



Entrepreneurial
Training & Consulting

Sunthetics is creating a sustainable chemical industry, one reaction at a time.

BBCetc is helping the company get SBIR funding from NSF.

Daniela Blanco is more than a Ph.D.—she's successfully discovering feasible solutions for renewable energy integration in chemical reactions. We're proud to play a role in helping her move forward. She and her team have developed a process that promises to create lasting, sustainable impact in the chemical industry.

Sunthetics has invented a machine-learning tool that fast-tracks innovation around processes using less energy, employing resources more efficiently, using safer or bio-based starting materials, and integrating with renewable energy sources.

Normally, getting to that point would take years to develop because it would require thousands of experiments to achieve a viable, commercial product. Traditional predictive modeling tools—physical, statistical or machine-learning—also require a deep understanding of the reaction or multiple data points to general valuable insights.

Sunthetics has developed a unique process that leverages very few data points to generate insights that deliver results equivalent to performing thousands of experiments. That accelerates a multi-year, multi-experiment process into only a few months. With Sunthetics, it can be achieved with *three times less experiments*.

Daniela Blanco came to the United States from Venezuela, earning her Ph.D. in Chemical Engineering from NYU in 2020. She and her team initially developed a process that would harness solar energy to create a chemical reaction that could produce nylon with 20 percent less expense and 30 percent fewer resources. She brought the idea to a series of innovation challenges and was awarded more than \$400,000 in prize money, which allowed her to fund staff and create a laboratory facility. She was also featured in the National Geographic documentary, "Own the Room."

To move the company forward even further, she turned to the National Science Foundation to apply for a Small Business Innovation Research (SBIR) grant. To make sure she had the best advice to create a successful proposal, she turned to BBC Entrepreneurial Training & Consulting.

“BBCetc’s expertise was critical to improving our chances of securing a Phase 1 NSF award, especially on our first try,” said Daniela. “Their advice was always on point because they truly understand the needs of a start-up. They know what’s best for the company.”

Synthetics’ enables process chemists to innovate and pinpoint viable processes using only a few experiments. That can accelerate the path to market by 75 percent. They are currently focused on pharmaceuticals and specialty chemicals, but they plan to grow the platform in order to take in more inputs, outputs, discrete variables, and much more. They are also combining their core technology with physical models for specifically complex reaction types.

“Our future is even more assured thanks to our work with BBCetc,” said Daniela.