



## Ryan Nelson BIO

### Titan Bioplastics Lead Technical Science Manager

Ryan is an evolving interdisciplinary scientist, with a BS in Chemistry from GVSU.

Ryan's early research work with Dr. Andrew Lantz at GVSU, included analytical techniques for the separation of microbes in blood matrices utilizing capillary electrophoresis. The project's design and success supported a grant and publication in Wiley, which was also presented at the 253<sup>rd</sup> ACS national conference in San Francisco.

Additional noteworthy projects during Ryan's formal education years, included a joint research program synthesizing heat-resistant polymers for potential uses on the space shuttle. It was this program that spearheaded Ryan's interest to expand further into polymer sciences.

While working for Corium International, a company producing various pharmaceutical patches as well as teeth whitening strips, Ryan worked with FDA regulations and their specific application to plastics, as a polymer matrix was used to promote skin permeability. At Corium, Ryan was an associate scientist on five separate R&D teams that received or had FDA approval for both prescription and OTC generic and novel drug formulations

Following a path towards Polymer development, Ryan worked for Cascade formulating TPOs with the ability to branch off into alternative areas of interest, including lightweight materials for drones, machine learning and 3D printing. At Cascade, Ryan was able to experiment with many exotic fillers (such as recycled aerospace carbon fiber, nano clays/spheres, glass bubbles, hemp and natural fibers, reground shoes/tires/ocean plastics) and a nearly limitless catalog of modifiers and colorants.

Its Ryan's experience using various natural materials, nano clays, fillers and carbon fiber, which make him an ideal team member of Titan Bioplastics. This, along with his knowledge and expertise understanding technical values of polymers during manufacturing, have promoted him to Lead Technical Manager, working directly under David Abecassis Titan's Director of Technology. Ryan works to drive and support innovations for Titan Bioplastics composite solutions, as well as Titan Nanofill barrier property additives.

Ryan lives in Grand Rapids Michigan and enjoys working on his midcentury home and enjoying Michigan's beaches and national forests.

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