Ram Seshadri: Publications and Patents

Updated March 2, 2025. Also to be found at http://www.mrl.ucsb.edu/∼seshadri

Awarded US Patents:

7. C. J. Cozzan, S. P. DenBaars, and R. Seshadri, Ce:YAG/Al_2O_3 composites for laser-excited solid-state white lighting, United State Patent 0,264,100 (August 29, 2019).

6. K. A. Denault, S. P. DenBaars, and R. Seshadri, Laser-driven white lighting system for high-brightness applications, United State Patent 9,927,076 (March 27, 2018).

5. K. A. Denault, S. P. DenBaars, and R. Seshadri, Laser-driven white lighting system for high-brightness applications, United State Patent 9,574,728 (February 21, 2017).

4. R. Seshadri, A. Birkel, B. Hong, and J. A. Gerbec, Single phase and full-color phosphor, United State Patent 9,228,125 B2 (January 5, 2016).

3. W.-B. Im, R. Seshadri, and S. P. DenBaars, Solid solution phosphors based on oxyfluoride and white light emitting diodes including the phosphors for solid state white lighting applications, United State Patent 8,535,565 (September 17, 2013).

2. W.-B. Im, R. Seshadri, and S. P. DenBaars, Oxyfluoride phosphors and white light emitting diodes including the oxyfluoride phosphor for solid-state lighting applications, United State Patent 8,344,611 B2 (January 1, 2013).

1. W.-B. Im, R. Seshadri, and S. P. DenBaars, Yellow emitting phosphors based on Ce^{3+}-doped aluminate and via solid solution for solid-state lighting applications, United States Patent 8,163,203 (April 24, 2012).

In press, or submitted:

S. J. Gomez Alvarado, J. R. Chamorro, A. R. Jackson, G. Pokharel, R. Gomez, B. R. Ortiz, S. Sarker, L. Kautzsch, L. C. Gallington, R. Seshadri, and S. D. Wilson, Interleaved bond and magnetic frustration in triangular lattice $LnCd_3P_3$.

A. J. Bologna, R. Vincent, A. Kallistova, J. A. Mayer, M. A. Wright, C. De la Cruz, R. Zhang, F. Seeler, K. Schierle-Arndt, and R. Seshadri, Pyrolyzed “black mass” feedstocks and their synthetic proxies relevant to Li–ion battery recycling.

J. A. Cooley, G. Dairaghi, G. Moore, M. K. Horton, E. C. Schueller, K. A. Persson, and R. Seshadri, Magnetism and magnetocaloric properties of $Co_{1-x}Mn_xCr_2O_4$, *Phys. Rev. Mater.*

Y. Li, R. Seshadri, S. D. Wilson, A. K. Cheetham, and R. Valentí, Origins of temperature-dependent magnetism in open-shell 4d and 5d halide perovskites, [**arxiv/2402.14064**] *Phys. Rev. Res.*

M. J. Brady, J. L. Andrews A. Zambotti, D. Zhang, X. Yuan, K. Thurber, X. Duan, Y. Li, J. Nelson Weker, A. R. Balakrishna, K. See, R. Seshadri, A. Van der Ven, Bruce S. Dunn, S. H. Tolbert, and B. C. Melot, Multiscale approaches for optimizing the impact of strain on Na–ion battery cycle life, *MRS Energy & Sustainability* [**DOI: 10.1557/s43581-024-00118-x**]

Appeared, not peer-reviewed:

4. E. S.Sciaky, L. A. Lenaburg, R. Seshadri, and D. K. Pak, Interdisciplinary research center programs positively impact graduate and postdoctoral training, *MRS Bulletin* **49** (2024) 1300–1304 (2024). [**DOI: 10.1557/s43577-024-00800-y**]

3. Book Review: The Visual Elements – Photography: A Handbook for Communicating Science and Engineering by Felice C. Frankel, *Am. J. Phys.* **92** (2024) 479–480. [**DOI: 10.1119/5.0216761**]

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1. T. A. Strom, G. Haugstad, J. Shu, and R Seshadri, Shared instrumentation facilities: Benefiting researchers and universities, sustaining research excellence, *MRS Bulletin* **45** (2020) 331–335. [**DOI: 10.1557/mrs.2020.130**]

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437. L. Kautzsch, A. Georgescu, L. Yuan, K. Taddei, A. Reilly, R. Seshadri, J. Rondinelli, and S. Wilson, Highly quantum spin chains from strong covalency in Ca_3CrN_3, *J. Am. Chem. Soc.* **147** (2025) 3092–3101. [**DOI: 10.1021/jacs.4c11629**] & [**UC-eScholarship**]

436. A. S. Mulligan, G. T. Kent, J. Zhuang, A. Zohar, K. R. Albanese, E. E. Morgan, G. Wu, A. K.Cheetham, and R. Seshadri, Iodide double perovskites and the limit of their structural stability, *Chem. Eur. J.* **31** (2025) e202404009. [**DOI: 10.1002/chem.202404009**] & [**UC-eScholarship**]

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