

Ram Seshadri

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Research vision

To develop rational guidelines for the screening of known materials for useful function, leading to the creation of new functional materials through understanding and control of structure–composition–property relationships. To concurrently help develop the tools to better establish these relationships.

Education:

1990-1995 M.S. in Chemistry & PhD in Solid State Chemistry, Indian Institute of Science, Bangalore, India (with C. N. R. Rao FRS). PhD thesis titled *Investigations on Fullerenes, Carbon Nanotubes, Onions and Small Gold Particles*.

1986-1989 B.Sc. (Hons.) Chemistry, St. Stephens College, Delhi University, India.

Employment:

2020– Distinguished Professor, Materials Department, and Department of Chemistry and Biochemistry, UC Santa Barbara.

2008–2020 Professor, Materials Department, and Department of Chemistry and Biochemistry, UC Santa Barbara.

2006–2008 Associate Professor, Materials Department, and Department of Chemistry and Biochemistry, UC Santa Barbara.

2002–2006 Assistant Professor, Materials Department, UC Santa Barbara.

1999–2002 Assistant Professor, Solid State and Structural Chemistry Unit, Indian Institute of Science.

1997–1999 Postdoctoral Fellow with Professor Wolfgang Tremel at the Institut für Anorganische Chemie, Universität Mainz, Germany: *Magnetic and charge-density wave chalcogenides, biomineralization, and electronic structure of functional materials*.

1995–1996 Postdoctoral Fellow with Professor Bernard Raveau at the Laboratoire CRISMAT, Caen, France: *High- T_C superconductors and CMR manganites*.

1989–1990 Pre-Doctoral Researcher in the Solid State and Structural Chemistry Unit, Indian Institute of Science: *High- T_C copper- and bismuth-oxide superconductors*.

Research contributions

Research efforts in the group are focused on the theme of developing structure – composition – property relations in functional inorganic materials. The focus at the present time is largely in materials for energy conversion and storage, including magnetocaloric materials, Li-ion and related battery materials, and hybrid halide optoelectronic materials. For research publications, please see: <http://www.mrl.ucsb.edu/~seshadri/respubs.html>

Service and recognition (select, since 2010):

2022 Executive Editor, *Chemistry of Materials*

2022 Fellow, Neutron Scattering Society of America

2020 Distinguished Professor, UC Santa Barbara

2019 Visiting Professor, MS&E Department, National University of Singapore

2019 Fellow, American Association for the Advancement of Science

2019 Associate Editor, *Annual Reviews of Materials Research*

2018 Materials Research Society of India Silver Medal

2017 Fred and Linda R. Wudl Professor of Materials Science

2015 Director, Materials Research Laboratory: An NSF MRSEC

2015 Chemical Research Society of India, Medal (joint)

2015 Fellow, American Physical Society

2014 Associate Editor, *Chemistry of Materials*

2014 UC Santa Barbara Academic Senate Graduate Mentoring Award

2013 UC Santa Barbara Margaret T. Getman Service to Students Award

2013 Editorial Board Member, *Journal of Solid State Chemistry*

2010 Fellow of the Royal Society of Chemistry (FRSC)

2009 Visiting Fellow Commoner, Trinity College, Cambridge, UK.

2009 Editorial Committee Member, *Annual Reviews of Materials Research*

2009 Saint-Gobain Chair Visiting Professor, École Polytechnique

2009–2012 US Associate Editor, *Journal of Materials Chemistry*

2005 American Chemical Society ExxonMobil Solid State Chemistry Faculty Fellowship

2004 National Science Foundation Career Award.

2000 Professeur Invité, École Centrale Paris.

1999 Young Associate of the Indian Academy of Science.

1996 Sudborough Medal for Best Thesis (over a 2-year period), Solid State and Structural Chemistry Unit.

Former graduate students (with current location):

Bangalore, co-advised: Ujjal Gautam (IISER, Mohali, Faculty), Sudip Barman (NISER Bhubaneswar, Faculty), Moumita Ghosh (DuPont, Hyderabad), Hem Kandpal (IIT Roorkee, Faculty) **Santa Barbara:** Aditi Risbud (Stanford, Development), Eric S. Toberer (Colorado School of Mines, Faculty), Katharine Page (University of Tennessee Knoxville, Faculty), Brent Melot (USC, Faculty), Daniel Shoemaker (UIUC, Faculty), Joshua Kurzman (Juul); Nathan George (Tink, Sweden), Phillip Barton (Lumileds), Lauren Misch (AbbVie), Moureen Kemei (Intel), Kimberly See (Caltech, Faculty), Michael Gaultois (Fairmat, France), Kristin Denault, Jason Douglas (Boeing), Malinda Buffon, Megan Butala (University of Florida, Faculty), Douglas Fabini (MIT, Postdoc), Hayden Evans (NIST, Staff), Emily Levin (Hewlett-Packard), Joshua Bocarsly (U. Cambridge, Postdoc), Molleigh Preefer (SLAC, Staff), Nicole Michenfelder-Schauser (Voltaiq), Emily Schueller (Northrop-Grumman), Sam Teicher (Microsoft Quantum), and Yuzki Oey (Exponent).

Former post-doctoral fellows (with current location):

Dave Wolfe, K. Ramesha (CECRI Chennai Staff), Ombretta Masala (Nanoco Technologies), Jun Li (Oregon State), Srinivasa Thimmaiah (Kimberly-Clark), Young-Il Kim (Yeongnam University, Faculty), Serena Corr (University of Sheffield, Faculty), Won Bin Im (Hanyang University, Faculty), Alexander Birkel (ITICON GmbH), Christina S. Birkel (ASU, Faculty), Taylor Sparks (University of Utah, Faculty), Jakoah Brgoch (University of Houston, Faculty), Anna Lehner (Freiburg), Geneva Laurita (Bates College, Faculty), Vicky Doan-Nguyen (Aerospace Corporation), Jason Grebenkemper (Lam Research), Dongwook Lee (Hangoon University, Faculty) and. Kartik Pilar (State of NY), Joya Cooley (CalState Fullerton, Faculty), Lingling Mao (SUSTech, Shenzhen, Faculty), Pratap Vishnoi (JNCASR, Bangalore, Faculty), and Eve Mozur (Colorado School of Mines, Faculty).

Former co-advised students (with current location):

Efrain Rodriguez (University of Maryland College Park Faculty) and James Neilson (Colorado State University Faculty).

Current graduate students:

Kira Wyckoff (2018-present), Rebecca Vincent (2018-present), Nelson Moreno (2019-present), Justin Mayer (2019-present), Emily Morgan (2019-present), Farnaz Kaboudvand (2020-present), Ashlea Patterson (2020-present), Aurland Hay (2020-present), and Alex Bologna (2021-present).

Current post-doctoral fellows:

Juan Chamorro (2021–present), Arava Zohar (2021–present), Anna Kallistova (2021-present), Gregory Kent (2022-present), and Alexandra Brumberg (2022-present)

Current and past undergraduate interns (over 120):

Please see website above.