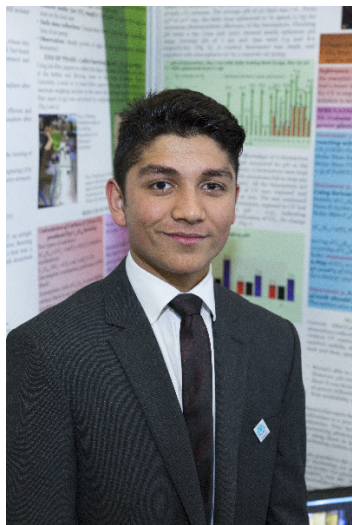


CWSF 2018 - Ottawa, Ontario



Aaron Sarkar

Algae-Based Carbon Capture System: A Sustainable Solution for CO2 Emissions

Challenge: Environment

Category: Intermediate

Region: Eastern Newfoundland

City: St. John's, NL

School: Holy Heart High School

Abstract: An algae-based system was made to capture CO₂ after burning of fossil fuels. There were 2 phases. In phase 1 kerosene was used to release CO₂ while in phase 2 vinegar and baking soda was used. After checking efficiency of all essential inputs within the system and creating a simulation model to a thermal power plant, the system successfully captured CO₂ effectively and efficiently.

Biography

Hello my name is Aaron Sarkar and I am a grade 10 student at Holy Heart of Mary High School, St. John's, NL. The inspiration for my project seeded from reading multiple articles on Climate change and global warming. I had always been fascinated by this topic since it is such a huge problem to our planet and everyone talks about it so much. Everyone says that not burning fossil fuels is the solution, but is it even practical? We burn thousands of tonnes of fossil-fuels a day because we are heavily dependant on it so why not find a way to make burning fossil fuels completely Eco-friendly. My plans for further research are to make a computational approach and then make a real life miniature algae-based system in a lab. My dream is to see this tech incorporated in real life one day because I strongly believe systems like these are our future. If I was to give advice to a student wanting to do a science fair project, I would say remember to always be inspired by something that you love and incorporate it into science and remember to always be original and innovative in anything you do.

Awards

Value

Excellence Award - Intermediate - Silver Medal Sponsor: Youth Science Canada	
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
Total	\$2 000