

GreenSTEM - 2019 Cohort



SeeO2 Energy

Beatriz Molero Sanchez, Paul Addo

Graduates from the University of Calgary, Beatriz and Paul both hold PhDs in Chemistry. Their company, SeeO2 Energy, aims to develop a symmetrical solid oxide electrolysis cell (SOEC) technology that efficiently converts carbon dioxide to carbon monoxide and oxygen for specialty chemicals and metal processing users.



Wyvern

Kurtis Broda, Chris Robson

Graduates from the University of Alberta, Kurtis and Chris each have a Master's Degree in Mechanical Engineering. Their company, Wyvern, aims to develop hyperspectral imaging technology for deployment in cube satellites to provide high quality, targeted data to industry in a time frame better suited to informed decision making. Wyvern is currently targeting the precision agriculture industry.



ZoraMat Solutions

Roger Mah

Roger holds a PhD in Chemistry from the University of Calgary. His company, ZoraMat Solutions, aims to prototype and scale Zoralite, a solid sorbent for carbon dioxide capture from large industrial emitters, natural gas separations and other challenging carbon dioxide-related gas separations.



Synthergy

Gem Shoute

Gem holds a PhD in Electrical Engineering from the University of Alberta. Her company, Synthergy, aims to prototype a cognitive atomic processing (CAP) system for atomic layer deposition (ALD), an additive nano-manufacturing technique used in the fabrication of semiconductors and advanced coatings. CAP improves efficiency and long-term sustainability of ALD processes.



Carbonova

Mina Zarabian

A graduate of the University of Calgary, Mina holds a PhD in Chemical and Petroleum Engineering. Her company, Clean Carbon Tech is an engineering company developing a technology to produce massive, pure carbon nanofibers (CNF) from greenhouse gases. CNF is 40 times stronger and four times lighter than structural steel and potential industrial applications including automobile, wind turbine, aircraft and battery manufacturing, as well as construction.



TransEON

Vallen Rezazadeh

Vallen holds a Master's Degree in Electrical Engineering from the University of Alberta. His company, TransEON, aims to develop a nanoscale gallium nitride integrated circuit platform for use in radio-frequency applications. The platform will be capable of substantially improved power-added efficiencies in applications related to 5G telecommunications, defense and space.



EnviCore

Shahrukh Shamim, Aseem Pandey

Shahrukh and Aseem both hold Master's Degrees in Chemical Engineering from the University of Calgary. Through GreenSTEM, they aim to develop a novel nanoparticle/biopolymer treatment for sustainable tailings treatment. The technology may have applications in oil and gas and coal and mineral mining, as well as treatment of wastewater originating from pharmaceuticals and textile industries.



Copperstone

Nicolas Olmedo, James Yuen

Graduates from the University of Alberta, James holds a Master's Degree and Nicolas is a PhD candidate, both in Mechanical Engineering. Their company, Copperstone Technologies, aims to commercialize advanced robotic systems for use in mine waste, tailings and environmental monitoring. Their amphibious robots are capable of surveying and sampling in a variety of environments, increasing the accuracy of environmental monitoring, while decreasing cost and human risk.