



We are Pleased to Present the Featured Guest Speaker for our February 6th Meeting:

## Review of Methacrylate Monomers and Polymers in Composites and Coatings for Transportation Applications

**Jim Toth**

**Business Development Manager  
Acrylic Monomers**

**Evonik Cyro LLC**

### ABSTRACT

Evonik Cyro LLC manufactures a broad range of methacrylate monomers and is a leader in the development of new acrylic based technology. The polymers are utilized for a wide variety of applications that include coatings, composite resins, plastics, adhesives, and fibers. The focus of the presentation will be on polymer composites and automotive coatings that utilize methacrylate chemistry.

Methacrylate monomers are widely used in polymer composites as reactive diluents, crosslinkers, and raw materials for polymer synthesis. Base monomer such as methyl methacrylate and butyl methacrylate are widely utilized as co-monomers with styrene in unsaturated polyesters resins (UPR) for enhanced weather resistance of gelcoats and laminate resins. Methacrylic acid is used in the synthesis of vinyl ester (VE) molecules and also as a co-monomer with acrylonitrile in the production of the carbon fiber precursor, polyacrylonitrile (PAN). The usage of Styrene as a reactive diluent for UPR and VE resins has recently come under increased environmental and regulatory scrutiny. The technology and monomers required to synthesize an automotive clear coat will be discussed.

### BIOGRAPHY

Jim Toth received B. S. and M. S. Degrees in chemical engineering from the Ohio State University. His masters' research was funded by General Motors and focused on liquid injection/compression molding of large structural parts. Upon graduation, he joined the Bombardier Recreational Products as a product engineer where he was responsible for the composite and chemical components of several

vehicles. He then worked for Akzo Nobel as technical service engineer providing support for organic peroxide initiators in the thermoset polymer industry. He joined Evonik Industries in 2005 and for seven years worked as an application technology manager. He is currently a business development manager working for Evonik's acrylic monomer business line where he manages growth efforts of new products and new applications for monomers.

### MEETING DETAILS

Place: Bridgewater Manor, Bridgewater, NJ; (908) 658-3000

Time: 5:45 – 8:30

Cost: \$10.00 Adv Registration; \$15.00 at Door; Students – Free

This meeting is open to all SAMPE members, spouses, guests, and other interested parties

Reservations contact John Osterndorf at 973-248-5885 or at [jfo0956@gmail.com](mailto:jfo0956@gmail.com) by noon Wednesday before the meeting.

Directions to Bridgewater Manor: From I-287 north, take exit 22A (206 south). Go thru two lights, Bridgewater Manor is on right. From I-287 south, take exit 22. Make right at end of ramp. Make next left, a jughandle to cross 202/206 to go south on 202/206. Go thru three lights, Bridgewater Manor is on the right:



# NEWSLETTER

February 2014

## Society for the Advancement of Materials and Process Engineering

New Jersey Chapter



### 2013 – 2014 Meeting Schedule

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**September 5, 2013** – Louis Pilato, Pilato Consulting

**October 3, 2013** – Len Poveromo, Northrup Grumman Corp

**October 21 – 24, 2013** – 45<sup>th</sup> ISTC, Wichita, KS.

**November 7, 2013** – Jerry Grzybowski, Evonik Corp.

**December 6, 2012** –David Jhaveri, TFP Americas

**February 6, 2014** – Jim Toth, Evonik Corp

**March 6, 2014** – Deep Solanki, Structural Corp.

**April 3, 2014** – TBD

**May 1, 2014** – TBD

**June 2-4, 2014** – 58<sup>th</sup> ISEE, Seattle WA

**July , 2014** – 31st NJ SAMPE Golf Tournament, Picatinny Arsenal



# NEWSLETTER

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Aram Mekjian is President of Mektech Composites Inc, a Distributor for Momentive Specialty Chemicals Inc's Phenolic resins. He is the exclusive North American Distributor for Cellobond Phenolic resins, now owned by Momentive, which he introduced to the US market in 1990 as Business Manager for BP Chemicals. Prior to that, Aram was the Technical Director and Product Manager for Aristech Polyesters for 13 years.

#### **MEKTECH COMPOSITES INC.**

40 Strawberry Hill Rd.  
Hillsdale, NJ 07642

United States

Phone: +1 (0)201 – 666 4880

[mekmail@prodigy.net](mailto:mekmail@prodigy.net)

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