Stanford

# Sandeep Yadav

Postdoctoral Scholar, Energy Science and Engineering

## Bio

### BIO

Sandeep Yadav is a postdoctoral scholar in the Department of Energy Resources Engineering at the Stanford Doerr School of Sustainability. His research focuses on advancing sustainable energy systems, with an emphasis on techno-economic analysis and modeling of carbon capture retrofits for industrial decarbonization and energy efficiency. He earned his Ph.D. in Energy Science and Engineering from the Indian Institute of Technology (IIT) Bombay, where he specialized in the techno-economic assessment of carbon capture technologies, data center cooling, and combined cooling and power systems. Sandeep is committed to supporting the global transition to low-carbon energy and is passionate about mentoring the next generation of scientists and engineers.

### HONORS AND AWARDS

- Best Presentation in the category of "Thermal Management and industrial applications", Energy Day 2025, IIT Bombay (April 2025)
- Prime Minister’s Research Fellowship for Ph.D. Degree, Ministry of Education (MoE), Government of India (Aug 2020- July 2024)
- Teaching Assistantship Fellowship for M.Tech. Degree, Ministry of Education (MoE), Government of India (Aug 2017- Jul 2019)

### PROFESSIONAL EDUCATION

- Doctor of Philosophy, Indian Institute of Technology (2025)
- MTech, Indian Institute of Technology Mandi, India , Energy Engineering (2019)

### STANFORD ADVISORS

- Anthony Kovscek, Postdoctoral Faculty Sponsor

## Publications

### PUBLICATIONS

- **Techno-economic assessment of advanced amine-based CO<sub>2</sub> capture for blue SMR hydrogen production: Impacts of process integration, solvent choice, and optimization** *INTERNATIONAL JOURNAL OF HYDROGEN ENERGY*
  Yadav, S., Saltzer, S. D., Kovscek, A. R.
  2026; 219

- **Post-combustion CO2 capture using cold energy from liquefied natural gas regasification in natural gas combined cycle power plants** *FUEL*
  Yadav, S., Seethamraju, S., Banerjee, R.
  2025; 401

- **Cold energy recovery from liquefied natural gas regasification process for data centre cooling and power generation** *ENERGY*
  Yadav, S., Seethamraju, S., Banerjee, R.

2023; 283

- **Thermodynamic Analysis of LNG Regasification Process** *Chemical Engineering Transactions*
  Yadav, S., Banerjee, R., Seethamraju, S.
  2022; 94: 919-924