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## Ram Seshadri: Publications and Patents

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### Awarded US Patents:

8. C. J. Cozzan, S. P. DenBaars, and R. Seshadri, Ce:YAG/Al<sub>2</sub>O<sub>3</sub> composites for laser-excited solid-state white lighting, United State Patent 0,264,100 (August 29, 2019).
7. 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).
6. 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).
5. H. Wang, R. Seshadri, M. Chabynec, A. Lehner, C. Liman, Complex pnictide metal halides for optoelectronic applications, US 0,155,974 (June 2, 2016).
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<sup>3+</sup>-doped aluminate and via solid solution for solid-state lighting applications, United States Patent 8,163,203 (April 24, 2012).

### In press, or submitted:

H. Tian, T. Li, A. Mulligan, J. Tregidga, M. Wright, A. Zohar, A. Chezhiyan, M. Preefer, K. Stone, J. Hu, G. Wu, A. Manjón-Sanz, S. Lapidus, J. Harter, A. K. Cheetham, and R. Seshadri, Structural propensities in Cs<sub>2</sub>MBiX<sub>6</sub> (M = Na, Ag; X = Cl, Br) bismuth halide double perovskites.

K. Wyckoff, J. Bienz, M. Saber, A. Zohar, A. K. Cheetham, and R. Seshadri, Relating structural features to electrode performance in Wadsley-Roth anodes.

K. Brockmeyer, A. Bologna, M. Wright, J. Wong, C. Rodriguez, T. Li, R. A. Segalman, and R. Seshadri, Direct microwave pyrolysis of cellulose to hard carbon anodes for sodium-ion batteries,

A. Bologna, D. Liu, S. Antall, B. Schmidt, R. Zhang, F. Seeler, K. Schierle-Arndt, and R. Seshadri, Impact of Al and Cu current collectors on Li-ion battery recycling.

A. Watkins, A. K. Cheetham, and R. Seshadri, Metallic oxides and the overlooked role of bandwidth, *Chem. Mater.*

A. Zambotti, K. Thurber, A. Sebastian, K. Liang, R. Chen, J. Li, A. Zohar, Arava; G. Nkala, Y. Li, A. Van der Ven, R. Seshadri, J. Nelson Weker, B. Melot, S. Tolbert, and B. Dunn, Morphological impact on sodium-ion storage in TiO<sub>2</sub> (B) nanostructures, *Chem. Mater.*

A. Reach, M. Wright, A. Mulligan, Z. Fang, K.-T. Tseng, C. Wang, J. Hu, M. Chi, A. K. Cheetham, R. Seshadri, and J. Sakamoto, Enhanced sodium dynamics in biphasic NaSICON solid electrolytes, *Chem. Mater.*

M. A. Wright and R. Seshadri, Linking battery electrode science with correlated and quantum materials, *Phys. Rev. Mater.*

A. Balvanz, A. Pournara, R. P. Reynolds, P. E. Meza, C. D. Malliakas, J. D. Fletcher, R. Seshadri, V. P. Dravid, and M. G. Kanatzidis, Tuning optical properties and local lone-pair off-centering in “hollow” FA<sub>1-x</sub>en<sub>x</sub>Pb<sub>1-y</sub>Sn<sub>y</sub>Br<sub>3</sub> perovskites, *Chem. Sci.* [DOI: <https://doi.org/10.1039/D5SC01841B>]

S. J. Gomez Alvarado, J. R. Chamorro, D. Rout, J. Hielscher, Sarah Schwarz, Caeli Benyacko, M. B. Stone, V. Ovidiu Garlea, 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 frustration in the triangular lattice antiferromagnet  $\text{LnCd}_3\text{P}_3$ , *Nature Mater.* [DOI: 10.1038/s41563-025-02380-x]

M. A. Wright, A. S. Mulligan, D. Rout, J. Hu, J. Liu, R. L. Behrens, J. R. Chamorro, S. D. Wilson, A. K. Cheetham, and R. Seshadri, Strong, yet split hydrogen bonding with ice rules in delafossite  $(\text{H/D})\text{RhO}_2$ , *Angew. Chem. Int. Ed.* (2025) e15471. [DOI: doi.org/10.1002/anie.202515471]

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