



**SOCIETY FOR THE ADVANCEMENT
OF MATERIAL AND PROCESS
ENGINEERING
NEW JERSEY CHAPTER**

JUNE NEWSLETTER & MONTHLY NOTICE

JUNE 5, 2008 (1ST THURSDAY)

**FIRE RETARDANT INTUMESCENT
POLYAMIDE 11 NANOCOMPOSITES**

**DR. LOUIS A. PILATO
PILATO - CONSULTING
598 WATCHUNG ROAD
BOUND BROOK, NJ 08805-1746
Phone: 732-469-4057
FAX: 732-764-9747
Email: Pilato-consulting@att.net**

MEETING DETAILS

Place: Bridgewater Manor, Bridgewater, NJ; (908) 658-3000
Time: 5:30 Cocktails (Cash Bar); 6:15 Dinner; 8:30 Adjourn
Cost: \$10.00 Advanced Registration; \$15.00 at Door; Students - Free

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

Reservations please contact John Osterndorf at 973-248-5885 or by email at sampejohn@yahoo.com
by noon the Wednesday before the meeting.

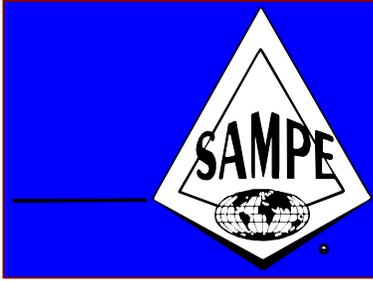
Directions to Bridgewater Manor: From I-287 north, take exit 22A (206 south). Go thru two lights, Bridgewater Manor is on right. From I-287 south, take exit 22. Make right at end of ramp. Make next left, a jughandle to cross 202/206 to go south on 202/206. Go thru three lights, Bridgewater Manor is on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

SAMPE BEST CHAPTER AWARD WINNER

1990, 1991, 1992, 1993, 1995, 1996, 1997, 1998, 1999, 2000, 2001

SAMPE CHAPTER SERVICE EXCELLENCE AWARD WINNER

2002, 2003, 2004, 2005, 2006



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2007 – 2008 MEETING SCHEDULE

September 7, 2007 – Toward ‘Advanced Composites Green’, Professor Anil N. Netravali, Cornell University
October 4, 2007 – Plant Tour – General Magnaplate, Linden, NJ
October 29 – November 1, 2007 – 38 th International SAMPE Technical Conference, Cincinnati, OH Sponsored by Midwest Chapter
November 8, 2007 – The use of Titanates and Zirconates in Thermoset Composites with an Emphasis on Nanotechnology, Sal Monte, Kenrich Petrochemicals, Bayonne, NJ
December 13, 2007 – (Meeting Cancelled due to Snow Storm)
February 7, 2008 – Affordable Automation for Engineered Composite Structures, David Hauber, Automated Dynamics, Schenectady, NY
March 6, 2008 – “Composite applications in Infrastructure” for Alcan Baltek Corporation, Dr. Kurt Freichtinger, Alcan Baltek, Northvale, NJ
April 3, 2008 – Shuttle Imaging Radar Missions from a microwave Engineers Perspective, James Alford, Ad. Devel. Group, Somerset, NJ
May 1, 2008 – Election of Officers – Structural Evaluation of the Solomon R. Guggenheim Museum, Nancy Hudson, Robert Silman Assoc.
May 18 - 22, 2008 – 52 nd International SAMPE Symposium & Exhibition, Long Beach Convention Center, Long Beach, CA. Sponsored by Utah and Japan Chapters
June 5, 2008 – Fire Retardant Intumescent Polyamide 11 Nanocomposites, Dr. Louis A. Pilato, Pilato Consulting, Bound Brook, NJ
July 10, 2008 – 25 th Annual NJ SAMPE Golf Tournament, Picatinny Arsenal, NJ

**THE NEW JERSEY CHAPTER HAS A
STUDENT CHAPTER AT DREXEL
UNIVERSITY**

MAY MEETING

At the May meeting, Ms. Nancy Hudson of Robert Silman associates gave a presentation entitled Structural Evaluation of Solomon R. Guggenheim Museum in New York, NY. The presentation was an overview of the components involved in the structural investigation, analysis and repair design.

The New Jersey Chapter wishes to thank Ms. Nancy Hudson for the excellent presentation.

UPCOMING SAMPE EVENTS

2008 International SAMPE Technical Conference, Memphis, Tennessee, September 8 – 11, 2008.

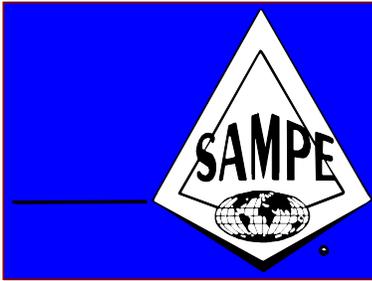
“MULTIFUNCTIONAL MATERIALS WORKING SMARTER TOGETHER:”

The Michigan SAMPE Chapter is sponsoring the 2008 ISTC

2009 SAMPE International Symposium and Exhibition, Baltimore Convention Center, May 18 – 21, 2009

“LEVERAGING M&P TECHNOLOGIES FOR A GREENER FUTURE”

The Baltimore, Midwest and Ohio SAMPE Chapters are sponsoring the 2009 ISS&E



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FIRE RETARDANT INTUMESCENT POLYAMIDE 11 NANOCOMPOSITES

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ABSTRACT:

Commercially available polyamide 11 and 12 are lacking both in fire retardancy and high strength/high heat resistance characteristics for a plethora of fabricated parts that are desired and required for performance driven applications. The judicious introduction of selected nanoparticles [surface modified montmorillonite (MMT) clay and nanofibers (CNFs)] is conveniently accomplished by melt processing. It is generally recognized that nanomodification of polyamide 11 and 12 results in selected improved polymer performance characteristics, i.e., fire retardancy, thermal stability, and high strength for polyamide 11 and 12 and is expected to expand market opportunities for polyamide 11 and 12 materials.

The objective of this study is to develop improved polyamide 11 polymers with enhanced flame

retardancy (UL94, V-0), thermal, and mechanical properties for selective laser sintering (SLS) rapid manufacturing. A nanophase is introduced into the polyamide 11 via twin screw extrusion to provide improved flame retardancy, thermal, and mechanical properties of the polymer blends. Arkema RILSAN® polyamide 11 molding polymer pellets were compounded with surface modified MMT organoclays and CNFs, and combined with a selective intumescent flame retardant (FR) additive to create intumescent FR polyamide 11 nanocomposites. Injected molded specimens were fabricated for flammability, mechanical, and thermal properties characterization. Significant improvements in enhanced FR properties such as UL94 and cone calorimetry data as well as thermal properties such as heat deflection temperature and TGA data are achieved.

BIOGRAPHY:

Dr. Louis Pilato is Pilato Consulting and specializes in Nanotechnology, Resin Matrix Systems, and Phenolic Resin Technology. He also collaborates with Professor Joseph Koo of the University of Texas at Austin in many Nanotechnology areas requiring thermosetting and thermoplastic resins along with selective nanoparticles. Specific application areas include nanocomposites for high temperature ablative systems for rocket nozzles, nanomodified carbon carbon composites, and nanomodified polyamide resin systems for SLS.



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YEARS OF SERVICE

The Executive Board would like to recognize the following members for their years of service:

5 YEARS

James Clayton Clayton Associates Inc
Ronald Trabocco Navmar

10 YEARS

James Mondo Automated Dynamics

20 YEARS

Robert Sallavanti

25 YEARS

Andrew Dunn Mutual Industries
Edmund Dunn Mutual Industries
Richard Saffadi R-Saffadi Consultant
Piyush Shah Fabric Development

30 YEARS

Howard Kliger HS Kliger & Associates

40 YEARS

Ben Rasmussen BMR Associates

WELCOME NEW MEMBER

The New Jersey Chapter would like to welcome the following new chapter member:

Xianglei Chen General Electric

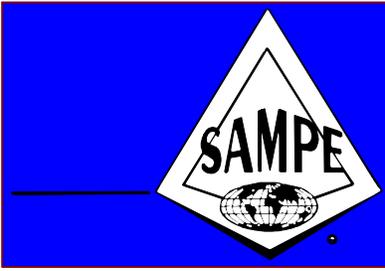
David Jhaveri Technical Fibre Products

John McMahon Knowlton Technologies

The New Jersey Chapter would also like to recognize the following two new student members of SAMPE from the New Jersey Institute of Technology

Doris Osenni

Sarah VanDunk



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ELECTION OF OFFICERS

FOR 2008 – 2009 Fiscal Year

At the May Meeting of the New Jersey Chapter of SAMPE, the following slate of candidates were elected for the next Fiscal Year 2008 – 2009:

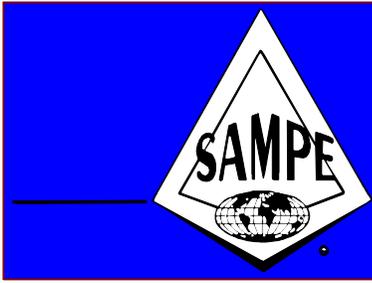
Chairman: Ben Rasmussen
Vice Chairman: Gail DiSalvo
Treasurer: John Osterndorf
Secretary: Borys Schafran
Directors: Howard Kliger
Louis Pilato
Ben Rasmussen
Program: Tony Constantino

25TH ANNUAL NEW JERSEY SAMPE GOLF TOURNAMENT

On July 10, 2008 the New Jersey Chapter of SAMPE will conduct its **25th Annual Golf Tournament**. Beginning in July 1984, the golf tournament has been held as a chapter event for its members and guests to spend a relaxing day of fun in the sun.

The first few tournaments were held at the Picatinny Arsenal Golf Course, before having to move to another location due to new requirement of having 100 golfers for the tournament to be conducted at Picatinny. The Chapter then went to the Farmstead Golf Course in Sussex County, NJ for several years before moving to the Warren Brook Golf Course in Warren County, NJ, which was centrally located for the Chapter members. In 2002, the Chapter was able to return to the Picatinny Golf Course and has been there for the past several years and again at Picatinny this coming year. Picatinny Golf Course has a practice facility (chipping, putting, and driving into a net) at the Club House for golfers who arrive early. The course is well maintained and presents a good challenge for the golfer who plans to attend this tournament.

Please reserve July 10, 2008 to attend the Golf Tournament and help the Chapter celebrate the 25th Annual Tournament.



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EXECUTIVE BOARD

CHAIRMAN:

Benjamin M. Rasmussen
BMR Associates
375 North Drive, Apt. C-8
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sampejohn@yahoo.com

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Gail D. DiSalvo
GTD Consulting
127 Rippling Brook Way
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disalvogail@aol.com

DIRECTORS:

Howard S. Kliger
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20 Stryker Road
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bmassociates@netcarrier.com

PAST CHAIRMAN:

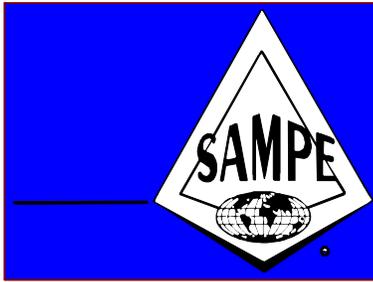
1977 – 1978 Raymond F. Wegman
1978 – 1979 William J. Russell
1979 – 1980 Michael Michno
1980 – 1981 Fred H. Ancker
1981 – 1982 Natalia Chujko
1982 – 1983 Robert J. Narsavage
1983 – 1984 Richard W. Reiter
1984 – 1985 Howard S. Kliger
1985 – 1986 John Burlage
1986 – 1987 John F. Osterndorf
1987 – 1988 Thomas J. Green
1988 – 1989 Harry S. Katz
1989 – 1990 Benjamin M. Rasmussen
1990 – 1991 Harry Tenney
1991 – 1993 Louis A. Pilato
1993 – 1994 John Burlage
1994 – 1995 Richard A. Walther
1995 – 1996 Frans van Anterpen
1996 – 1997 Kathleen A. Froelich
1997 – 1998 Gail D. DiSalvo
1998 – 1999 Ash Chopra
1999 – 2008 Benjamin M. Rasmussen

SAMPE FELLOWS:

1985 Raymond F. Wegman
1987 Dr. Carl H. Zweben
1989 Robert Pickney
1990 Dr. Frank K. Ko
1992 Fred H. Ancker
1993 Leonard Poveromo
1999 Dr. Howard S. Kliger
2001 Dr. Louis A. Pilato
2001 Harry S. Katz

SENIOR HONORARY MEMBERS:

Richard G. Adams
Edward A. Gallagher
Charles N. Muldrow
William D. Timmons
Raymond F. Wegman



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<p>Airtech International, Inc. Peter Grantham 5700 Skylab Road Huntington Beach, CA 95647 714-899-8100 Fax: 714-899-8179 pgrantham@airtechintl.com www.airtechintl.com</p>	<p>Alcan Baltek Corporation Marc A. Anderson 108 Fairway Court Northvale, NJ 07647 201-767-1400 Fax: 201-387-6631 marc.anderson@alcan.com www.alcanbaltek.com</p>	<p>Evonik Degussa Corporation Borys Schafran 379 Interpace Parkway Parsippany, NJ 07054 973-541-8172 Fax: 973-541-8161 borys.schafran@evonik.com www.evonik.com</p>
<p>Argosy International Inc. Paul Marks 14 Penn Plaza New York, NY 10001 (212) 268-0003, X101 pmarks@argosychemical.com www.argosychemical.com</p>	<p>Bryte Technologies Chuck Chakrabarti 1235 Beacon Hill Crossing Alpharetta, GA 30005 (770) 475-7977 Fax: (770) 475-7477 cchakrabarti@brytetechnology.com www.brytetechnology.com</p>	<p>Fabric Development Inc. Mary P. Shafer 1217 Mill Street Quakertown, PA 18951 215-536-1420 mshafer@fabricdevelopment.com www.fabricdevelopment.com</p>
<p>Automated Dynamics David Hauber 407 Front Street Schenectady, NY 12305 518-377-6471, X226 Fax: 518-377-5628 dhauber@automateddynamics.com www.automateddynamics.com</p>	<p>Coast-Line Int'l Heather O'Rourke 274 Bangor Street Lindenhurst, NY 11757 631-226-0500 X25 Fax: 631-226-5190 heathero@coast-lineintl.com www.coast-lineintl.com</p>	<p>General Magnaplate Edmund Aversenti 1331 US Route 1 Linden, NJ 07036 908-862-6200 Fax: 908-862-6110 eaversenti@magnaplate.com www.magnaplate.com</p>
<p>A & P Technologies Andrew A. Head 4595 East Tech Drive Cincinnati, OH 45245 513-688-3200 Fax: 513-688-3201 ahead@braider.com www.braider.com</p>	<p>Engineered Fibers Technology Robert E. Evans 25 Brook Street Shelton, CT 06484 203-922-1810, X335 Fax: 203-922-1814 efiberstec@aol.com www.EFTfibers.com</p>	<p>Gerber Technology Inc Dudley Fenn 24 W. Industrial Park Road Tolland, CT 06084 860-871-8082 Fax: 860-871-3730 dfenn@gerbertechnology.com</p>



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<p>Gentex Corporation PO Box 315 Carbondale, PA 18407 717-282-2814, X214 www.gentex.com</p>	<p>Loctite Corporation Larry Nativi 1524 Valhalla Drive Denver, NC 28037 704-489-8737 Fax: 704-489-8738 larry.nativi@us.henkel.com www.loctite.com</p>	<p>Prince Sports Incorporated Steve Davis One Sportsystem Plaza Bordentown, NJ 08505-7620 609-291-5800 stevedavis@princesports.com www.princesports.com</p>
<p>Johnson & Johnson Dr. Anthony L. DiSalvo 199 Grandview Road Skillman, NJ 08558-9418 908-874-2548 Fax: 908-874-1688 adisalv@cpcus.jnj.com www.jnj.com</p>	<p>Lonza Group Sajal Das 90 Boroline Road Allendale, NJ 07401 201-316-9218 sajal.das@lonza.com www.lonza.com</p>	<p>Utility Development Harry Katz 112 Nylon Road Livingston, NJ 07039-1006 973-994-4334 Fax: 973-994-3341 Harrvskatz@aol.com www.udccorp.com www.radcure.com</p>
<p>Kenrich Petrochemicals Mr. Salvatore J. Monte 140 East 22nd St., POB 32 Bayonne, NJ 07002 201-823-9000 Fax: 201-823-0691 sjmonte@4kenrich.com</p>	<p>Mektech Composites Inc. Aram Mekjian 40 Strawberry Hill Road Hillsdale, NJ 07642 201-666-4880 Fax: 201-666-4303 mekmail@prodigy.net</p>	<p>3M Aerospace Renee Rainboth 3M Center St. Paul, MN 55144-1000 (856) 769-8565 Fax: (856) 769-8566 rarainboth@mmm.com www.3m.com</p>

