GreenSTEM Fellows

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.

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 enable daily, global greenhouse gas emissions monitoring in conjunction with industry partners.

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.

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.

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.
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.

Shahrukh Shamim
Shahrukh holds a Master’s Degree in Chemical and Petroleum Engineering from the University of Calgary. Through GreenSTEM, he aims 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.

Aseem Pandey
Aseem holds a Master’s Degree in Chemical Engineering from the University of Calgary. Through GreenSTEM, he aims to prototype a technology which would enable transport of bitumen in the form of an emulsion, reducing or eliminating the need for diluents, which are volatile and flammable in nature, and generally include carcinogens such as Benzene.

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.