

PHA Bioplastic Inventor Dr. Isao Noda Presents the Science behind Nodax in March at Pittcon & UGA



Dr. Noda's paper is titled *Two Dimensional Correlation Spectroscopy and Development of Novel Bioplastics Nodax™*.

World renowned chemical engineer Dr. Isao Noda's March 11, 2015 seminar at the University of Georgia's Franklin College of Chemistry is the first of two where he will discuss the scientific history of his namesake bioplastic product.

Dr. Noda's second presentation on the subject will occur in New Orleans on March 12, 2015, for the annual [Pittcon Conference and Expo](http://pittcon.org/) (<http://pittcon.org/>) at the Ernest N. Morial Convention Center.

Pittcon, which attracts laboratory scientists from around the world, will be celebrating "The International Year of Light and Light-Based Technologies," sponsored by the United Nations.

During the seminars, Dr. Noda says he will tell the story of how "a unique infrared spectroscopic analysis method introduced to the field of polymer science actually led to the surprising discovery and eventual development of a new class of bioplastics..."

Dr. Noda, who serves as Chief Science Officer for MHG, originally developed Nodax™ PHA (medium-chain-length polyhydroxy alkananoate or mcl-PHA) for Procter & Gamble in the 1980s. The biopolymer is a renewable plastic produced from bacterial microorganisms that store PHA polyesters for energy. Because of its sourcing, MHG's Nodax™ PHA is 100% biodegradable in all conditions, including air, soil and water.

The Rationale behind the Insight

Considered to be the [original developer of 2D correlation spectroscopy](http://www.wiley.com/WileyCDA/WileyTitle/productCd-0471623911.html) (<http://www.wiley.com/WileyCDA/WileyTitle/productCd-0471623911.html>), Dr. Noda is a foremost authority in the field of mass spectrometry.

In his presentations at UGA and Pittcon, Dr. Noda will explain how "2D correlation

spectroscopy provided a critical insight into a way to modify the molecular structure of PHA to make this class of material much more useful and inexpensive to become a viable replacement for conventional petroleum-based plastics.”

He states “there was real scientific effort based on rigorous logic, beyond some fortuitous discovery, in the actual design and development of Nodax™ PHA copolymer.”

Bainbridge, GA based MHG purchased the patent for Nodax™ from Procter & Gamble in 2007. MHG brought Dr. Noda onboard in 2013 to help build out multiple applications of the product as the company expands to global scale manufacturing levels.

Currently, Nodax™ is produced by MHG using non-toxic processes, making it more ecologically viable and sustainable than many other bioplastics. Due to its unique properties, Nodax™ PHA is also UV resistant, making it stronger and more flexible than other bioplastics, and genuinely competitive with petro-plastic for durability and pricing.

— from Laura Mauney

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