00307]

12. M. M. Butala, M. Mayo, V. Doan-Nguyen, M. A. Lumley, C. Göbel, K. M. Wiaderek, O. J. Borkiewicz, K. W. Chapman, P. J. Chupas, M. Balasubramanian, G. Laurita, S. Britto, A. Morris, C. P. Grey, and R. Seshadri. Local structure evolution and modes of charge storage in secondary $Li-FeS_2$ cells, *(Chem. Mater.)*, **29** (2017) 3070–3082. [doi:10.1021/acs.chemmater.7b00070]

11. C. Cozzan, K. J. Griffith, G. Laurita, J. G. Hu, C. P. Grey, and Ram Seshadri, Structural evolution and atom clustering in β-SiAlON:β-$Si_{6-z}Al_zO_zN_{8-z}$, *Inorg. Chem.*, **56** (2017) 2153. [doi:10.1021/acs.inorgchem.6b02780]

10. D. H. Fabini, C. C. Stoumpos, G. Laurita, A. Kaltzoglou, A. G. Kontos, P. Falaras, M. G. Kanatzidis, and R. Seshadri, Large positive thermal expansion and re-entrant structural and optical properties in perovskite formamidinium lead iodide, *Angew. Chem.* **55** (2016) 15392. [doi:10.1002/anie.201609538/epdf]

9. D. H. Fabini,* G. Laurita,* J. S. Bechtel, C. C. Stoumpos, H. A. Evans, A. Van der Ven, M. G. Kanatzidis, and R. Seshadri. [* equal contributions] Dynamic stereochemical activity of the Sn^{2+} lone pair in perovskite $CsSnBr_3$, *J. Am. Chem. Soc*. **138** (2016) 11820. [doi:10.1021/jacs.6b06287]

8. M. L. C. Buffon, G. Laurita, N. Verma, L. Lamontagne, L. Ghadbeigi, D. L. Lloyd, T. D. Sparks, C. M. Brown, T. M. Pollock, and R. Seshadri, Enhancement of thermoelectric properties in the Nb–Co–Sn half-Heusler/Heusler system through spontaneous inclusion of a coherent second phase, *J. Appl. Phys.* **120** (2016) 075104. [doi:10.1063/1.4961215].

7. L. K. Lamontagne, G. Laurita, M. Gaultois, M. Knight, L. Ghadbeigi, T. D. Sparks, M. E. Gruner, R. Pentcheva, C. Brown, and R. Seshadri, High thermopower with metallic conductivity in p-type Li-substituted $PbPdO_2$, *Chem. Mater.* **28** (2016) 3367. [doi:10.1021/acs.chemmater.6b00447]

6. G. Laurita, R. Grajczyk, M. Stolt, I. Coutinho, A. W. Sleight, and M. A. Subramanian, Influence of structural disorder on hollandites $A_xRu_4O_8$ (A^+ = K, Rb, $Rb_{1-x}Na_x$), *Inorg. Chem.*. **55** (2016) 3462. [doi:10.1021/acs.inorgchem.5b02897]

5. G. Laurita, K. Page, S. Suzuki, and R. Seshadri, Average and local structure of the Pb-free ferroelectric perovskites (Sr,Sn)TiO_3 and (Ba,Ca,Sn)TiO_3, *Phys. Rev. B.* **92** (2015) 214209. [doi:10.1103/PhysRevB.92.214109]

4. J. Heo, G. Laurita, S. Muir, M. A. Subramanian, and D. A. Keszler, Enhanced thermoelectric performance of synthetic tetrahedrites, *Chem. Mater.* **26** (2014) 2047. [doi:10.1021/cm404026k]

3. G. Laurita, J. Vielma, R. Berthelot, F. Winter, R. Pöttgen, G. Schneider and M. A. Subramanian, From $Ag_2Sb_2O_6$ to $Cd_2Sb_2O_7$: investigations on an anion-deficient to ideal pyrochlore solid solution, *J. Solid State Chem.* **210** (2014) 65. [doi:10.1021/cm404026k]

2. G. Laurita, K. Page, A. W. Sleight and M. A. Subramanian, Investigation of the anion-deficient pyrochlore $AgSbO_3$ through total scattering techniques, *Inorg. Chem.* **52** (2013) 11530. [doi:10.1021/ic401860j]

1. T. Siritanon, G. Laurita, R. T. Macaluso, J. Millican, A. W. Sleight and M. A. Subramanian, First observance of electronic conductivity in mixed valent tellurium oxides, *Chem. Mater.* **21** (2009) 5572. [doi:10.1021/cm9029769]