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Green careers guide

Sauradeep Majumdar
Switzerland



Sauradeep Majumdar Switzerland

CO₂

CO₂

Short Biography

Sauradeep Majumdar, originally from India, is currently a PhD student in Chemical Engineering at École polytechnique fédérale de Lausanne (EPFL), in Switzerland. His research is in the area of Carbon Capture and Storage (CCS), one of the most promising technologies to combat Climate Change. He is specifically focusing on designing nanomaterials which can capture carbon dioxide or CO₂ molecules, and thus reduce the CO₂ concentration in the atmosphere.

Story

I was always curious about the topic of Climate Change, right from my school days. I wanted to work in this area someday, but back then I was not sure how. My Bachelors in Chemical Engineering from Jadavpur University, Kolkata, and my interest in computer programming then introduced me to the subject area of Molecular Simulations during my Masters. And through my Masters journey at the Indian Institute of Technology (IIT) Kanpur, I learned more about the alarming global impact of Climate Change and how, using Molecular Simulations, we can help in Carbon Capture and Storage (CCS) – one of the most viable ways to address Climate Change. After gaining a year of industrial R&D experience at Tata Steel R&D, I thus decided to go for my doctoral studies in this field. I am currently pursuing my PhD in Chemical Engineering at the Laboratory of Molecular Simulations (LSMO), EPFL, Switzerland.

The main reason behind Climate Change is the rising emissions of Carbon Dioxide or CO₂ in the atmosphere. Therefore, it is important that we capture these CO₂ molecules and reduce their concentration in the atmosphere. My research focuses on designing nano-porous materials which can trap these CO₂ molecules in their pores and thus capture them. With the help of computer simulations, I go inside the world of atoms and molecules, study them and then use them to build promising materials for carbon capture.

This journey would not have been possible without the help and support of many people along the way. My family has always encouraged me to pursue my dreams and supported me in my decisions. I am fortunate to have some wonderful friends who have been there with me during the highs and lows of this journey. And I am extremely grateful to my teachers, from my school days to my current PhD life. Their teachings and guidance have been invaluable in this journey.

Climate Change is one of the biggest challenges which the world is currently facing. It is a very complex global problem that needs to be looked from different perspectives. And therefore, to tackle it we need people from different domains- scientific research, industries, government and the society at large to come together.

So, if you are interested in learning about how the microscopic world of atoms and molecules can help us design materials for carbon capture to solve this complex global problem, then this might be the field for you.

The clocks are ticking and we are already running late. So, let us hurry and capture this CO₂, before.....it captures us !!

