

GreenSTEM – 2020 Cohort



Carbon OxyTech

Abdallah Manasrah

Abdallah holds a PhD in Chemical Engineering from the University of Calgary. His company, Carbon OxyTech Inc. (COT), is developing a green technology for converting residual feedstocks, low-rank coal, and carbon-based waste into valuable products. COT's back-end technology can produce multiple products each addressing a unique market opportunity, such as humic acids (organic fertilizer), carbon nanomaterials/fibers, clean fuel, as well as valuable metal recovery.



Cnergreen

Ali Telmadarreie

Ali holds a Ph.D. in petroleum engineering from the University of Alberta and joined the University of Calgary as a postdoctoral scholar and research associate while he launched his company, Cnergreen. Cnergreen aims to help the oil and gas industry improve their oil recovery efficiency, reduce GHG emissions, and maximize reservoir CO2 storage capacity, by applying Cnergreen's patent-pending nanofoam technology. The nanofoam can be rapidly customized for optimized use in varied conditions.



Roshan Water™
Solutions

Amirreza Sohrabi

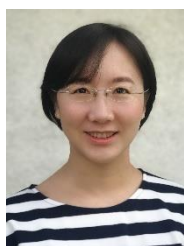
Amirreza received his PhD in Materials Engineering from University of Alberta with specialization in designing advanced water/wastewater treatment systems. Roshan Water™ addresses a current gap in the microbiological testing industry. The technology, VeloCens™, allows for rapid bacteria testing "anywhere by anyone" versus testing done in central laboratories. End-users can make decisions on the quality of their water in real-time while reducing sample transportation to labs.



SolarSteam Inc.

Apostol Radev

Apostol holds an MSc in Sustainable Energy Development from the University of Calgary. With his experience in the front line of solar heating for industrial process innovation, Apostol's Calgary based renewable energy company SolarSteam Inc. addresses the problem of high-cost and high-emissions associated with process heat. SolarSteam is developing novel concentrating solar systems for customers looking to improve performance as well as be more carbon and cost-effective.



Nanode

Bing Cao

Graduate from the University of Alberta, Bing Cao holds a PhD in Chemistry and expertise in renewable energy and advanced materials. Her company, Nanode, aims to design and produce high-performance drop-in electrodes for lithium ion and sodium ion batteries. Nanode produces nanostructured electrodes in a single-step low-cost process, while enabling 20-30% higher energy density compared to current lithium ion batteries.



Dustin Smith

Through his PhD studies in Biomolecular Science at the University of Lethbridge, Dustin gained unique expertise in metagenome analysis. His company aims to provide metagenome analysis to characterize microbial and viral diversity in environmental samples. Current target markets include the public health sector (i.e. pathogen tracing), and bioremediation in the oil and gas sector.



Allos Bioscience

Harland Brandon, Luc Roberts

Graduates from the University of Lethbridge, Luc and Harland hold PhDs in Biomolecular Science. Together they started Allos Bioscience, a company that aims to develop protein-based biosensors that are able to detect and quantify specific molecules in solution in real-time to support informed decision making. This technology has applications across varied industries but they are currently focused on improving biofuel production and guiding environmental remediation practices.



Future Fields

Matt Anderson-Baron

Matt Anderson-Baron graduated with a PhD in Cell Biology from the University of Alberta. He is a co-founder and the Chief Scientific Officer of Future Fields, a biotechnology company in the field of cellular agriculture. Future Fields is developing the most important ingredient for lab-grown media: cell growth media. Future Fields makes cell culture media 1000 times cheaper than anyone else through their novel production system.



SN Biomedical

Matthew Nickel, Hillary Sweet

Matthew and Hillary both hold PhDs in Materials and Biomedical Engineering from the University of Alberta. The purpose of SN Biomedical is to develop simple and affordable diagnostics in order to help others achieve a higher quality of care. Through GreenSTEM they plan to develop their diagnostic technology for detection applications in the cattle industry to help improve the sustainability, health and welfare of the sector.



WiDR Inc.

Ulian Shahnovich

Ulian Shahnovich holds a Masters in Electronics Engineering from the University of Calgary. He and his team have developed an innovative digital image sensor that can capture very bright and low light objects inside the same frame. These Wide-Dynamic Range image sensors are essential for a significant portion of the machine vision industry with important applications in self-driving vehicles and industrial automation. WiDR Inc. was founded to commercialize the technology.



High Density Power Conversion (HDPC)

Zhongyi Quan

Zhongyi holds a PhD in Energy Systems from the University of Alberta. Through GreenSTEM, he aims to commercialize high power density power electronics technology for renewable energy systems as well as battery storage and automotive systems. The new technology allows power converters to be built compact in size and light in weight, and thus make renewable energy - especially solar energy- more affordable.