

Indranil Ghosh

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Gordon Center for Integrative Science, 929
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Updated April, 2026

EDUCATION

- **Ph.D.** Department of Chemistry, The University of Chicago, USA Expected 2026
- **Specialization**, Energy and Environmental Policy, Harris School of Public Policy, USA Mar 2024
- **M.Sc.** School of Chemical Sciences, National Institute of Science Education and Research, India
Thesis: "Diagonal Suppressed Correlation Spectroscopy (DS-COSY) Using Negative Time Prediction" May 2020

SCIENTIFIC PUBLICATIONS

† = contributed equally; * = corresponding author

6. **I. Ghosh**, Q. Shen, P. E. Wu, and G. S. Engel*; "Vibronic Conical Intersection Trajectory Signatures in Wave Packet Coherences". *Journal of Physical Chemistry Letters* **2024**, *15*, 12494.
5. S. Sohoni†, **I. Ghosh**†, G. T. Nash, C. A. Jones, L. T. Lloyd, B. C. Li, K. L. Ji, Z. Wang, W. Lin, and G. S. Engel*; "Optically Accessible Long-Lived Electronic Biexcitons at Room Temperature in Strongly Coupled H-aggregates". *Nature Communications* **2024**, *15* (1), 8280.
4. I. Avdic, L. M. Sager-Smith, **I. Ghosh**, O. C. Wedig, J. S. Higgins, G. S. Engel, and D. A. Mazziotti*; "Quantum sensing using multi-qubit quantum systems and the Pauli polytope". *Physical Review Research* **2023**, *5* (4), 043097.
3. S. Sohoni, L. T. Lloyd, A. Hitchcock, C. MacGregor-Chatwin, A. Iwanicki, **I. Ghosh**, Q. Shen, C. N. Hunter, and G. S. Engel*; "The Phycobilisome's Exciton Transfer Efficiency Relies on an Energetic Funnel Driven by Chromophore-Linker Protein Interactions". *Journal of the American Chemical Society* **2023**, *145* (21), 11659.
2. G. Lin†, G. T. Nash†, T. Luo†, **I. Ghosh**, S. Sohoni, A. J. Christofferson, G. Liu, G. S. Engel, W. Lin*; "Two-Dimensional Nanosensitizers Facilitate Energy Transfer to Enhance Sonodynamic Therapy". *Advanced Materials* **2023**, *35* (19), 2212069.
1. **I. Ghosh**, S. Chakraborty, S. Pandey, A. Ghosh*, "Diagonal free processing of conventional phase sensitive COSY using Filter Diagonalization Method", *ChemRxiv* **2022**.

SCIENCE POLICY PUBLICATIONS

† = contributed equally; * = corresponding author

2. **I. Ghosh**†*, C. Conzelmann†; "Nuclear Notions: Accounting for Risk Perceptions and Values When Implementing U.S. Nuclear Energy Policies". *Scitech Forefront* **2024**.
1. **I. Ghosh***; "The Future of Nuclear Power in the United States". *Illinois Science Council* **2024**.

INVITED TALKS

4. Paideia Energy-Matter Interactions Workshop, Northwestern University, USA, May 2026.
3. Bhabha Atomic Research Center (BARC), India, April, 2026.
2. Quantum Frontiers Summer School - Institute for Complex Adaptive Matter (iCAM), Institut d'Études Scientifiques de Cargèse, France, June 2025.
1. Department of Chemistry, National Institute of Science Education and Research, India, March 2025.

ACCOLADES AND ACHIEVEMENTS

8. **Eugene Olshansky Memorial Fellowship**, Department of Chemistry, The University of Chicago, 2025-26.
7. **Quantum Materials Accelnet Science Exchange Fellowship**, Quantum Frontiers Summer School in France, Institute of Complex Adaptive Matter (iCAM), June 2025.
6. **Distinguished Leadership and Service Award**, The University of Chicago.
5. **Freud Fellowship**, Department of Chemistry, The University of Chicago, 2020-21.
4. **Gold Medal - Summa cum laude** - School of Chemical Sciences, NISER, 2015-20.
3. **S. N. Bose Fellowship**, Indo-US Science and Technology Forum, 2019.
2. Recipient of **INSPIRE Fellowship**, Department of Science and Technology (DST), Government of India, 2015-20.
1. Recipient of **IAS Fellowship** from the Indian Academy of Sciences (IAS), Government of India, 2018.

TEACHING EXPERIENCE

- Undergraduate General Chemistry, Constructivist Classroom through collaborative problem-solving - Teaching Assistant - Fall 2025 and Winter 2026 - UChicago Chemistry.
- Undergraduate General Chemistry - Teaching Assistant - Fall 2020, Winter 2021 and Spring 2021 - UChicago Chemistry.
- Undergraduate General Chemistry - Head Teaching Assistant - Fall 2022 - UChicago Chemistry.

LEADERSHIP AND SERVICE

- **ORGANIZER: GORDON RESEARCH SEMINAR** Jul 2026
Gordon Research Conferences, United States
- **MEMBER: PUBLIC SAFETY ADVISORY COUNCIL** Sep 2022 - Jul 2024
The University of Chicago, United States
- **EDUCATION MENTOR** Nov 2021 - Apr 2025
Illinois Science and Technology Coalition, United States
- **GRADUATE STUDENT GOVERNMENT** Jan 2021 - Jun 2022
The University of Chicago, United States
- **SOCIAL SERVICE** Sep 2015 - May 2020
Zaariya, NISER, India