

Nivedina A. Sarma Ph.D. - Patent Agent

Patent Agent



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Dr. Sarma is a Patent Agent whose work focuses on the review and evaluation of technology in the fields of chemistry, materials science, medical devices, energy storage, and machine learning.

During her doctoral research at UC Berkeley, Dr. Sarma developed theoretical and computational models to understand bulk and interfacial phenomena in soft matter systems. She also has experience with battery technology from her time at a sodium-ion startup in the Bay Area and has previously worked on medical devices and tissue engineering scaffolds including the Zurich Heart Project.

Prior Experience

- Graduate Student Researcher, Omar Research Group, University of California, Berkeley, 2021-2025
- Performance and Reliability Engineering Intern, PowerNaP Energy, 2024-2025
- Graduate Student Researcher, Materials Sciences Division, Lawrence Berkeley National Laboratory, 2023-2025
- Undergraduate Researcher, Talapin Lab., Department of Chemistry, The University of Chicago, 2019-2020
- Invited Visiting Student, Laboratory of Applied Mechanobiology, ETH Zurich, 2018
- Undergraduate Researcher, Tian Lab, Department of Chemistry, The University of Chicago, 2017-2019

News & Publications

Publications

- DeFrates K.G.*, Engstrom J.*, Sarma N.A., Umar A., Shin J., Cheng J., Omar A.K., and Messersmith P.B., "The influence of molecular design on structure-property relationships of a supramolecular polymer prodrug," *Proceedings of the National Academy of Sciences* (October 2022).

EDUCATION

University of California, Berkeley, Ph.D., Materials Science and Engineering, 2025; National Science Foundation Graduate Research Fellowship (2020)

The University of Chicago, S.B., Chemistry, 2020; with honors; Crerar Science Writing Prize (2019); Beckman Foundation Scholar (2018); Astronaut Foundation Scholar (2018); Otto Whaley Award, awarded to an outstanding female student in a science major, (2017)

- Gupta A.*, Ondry J.C.*, Chen M., Hudson M. H., Coropceanu I., Sarma N.A., and Talapin D. V. "Diffusion-Limited Kinetics of Isovalent Cation Exchange in III-V Nanocrystals Dispersed in Molten Salt Reaction Media," *Nano Letters* (August 2022)
- Coropceanu I.*, Janke E.M.*, Portner J.*, Haubold D., Nguyen T.D., Das A., Tanner C.P.N., Utterback J.K., Teitelbaum S.W., Hudson M., Sarma N.A., Hinkle A.M., Tassone C.J., Eychmuller A., Limmer D.T., de la Cruz M.O., Ginsberg N.S., and Talapin D.V., "Self-assembly of nanocrystals into strongly electronically coupled all-inorganic supercrystals," *Science* (March 2022)
- Rotenberg M.H., Elbaz B., Nair V., Schaumann E.N., Yamamoto N., Sarma N., Matino L., Santoro F., and Tian B., "Silicon Nanowires for Intracellular Optical Interrogation with Subcellular Resolution," *Nano Letters* (January 2020)
- Parameswaran R.*, Koehler K.*, Rotenberg M.H., Burke M., Kim J., Jeong K., Couto B., Paul M., Moreno K., Sarma N., Hayes T., Sudzilovsky E., Park H., and Tian B., "Optical Stimulation of Cardiac Cells with a Polymer-supported Silicon Nanowire Matrix," *Proceedings of the National Academy of Sciences* (December 2018)

(* equal contributions)

Presentations

- Fall Meeting of the Materials Research Society (December 2024, Boston MA) *
- Berkeley-Stanford Soft Matter Symposium (October 2024, Berkeley CA) +
- Gordon Research Conference on Colloidal, Macromolecular, and Polyelectrolyte Solutions (February 2024, Ventura CA) +
- Berkeley-Stanford Soft Matter Symposium (September 2023, Stanford CA) +
- Spring Meeting of the Materials Research Society (April 2023, San Francisco CA) *
- Gordon Research Conference on Colloidal, Macromolecular, and Polyelectrolyte Solutions (November 2022, Ventura CA) +; - received American Physical Society Division of Soft Matter Future Investigator Travel Award
- Berkeley-Stanford Soft Matter Symposium (September 2022, Berkeley CA) +
- Chemistry Honors Colloquium, The University of Chicago (May 2020, remote) *
- Beckman Foundation Symposium (August 2019, Irvine CA) +
- College Research Week, The University of Chicago (May 2019, Chicago IL) *
- National College Research Conference (January 2019, Cambridge MA) *+
- Invited talk at the Embassy of Switzerland in Washington, DC (November 2018, Washington DC) *
- Midstates Undergraduate Symposium for Biology and Psychology (November 2018, Chicago IL) *+
- University of Chicago Careers in STEM Research Fair (October 2018, Chicago IL) +

- Astronaut Foundation Research Symposium (August 2018, Washington DC) +
- National College Research Conference (January 2018, Cambridge MA) *
- Midstates Undergraduate Symposium for Physical Sciences, Math, and Computer Science (October 2017, Chicago IL) +

(* talk; + poster)