

TPM&F

THERMOPLASTIC MATERIALS AND FOAMS DIVISION



Communications
Excellence Award



Pinnacle Award

TPM&F SCOPE

The Thermoplastic Materials and Foams Division is organized to provide a focal point for the interchange of information relating to non-vinyl thermoplastic resins including fluoropolymers, polyamides, polyesters, polyolefins, polystyrenes, polyurethanes, their filled and/or reinforced products, and their foamable and foamed products. Its interests lie in stimulating the development of scientific and engineering knowledge. By encouraging participation between producers and consumers, it aims to provide information on new developments which shall encompass synthesis, characterization, fabrication, safe handling, application, serviceability, and marketing.

CHAIRMAN'S MESSAGE

MARCH 2015



It is my great pleasure to announce that the Thermoplastic Materials and Foams Division has just received two of the most prestigious awards for the Society of Plastic Engineering: the 2015 SPE Gold Pinnacle Award and the 2015 SPE Communications Excellence Award. The Pinnacle Gold is awarded to those who, in addition to meeting Pinnacle Silver criteria, demonstrate superior performance in the Gold achievement categories. The Communications Excellence Award recognizes a full range of achievements in communications excellence in which our board has been recognized with the highest level: Communication Leader. I would like to take this opportunity to congratulate all the divisions' members and board for this great achievement. I want to acknowledge the Board Members for their dedication and excellence in serving on the board and all the divisions 'members for the continuous support and involvement to the division activities.

I would like to highlight the great success of the International Polyolefins Conference that took place on February 22 – 25 2015 in Houston, Texas and to recognise all the hard work from the division members that were involved in the event. The theme for the conference this year was on “Four Decades of Advancing Polyolefins Technology” in which the International Polyolefin Conference celebrates its 40th birthday. It included topics on innovation in polyolefins, catalyst and process advances, medical applications, advances in polyolefin stabilization, new polyolefin resins and copolymer developments, Polymer Testing and Characterization, Durable Applications. The conference featured renowned speakers from academics and industries presenting technical papers on innovations in polyolefins and their research and development as well as industrial applications.

continued on page 2



The Society of Plastics Engineers
13 Church Hill Road
Newtown, CT 06470 USA

BOARD OF DIRECTORS LISTING

Ananda (Andy) Chatterjee (2015) HSM, FE

Chatterjee Consulting, LLC
281-684-9247 phone
am_chatterjee@yahoo.com
TPC - PO 2015

Stéphane Costeux (2016)

The Dow Chemical Company
989-636-6424 phone
sccosteux@dow.com
EDUCATION CHAIR

Donna Davis (2016) HSM

ExxonMobil Chemical Co.
281-834-2036 phone 281-834-2040 fax
donna.s.davis@exxonmobil.com
TPC - ANTEC®2013

Dale Grove (2015) HSM

US Silica
240-313-8860 phone
grove.dale@hotmail.com
TPC - ANTEC®2014

Theresa Healy (2015)

Reedy International Corporation
732-264-1777 phone 732-264-1189 fax
thealy@reedyintl.com
COMMUNICATION CHAIR

Vipin Kumar (2016) FE

University of Washington
206-543-5535 phone 206-685-8047 fax
vkumar@u.washington.edu
OUTSTANDING ACHIEVEMENT AWARD
CHAIR

Salvatore J. Monte (2016) HSM, FE

Kenrich Petrochemicals
201-823-9000 phone 201-823-0691 fax
sjmonte@4kenrich.com
FOAMS®2014 CO-CHAIR

Hani Naguib (2017)

University of Toronto
416-978-7054 phone/fax
naguib@mie.utoronto.ca
CHAIRMAN

Masahiro Ohshima (2017) FE

Kyoto University, Dept. of Chem Eng.
81 75 383 2666 phone
masahiro.ohshima@gmail.com
INTERNATIONAL ACTIVITIES CHAIR

Chul B. Park (2017) FE

University of Toronto
416-978-3053 phone 416-978-0947 fax
park@mie.utoronto.ca
TUTORIAL CHAIR-FOAMS®2013

Ajit Ranade (2016)

Sonoco Protective Solutions
847-212-1117 mobile
Ajit.Ranade@sonoco.com
MEMBERSHIP CHAIRMAN

N.S. Ramesh (2015) HSM, FE

Sealed Air Corporation
972-522-4041 phone 972-647-1040 fax
n.s.ramesh@sealedair.com

Miguel Rodriguez-Perez (2015)

University of Valladolid
34 983184035 phone 34 983423192 fax
marrod@fmc.uva.es

Ashutosh Sharma (2017) FE

Nike, Inc.
(503) 671-1789 phone (503) 915-7620 mobile
ashutosh.sharma@nike.com

Henry Schirmer FE, HLM

BBS Corporation
864-579-3058 phone 864-579-2126 fax
hschirmer@att.net
HONORARY LIFETIME MEMBER

Raymond J. Shute (2017) HSM

CORTECH, LLC
866-553-6689 X6000 phone
rshute@cortechfoams.com
NOMINATING CHAIR

Lukas Stirnemann (2015)

Sulzer Chemtech Ltd.
+41 52 262 6806 phone +41 52 262 0096 fax
lukas.stirnemann@sulzer.com
SECRETARY

Perry Vadhar (2016) HSM

Sealed Air Corporation
864-433-2086 phone 864-433-2560 fax
perry.vadhar@sealedair.com
COUNCILOR

Xiaoxi Wang (2017)

Boeing Company
425-404-1253 phone
wang0213@gmail.com
NEWSLETTER /COMMUNICATION CHAIR

Maxwell Wingert (2016)

Procter & Gamble
513-634-2832 phone
mw4SPE@yahoo.com
TREASURER, FOAMS®2014 CHAIR

Gary Wilkes (2015)

Dart Container Corp.
517-244 2196 phone
517-525-0755 mobile
gary.wilkes@dart.biz
BEST PAPER CHAIR

Changchun (Chad) Zeng (2017)

Florida State University
850-410-6273 phone
850-410-6342 fax
zeng@eng.fsu.edu

HSM: Honored Service Member FE: Fellow of the Society HLM: Honorary Lifetime Member

CHAIRMAN'S MESSAGE

continued from page 1

I need to take this opportunity to invite you all for our upcoming events of the division: SPE ANTEC® 2015 Conference, March 22 - 25, 2015 held in Orlando, Florida. During ANTEC®, our division will have five sessions and technical papers in thermoplastics and foams themes. I would like to extend the invitation for all the board members and non-members to join us in the division business meeting on Tuesday March 24, 2015 at 5:30 pm. In addition, our division will also have its annual FOAMS®2015, 13th International Conference on Foam Materials & Technology on September 8-11, 2015 at Kyoto Japan.

Finally, as my two years term as a chair of the division is ending this June, it has been an honor to serve as the division chair as we continue our commitment of conveying the mission of the SPE in the education and training in the plastics industry and closing the gap between academics and industries for prosperous collaboration in the field of thermoplastics and foams. We are committed to reach excellence in our service to the board, and to achieve our goals in increasing the depth of our education activities; organizing global TopCon conferences and grow the membership of the division.

I invite all the members and non-members to join our division and its activities, we are continuing to grow our network of professionals and specialists in this field and we would always welcome your help, support and feedback to achieve our missions. Best regards.

*Hani Naguib
TPM&F Chairman*

COUNCILOR'S REPORT



SPE promoting Plastic Race at ANTEC® 2015. This is organized by Next GEN committee. Perry had shared information earlier on sponsorship for this race.

Section or Division should host their scholarship with the Foundation rather than on their own. That is proposal on the table. Foundation enhances the work they do with college students and getting new “recruits” into the industry. More details will become available after next Councilors meeting during ANTEC® 2015.

SPE HQ is promoting Plastivan Program. The PlastiVan program is there for the Sections and Divisions growth of the industry in their communities as well as the over all growth of the industry.

Section and Division can use The Chain to facilitate their meetings and group communications going forward. Each Section and Division has its own community where it can post upcoming meeting agendas, meeting materials, and communicate with their board in an organized fashion. So please consider to use The Chain in your communication. Perry will have also more details to share following next Councilors meeting.

Perry Vadhar
TPM&F Division Councilor

WRAP-UP OF THE TPM&F SESSIONS IN THE PO 2015

There are about 625 people which appears to be a good attendance. Congratulations to Stephane Costeux and Gary Wilkes for the great job organizing the TPM&F session in the Polyolefins Conference. Six papers were presented at TPM&F session on 24FEB2015 of the 2015 International Polyolefins Conference, which was held at the Hilton Houston North Hotel in Houston, Texas. The session was entitled “Foams and Lightweighting. Dr. Stephane Costeux and Gary Wilkes shared the moderator responsibilities for this session as Dr. Costeux was not able to attend this conference. The audience for the presentation varied from about 25 to 50 conference attendees.



TPM&F BOD Meeting in PO 2015 Conference



FOAMS® 2014 Best Paper Award to N.S. Ramesh and John Wolf

Donna Davis & Andy Chatterjee
TPM&F PO 2015 Chairs

continued on page 4

COMMUNICATION CHAIR REPORT

by Theresa Healy



February 23, 2015

TPM&F WEBSITE

Our website is now accessible by your mobile device so it can be viewed from

your cell phones. I have updated the events for 2015 Polyolefins, ANTEC® 2015, and FOAMS® 2015 on the website. I will upload the pics from the Polyolefins very shortly. I would like to get an updated BOD member list so I can make any changes/updates to our members tab. In the near future, we may want to consider changing our website's appearance to something more cohesive with that of the actual SPE site (black/green colors and format). I can work with the SPE organization and our web developer to see if that is something that can be done and discuss the costs involved to make that change. In the meantime, we will keep our site as user friendly as possible. I will also update the Educational tab once I have updated information for new webinars, seminars, etc...I am happy to report that as group effort, we have been awarded the Communication Excellence Award. Thank you to all of you that contributed to this honor. If anyone has a sharp image of the award, please send it to me as I want to upload it to our website.



LINKED-IN TPM&F SITE —

This site is still active and we need to continue to utilize it for any technical discussions, promotions, etc...I use it to promote the upcoming conferences as well. We now have approximately 600 members and growing.

FOAMS® 2015 —

I have worked with Professor Ohshima and have uploaded the Call for Papers and the Sponsorship form to our website. I will assist Professor Ohshima in soliciting sponsors from the US.

www.SPETPMF.com

PO 2015 TOPCON SCHOLARSHIPS

Andy Chatterjee

TPM&F awards two scholarships. The Funding comes from proceeds from the conference.

The scholarship winners this year are:
Sarah Forester, *University of North Texas* and
Daiya Reed, *Texas A&M*

This was synchronized with the Education Committee of South Texas Section. Next year we will be selecting candidates from the other two schools. We will continue to rotate the scholarship winners between these schools.

NEWSLETTER PUBLICATION REPORT

by Xiaoxi Wang

Newsletter publication plan for the year 2014/2015

Oct 2014 (FOAMS®2014, BOD meeting, PO2015 promotion etc.)

March 2015 (PO2015, BOD meeting, ANTEC® preview, FOAMS®2015 promotion, etc.)

May 2015 (ANTEC®2015, BOD meeting, FOAMS®2015 promotion,)





REEDY
INTERNATIONAL

🏠 9301-A Forsyth Park Drive
Charlotte NC, 28273

☎ 980.819.6930

✉ sales@reedyintl.com

🌐 www.reedyintl.com

Committed to the Future of Plastics

2015 SPE INTERNATIONAL POLYOLEFINS CONFERENCE - Courtesy of SPE South Texas Section



If you weren't there, you missed an exciting 2015 Polyolefins Conference in Houston, Texas at the end of February celebrating the 40th Anniversary of the Conference (*Four Decades of Advances in Polyolefin Technology*). The conference was organized by the SPE South Texas Section, SPE Polymer Modifiers and Additives Division, SPE Thermoplastics Foams and Additives Division, and the SPE Medical Division. There were 637 people attending (*largest attendance in the last 15 years*), 64 exhibitor booths, 2 networking socials, 84 outstanding technical papers, a very successful technical tutorial (135 people), and a great Student Poster contest. As the Conference Chairman, Chuck Crosby, said "*This is the premiere Polyolefin Conference in the world that should be on everyone's calendar.*" Excitement

was evident at the conference as inexpensive Natural Gas and now low oil prices propel the Polyolefins Industry around the world and in the US. There are major investments scheduled in the US, China, and other places in the world in the coming years that will dramatically expand many sectors of the chemical and manufacturing industry. As Nick Vafiadis from IHS, who was one of the keynote speaker for the conference, will tell you, "Business is Booming".

During the conference awards were given out for the Polyolefins Conference Hall of Fame Service Award, Special Recognition Award, 6 student scholarships, and 4 poster contest awards. Tom Walsh received the Polyolefin Conference Hall of Fame Service Award for over 27 year of continuous and dedicated service to the Polyolefins Conference. Tom has served as Conference Chair, Plenary Chair, Exhibitor Chair, Publicity Chair as well as many other leadership positions and has dedicated thousands of hours to make the Polyolefins Conference a great success which benefits the Plastics Industry. The Polyolefins Conference has become known as one of the best places to conduct business, to learn about new technology, and to network. Special Recognition was also given to Brandon Cleary who has done an outstanding job the last 8 years as the Exhibitor Chair for the Polyolefin Conference, improving the booth layouts, exhibition floor activities, and value for the exhibitors. Proceeds from the conference go to help students and SPE student chapters in 8 different universities. The following university students were awarded \$1,000 scholarships at the conference:



Tom Walsh



Brandon Cleary

TPM&F Division:

DARIYA K. REID, Texas A&M University SARAH FORESTER, University of North Texas

PMAD Division:

KEVIN A. LAUX, Texas A&M University AMANDA PAINE, University of Texas

South Texas Section:

BLAKE HELLER, Baylor University RUTVIK GODBOLE, Texas Tech University

Four student posters were selected (*out a field of 21 posters*) to received the top prizes and recognition for their work. The winners were: **1st Place Amanda Paine**, University of Texas, "*Oxygen Scavenging Polymers for Barrier Applications*" **2nd Place, Abdulsalam Abdulkadir**, Lamar University, "*Fabrication of Carbon Precursor Nanofibers*" **3rd Place, Lan Ma**, Texas Tech University, "*Multiple shape memory effects in polyolefin based nanocomposites and blends*" **Honorable Mention, Kevin Laux**, Texas A&M University, "*Fretting Behavior of High Performance Polymers*"

The SPE South Texas Section and Division organizers do even more during the rest of the year to support the University Polymer Programs with profits from the conference (*endowed scholarships, aid in buying equipment, and supplementing student chapter operating funds*).

If you missed the 2015 Polyolefins Conference, after March 30 you can purchase videos of the 2015 Plenary Keynote talks and the 2015 Tutorial talks at : <http://spe-stx.org/conference.php>

Don't miss next year's conference. Put February 21-24, 2016 on your calendars for the 2016 SPE International Polyolefins Conference at the Hilton Houston North Hotel in Houston, Texas. For more information go to: <http://spe-stx.org/conference.php>

TREASURER'S REPORT

February 23, 2015



FINANCIAL SUMMARY:

- 1) FY13-14 budget: Income \$23,200; Expenses \$31,750. Thus, we have a budgeted deficit of \$8,550.
- 2) First half of FY actual transactions are: Income \$1,780.60; Expenses \$10,537.47.
- 3) We are expecting upcoming significant expenses for Best Paper, Communication (Peacock Graphics), and Education. Please let me know if this is no longer the case.
- 4) 2015 SPE membership rebate will be down 18% from 2014 (it changes on a calendar year versus fiscal year timeline). This is because qualified membership (professional and young professional) is down from 853 to 703. (According to SPE, 1/1/2015 student membership was 52 versus 42 last year and emeritus members was 24 versus 22 last year.)
- 5) I am seeking 2-3 volunteers from the BOD to be on an audit committee. Please email me if you are willing to assist.

INVESTMENT ACCOUNT UPDATE:

Between June 30 and December 31, the account managed by Constitution Advisory Group gained 0.3% from \$139,674.96 to \$140,155.87. As of February 18, the investment account value is now \$142,981.72.

TPM&F Financials:

	FY2013-14		FY2014-15	
	6/30/13 Actual	Revised budget	6/30/14 Actual	Budget
INFLOWS				
Interest & Dividends	\$ -	\$ -	\$ -	\$ -
CAG Investment Program Net Gain	\$ 15,873.23	\$ 4,000.00	\$ 480.91	\$ 5,000.00
Conference - FOAMS	\$ 11,669.06	\$ 5,000.00	\$ -	\$ 6,000.00
Conference - Polyolefins	\$ 20,074.46	\$ 16,783.00	\$ -	\$ 9,000.00
Previous Year TopCon Reimburse	\$ 5,000.00	\$ 5,000.00	\$ -	\$ -
SPE Rebate	\$ 3,711.88	\$ 4,000.00	\$ 799.69	\$ 3,200.00
Sponsorship	\$ 500.00	\$ 500.00	\$ 500.00	\$ 500.00
Total Inflows	\$ 56,828.63	\$ 35,283.00	\$ 1,780.60	\$ 23,200.00
OUTFLOWS				
ANTEC Expenses	\$ 1,314.02	\$ 3,500.00	\$ -	\$ 3,500.00
Best paper awards	\$ 781.40	\$ 2,700.00	\$ -	\$ 2,700.00
Non-ANTEC Board Meeting	\$ 1,230.82	\$ 3,000.00	\$ 1,466.81	\$ 3,000.00
Councilor Travel	\$ 891.22	\$ 2,000.00	\$ 569.14	\$ 2,000.00
Educational Programs	\$ 2,500.00	\$ 6,000.00	\$ 1,000.00	\$ 6,000.00
FOAMS Conference Net Loss	\$ -	\$ -	\$ 6,493.47	\$ -
Future Year TopCon Expenses	\$ -	\$ -	\$ -	\$ -
General Office	\$ 32.24	\$ 50.00	\$ 8.05	\$ 50.00
Communication	\$ -	\$ 2,800.00	\$ -	\$ 4,000.00
Outstanding Achievement Award	\$ -	\$ 4,500.00	\$ 1,000.00	\$ 4,500.00
Scholarships/Grants	\$ 1,000.00	\$ 1,000.00	\$ -	\$ 3,500.00
Technical Training Seminars	\$ -	\$ 500.00	\$ -	\$ 1,500.00
CAG Investment Program Net Loss	\$ -	\$ -	\$ -	\$ -
Other expenses	\$ 191.66	\$ 1,000.00	\$ -	\$ 1,000.00
Total Outflows	\$ 7,941.36	\$ 27,050.00	\$ 10,537.47	\$ 31,750.00
Overall Surplus (deficit)	\$ 48,887.27	\$ 7,733.00	\$ (8,756.87)	\$ (8,550.00)
Budget Plan	\$ 7,733.00	\$ 7,733.00	\$ (8,550.00)	\$ (8,550.00)
Variance from Budget	\$ 41,154.27		\$ (206.87)	
Ending Account Balance	\$ 193,919.33		\$ 185,162.46	

Respectfully submitted by:
Maxwell J. Wingert
SPE TPM&F Treasurer

Call for Papers FOAMS® 2015

September 10-11, 2015

Kyoto, Japan



The Thermoplastic Materials and Foams Division (TPM&F) of the Society of Plastic Engineers (SPE) is pleased to announce the **13th International Conference on Advances in Foam Materials & Technology (FOAMS® 2015)** at Funai Tetsuro Auditorium, Kyoto University- Katsura Campus, **Kyoto, Japan, September 10-11, 2015**, to address the advances in synthesis, characterization and properties of polymer foams by leading foam researchers in industry and academia. This conference is held every year (every three years outside of USA) and it is the premier forum for sharing ideas and learning about new developments in foaming technologies.

Conference Topics:

- **Polymer Foam Sustainability**
(Bio-based or biodegradable materials, environmentally benign blowing agent)
- **Foaming Processing Technologies**
(Extrusion, steam chest molding, injection molding, blow molding, solid state foaming, novel foaming technology)
- **New Materials, New Properties**
(Blowing agents, Nucleating agents, new advanced foams, nanocellular foams)
- **New Products and Applications**
(Packaging, automotive, aerospace, building /construction, medical, or consumer products)



Please send an abstract (100 word minimum) with a Title, author affiliation, and full contact information to Professor Masahiro Ohshima, Conference Chair, at

foams15@cheme.kyoto-u.ac.jp,

Fax :+81-75-383-2646

Important Dates: April 30, 2015: Abstract Submission

May 30, 2015: Acceptance Notification

June 30, 2015: First version of the paper Submission

July 30, 2015: Final version of the paper Submission

For more information please visit the conference website: <http://www.cheme.kyoto-u.ac.jp/foams15/>



URL: <http://www.cheme.kyoto-u.ac.jp/foams15/>

EXHIBITOR/SPONSORSHIP REGISTRATION FORM

During September 8-11, 2015, the **FOAMS® 2015 conference & tutorial will be held** at Funai Tetsuro Auditorium, Kyoto University Katsura Campus, located at about 7 km West from the Kyoto central station.

The national organization committee kindly solicits the conference exhibitors and sponsors during the conference on **Sept. 10-11, 2015**. The tabletop set up can be conducted in the afternoon of Sept. 9, 2015.

Contact/Attendees: _____

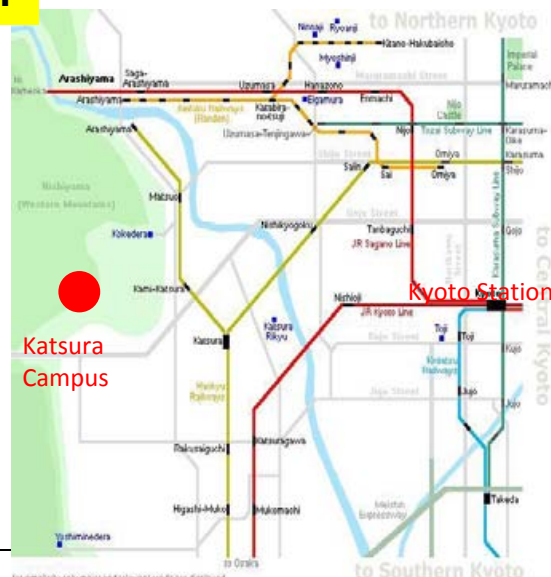
Company: _____

Address: _____

City/State/Zip : _____

Phone #: () _____ Fax# () _____

Email (please print legibly) _____



- We wish to be a **Gold Sponsor** for **\$2,000** (includes a tabletop exhibition, **Two complimentary registration**, reception, announcement of Gold Sponsorship during conference, company logo on poster, company logo on website of the conference, **distribution of literature to attendees at the registration process**, and a 5-minute PowerPoint presentation during the conference*).
- We wish to be a **Coffee Break Sponsor** for **\$1,500** (Includes a tabletop exhibition, **one complimentary registration**, reception, company logo on website of the conference, announcement of sponsorship during coffee break and a 5-minute PowerPoint presentation during the conference*).
- We wish to be a **Exhibitor Sponsor** for **\$1,200** (Includes a tabletop exhibition, **one complimentary registration**, reception, company logo on website of the conference and a 5-minute PowerPoint presentation during the conference*)
- Please charge my Credit Card \$ _____

Card # (Amex/Visa/MC) _____

Exp. date ____/____/____

Authorized Signature _____

Date: ____/____/____

*) Each sponsor will be slotted a 5-minute PowerPoint presentation on the technology their company is exhibiting as part of the new "Sponsors' Commercial Technology Forum" on the 1st day of the conference so that the delegates and sponsors may have meaningful technical discussions during breaks located in the exhibit area.

***) If you wish to have your company logo on the conference website and further advertising, please indicate approval upon sign up.

The Exhibitor / Sponsorship Registrations must be made on/before July 1st, 2015

Questions about Exhibiting/Sponsorship?

(North America & Europe) Email: Theresa Healy, thealy@reedychemicalfoam.com

(Asia and Other countries) Email: Masahiro Ohshima, Kyoto University, m.ohshima@cheme.kyoto-u.ac.jp

Tel: +81-75-383-2666 (oversea), 075-383-2666 (domestic), Fax :+81-75-383-2656 (oversea), 075-383-2656 (domestic)

MARCH 23 Monday AM

FOAMS MODELING AND PROCESSING

Moderator: Ananda Chatterjee

TITLE	AUTHOR CONTACT
Mechanisms of Foaming-Induced Thermal Conductivity Enhancement in Polymer Matrix Composite Foams	H. Ding and S. Leung
High Accuracy Methods for Foam Injection-Expansion Simulation	G. Francoise, L. Ville, N. Poulain, and J. Claracq
Numerical Simulation and Exp. Verification in Cell Nucleation & Growth with Core-Back Foam Injection Molding	L. Chang, Y. Chang, C. Hsu, and M. Ohshima
Visualization of Cell Growth Induced Fiber Orientation in Polymer Composite Foams	A. Ameli, V. Shaayegan, and C. B. Park
Modelling the rheological behavior of blowing agent loaded melts for simulating the foam injection Molding process	Prof. C. Hoppmann and D. Sander

MARCH 23 Monday PM

NANOFOAMS AND NANOFILLED FOAMS SESSION

Moderator: Changchun Zeng

TITLE	AUTHOR CONTACT
Continuous Extrusion of Nanocellular Foam	S. Costeux and D. Foether
Evaluation of Nitrogen as a Co-Blowing Agent in Nanocellular Foam	K. A. Patankar, J. D. Moore, and S. Costeux
Controlled Foaming of PS/MWCNT by Carbon Dioxide	S. Wang, A. Ameli, Y. Kazemi, and K. J. Yu
From Nano-structured iPP Formation to Nano-cellular iPP Foam	M. Saniei, A. Ameli, M. P. Tran, and C. B. Park
Solid-state Thermoplastic Nanofoams via a Novel Low-temperature Saturation Pathway	H. Guo and V. Kumar
Preparation of Micro and Nanocellular TPU-Graphene Nanocomposite Foam by Supercritical CO ₂ Foaming	Y. R. Chen, S. P. Peng, S. K. Yeh, and C. C. Chu
The Effect of Microstructure on the Mechanical Properties of Thermoplastic PUR/Clay NanoComposite Foams	X. Wang, H. Kharbas, M. Jason, and C. Liu

ANTEC® 2015 PROGRAM IN THERMOPLASTIC MATERIALS & FOAMS DIVISION (CONT.)

MARCH 24 Tuesday AM

THERMOPLASTICS SESSION

Moderator: Gary Wilkes

TITLE	AUTHOR CONTACT
Thermotropic Liquid Crystalline Powder	K. P. Nair
Gel Spinning of UHMWPE Fibers with Low Mol. Wt. Polybutene as a new Spin Solvent	X. Fang, T. Yatt, and D. Yao
Low Permeation Toughened POM for injection molded and blow molded tanks in small off road Engine (Sore) Applications	S. Kim, L. Larson, P. Wilson, and G. Zollos
Aging of Physical Properties in Ionomers Modified with Fatty Acid Salts	J. P. Bishop, J. R. DeGaravilla, and K. C. Andersen
Crystallization and Foaming Behavior of Polypropylene with a Crystal-Nucleating Agent	R. K. M. Chu, L. H. Mark, and C. B. Park

MARCH 24 Tuesday PM

FOAM SESSION 1

Moderator: Raymond Shute

TITLE	AUTHOR CONTACT
Layer Integrity in Polyethylene Based Multilayer Film/Foams and Their Properties	M. Rahman and E. Baer
In-Situ Measurement of Internal Mold Pressure on Chemical Foaming Process	J. Tateishi, K. Matsuo, E. Katayama, N. Taniguchi, T. Nishiwaki, S. K. Sukumaran, and M. Sugimoto
Correlation Between Foam Extrusion Process Parameters, Mech. Properties and Pharmaceutical Downstream Processing	J. Weng, G. Terife, G. Chouzouri, and M. Lamm
Mechanism of Bubble Nucleation and Growth in High Pressure Foam Inj. Molding using Gas-Counter Pressure	V. Shaayegan, G. Want, E. Reghem, M. Boisson, and C. Park
Piezoelectric Foams Based on Cyclic Olefin Copolymer	H. Wang, Y. Li, and C. Zeng
The Influence of Rheo. Properties of the Material Formulation on the Cell Size and Cell Density of Physically Foamed PE	M. Walluch, A. Uray, B. Geissler, S. Laske, C. Holzer, and G. Langecker
Effect of Fluorinated Hyperbranched Polymer on Morphology of PS and PMMA Foams	M. Sugimoto

MARCH 25 Wednesday AM

ACOUSTICAL FOAMS AND FOAM VISUALIZATION EXPERIMENTS SESSION

Moderator: Donna Davis

TITLE	AUTHOR CONTACT
Microstructural Design of Porous Membrane for Effective Sound Absorption Performance	S. G. Mosanenzadeh, H. Naguib, and N. Atalla
Visualizing 3D Polymer Foam Structure Characteristics with Optical Tomography	C. Muelder and C. Hopmann
Structure and Acoustical Property of Polyolefin Film/Foam Alternating Multilayer Composites	X. Sun and W. Liang
Fabrication of Interconnected Porous PLA by Mixing with NaCl and PEO in Two-Rotor Continuous Mixer	X. Chen, Z. Lin, J. Sha, T. Wu, Y. Ma, L. S. Turng, and L. Xie

TERMOPLASTIC MATERIALS AND FOAMS DIVISION BOARD MEETING MINUTES

Meeting Date: February 23, 2015

Location: Polyolefins Conference 2015, Houston, TX

ATTENDANCE

Attending the BOD meeting in person: Gary Wilkes, Theresa Healy, Donna Davis, N.S. Ramesh, Sal Monte, Erica Monte, and Andy Chatterjee **Joined by phone:** Hani Naguib, Dale Grove, Anson Wong, Perry Vadhar, Chul Park, and Max Wingert,

Chairman Hani Naguib called the meeting to order at 7:00pm

CHAIR REPORT — HANI NAGUIB

Hani mentioned the next BOD meeting will that Sunday evening of the ANTEC®. Donna, Sal, and Erica will not be able to attend because there is a Hall of Fame dinner that same timeframe. Hani congratulated all involved as our division was awarded the Pinnacle Award-2nd year in a row and the Communication Excellence Award.

OPEN POSITIONS-Hani will finish his term by July and he will be stepping down so we need a Chairperson and a Chair-Elect. Dale Grove has done a great job at the ANTEC® TPC and that position will be available too. Hani will send an email for open positions and you can nominate anybody (just let Hani know). Elections will be held during the ANTEC® meeting.

SECRETARY'S REPORT — THERESA HEALY/ LUKAS STIRNEMANN Meeting minutes from September 09, 2014 BOD meeting were approved (Donna and Sale motioned to approve).

FOAMS®2014 REPORT — SAL MONTE, MAXWELL WINGERT, AJIT RANADE, CHUL PARK, THERESA HEALY

Max stated that there were about 120 attendees-25 people attended the Tutorial. The division did not make money on this conference and we paid a loss (HQ did make money). There were 5 posters/2 winners. Hani mentioned that the conference is well known and the quality was excellent and that they had a teleconference and Max had made some recommendations for future FOAMS® conferences. We presented Chul Park with a Lifetime Achievement Award.

TREASURER'S REPORT — MAX WINGERT

According to the report, we have underspent in every cFY13-14 budget: Income \$23,200; Expenses \$31,750. Thus, we have a budgeted deficit of \$ 8,550. First half of FY actual transactions are: Income \$1,780.60; Expenses \$10,537.47. We are expecting upcoming significant

expenses for Best Paper, Communication (Peacock Graphics), and Education. Please let me know if this is no longer the case. 2015 SPE membership rebate will be down 18% from 2014 (it changes on a calendar year versus fiscal year timeline). This is because qualified membership (professional and young professional) is down from 853 to 703. (According to SPE, 1/1/2015 student membership was 52 versus 42 last year and emeritus members was 24 versus 22 last year.)

I am seeking 2-3 volunteers from the BOD to be on an audit committee. Please email me if you are willing to assist. Between June 30 and December 31, the account managed by Constitution Advisory Group gained 0.3% from \$139,674.96 to \$140,155.87. As of Feb 18, the investment account value is now \$142,981.72. HQ recommended an audit committee. We need volunteers to help out with that committee. Max wants to implement this calendar year. Donna made a comment that it is a 3 person committee to review the expenses and it is not daunting as it sounds and the Treasure report and tax filings be reviewed. We need 3 people to help. Donna will be one of those people. We need 2 other people. In principle it is good to have the Chair and Chair Elect. Max suggested using the Foams Conference to pulling new members. We need to think more about this and make some recommendations for the future.

PO 2015 TOPCON REPORT —DONNA DAVIS/ ANDY CHATTERJEE

here are about 625 people which appears to be a good attendance. Donna was concerned with resin prices being down but it doesn't appear that attendance was effected. Donna congratulated Stephane and Gary for doing a great job for the Polyolefins Conference as they were the first to complete all their sessions. Andy said the plenary session was very well received and the afternoon session went well so far. A lot of good presentations at this conference.

continued on page 12

PO 2015 TOPCON SCHOLARSHIPS — ANDY CHATTERJEE TPM&F awards 2 scholarships –Funding comes from proceeds from the conference-University of North Texas and Texas A&M -Sarah Forester and Daiya Reed were the scholarship winners. This was synchronized with the education committee of South Section Texas. Next year there will be the other 2 schools. We will continue to rotate the schools.

ANTEC® 2015 — DALE GROVE

There are 5 sessions (28 papers) and a last minute moderator changes (Donna has the Wednesday). Plaques and certificates are ready-4 papers were rejected (number of them were transferred). Room applications for the Board Meeting and Reception were discussed.

FOAMS®2015 REPORT —MASAHIRO OHSHIMA

Masahiro Ohshima sent the FOAM® brochures to distribute during the FOAMS® session. The FOAMS® 2015 is set up to take place in Kyoto, Japan on September 10-11, 2015 (Tutorials 8-9). Chul brought up a point if SPE HQ can collect the money and Donna mentioned they can do that and she will have Sue from SPE HQ discuss with Prof. Ohshima. Hani asked if anyone is going to Japan for the FOAMS® conference and Gary said he will probably be there and Perry may attend. There will be 3 speakers from our BOD as well. Registration fees are already in place.

COUNCILOR'S REPORT — PERRY VADHAR

SPE is promoting Plastic Race at ANTEC® 2015. This is organized by Next GEN committee. Perry had shared information earlier on sponsorship for this race. Section or Division should host their scholarship with the Foundation rather than on their own. That is proposal on the table. Foundation enhances the work they do with college students and getting new “recruits” into the industry. More details will become available after next Councilors meeting during ANTEC® 2015. SPE HQ is promoting PlastiVan Program. The PlastiVan program is there for the Sections and Divisions growth of the industry in their communities as well as the overall growth of the industry. Section and Division can use *The Chain* to facilitate their meetings and group communications going forward. Each Section and Division has its own community where it can post upcoming meeting agendas, meeting materials, and communicate

with their board in an organized fashion. So please consider to use *The Chain* in your communication. Perry will have also more details to share following next Councilors meeting.

COMMUNICATION CHAIR REPORT — THERESA HEALY - SEE PAGE 4

EDUCATION CHAIR REPORT — STEPHANIE COSTEUX He is currently traveling to China

MEMBERSHIP CHAIR REPORT— AJIT RANAD TPM&F division active members as of February 12, 2015: 883 and 3 new members added since September 2014.

TPM&F BY-LAWS — RAY SHUTE

Please let Ray know if you are interested in continuing to be on the Board. We want to bring new professionals on board. {See page 13 for bylaws}

HSM/FELLOWS NOMINATIONS — DONNA DAVIS. Congrats to Hani as becoming a Fellow at ANTEC®. Hani thanked everyone for their support. Donna will get a list of membership and service members in leadership roles so we can do this again. Donna will sort through a list and send everyone the criteria.

NEW/OLD BUSINESS

Nominate someone for those open positions-Hani will send details about the next meeting

NEXT BOARD MEETING

March 22 @6:00pm in Orlando, FL.

Meeting adjourned — Meeting was adjourned at 8:00pm Central Time which is a record of 1 hour. Motion to adjourn (Sal and Donna)

Minutes recorded by Gary R. Wilkes

DIVISION BYLAWS

ARTICLE I

NAME

The name of the organization shall be the Thermoplastic Materials and Foams Division of the Society of Plastics Engineers, Inc.

ARTICLE II

PURPOSES

The purpose of the Division is to provide and promote education and science in the field of plastics engineering within the area of non-vinyl thermoplastic materials and foams.

ARTICLE III

MEMBERSHIP

Those Members of the Society of Plastics Engineers who request membership in the division shall be members of the division. Members shall maintain the same grade of membership as assigned by the Society of Plastics Engineers. Member grades consist of: Distinguished Members, Fellows of the Society, Honored Service Members, Honorary Members, Senior Members, Members, Affiliate Members, Student Members, and Student Affiliate Members.

ARTICLE IV

GOVERNING AUTHORITY

The Division is incorporated under and shall be governed by the laws of the State of Connecticut.

ARTICLE V

BOARD OF DIRECTORS

Section 1. Functions. Management of the Division is vested in a Board of Directors that meets at least three times a year either physically, by phone or electronically. The Board is responsible for the following:

- (a) Establishment and amendment of Division Rules and Operating Procedures
- (b) Adoption of the annual budget
- (c) Election of Division Officers
- (d) Election of interim Councilor and Directors
- (e) Authorization requests for Technical Conferences of the Society of Plastics Engineers (“SPE” or the “Society”)
- (f) Authorization of special fund raising activities
- (g) Approval of appointments of Committee Chairs
- (h) Approval of annual audit and financial reports

continued on page 16

Section 2. Board Composition. The Division Board of Directors is composed of 21 elected Directors, Division Officers, a Council Representative, and Past-Chair. Their terms of office are as follows:

- (a) 21 elected Directors - three years
- (b) Division Officers
 - Chair - two years
 - Chair-elect - two years
 - Secretary - two years
 - Treasurer - two years
- (c) Councilor (Council Representative) - three years
- (d) Past-Chair - two years

All terms shall commence July 1, except that of Councilor, which shall commence after the annual business meeting.

Section 3. Vacating Board Positions. A Division Board of Directors will declare a position vacated upon receipt of a resignation received in writing and accepted by the Chair. Also the Board may declare a seat vacant whenever a Board Member fails to meet eligibility requirements, fails to perform duties, or for any other causes the Board justifies for removal.

Directors and Officers failing to attend two consecutive Board meetings will be considered to have resigned their elected positions, except for excused absences. A seat is considered vacant only after a two-third-majority vote of all Board Members.

Section 4. Interim Elections. When a vacancy occurs, the Board will elect an interim Officer, Director, or Councilor to complete the fiscal year, or complete the term of office if more than one year remains.

Section 5. Meetings. Meetings of Board of Directors are called by the Chair and must be held at least three times each year. A quorum will exist when a majority (51 %+) of Board Members are present. Written notice and the Order of Business (agenda) is prepared by the Chair and Secretary of the Division, and must be sent to all Board Members and Committee Chairs at least one week prior to each meeting.

Section 6. Duties of Officers. In addition to responsibilities as a Division Director and other duties outlined herein, the Chair or Division Rules and Operating Procedures may delegate additional duties to be performed by an Officer of the Division.

Section 7. Division Executive Committee. A Division Board may authorize an Executive Committee to act on its behalf between meetings and to serve as a steering committee.

- (a) Composition - The Executive Committee of the Division will consist of the Officers, Past-Chair, and Councilor.
- (b) Limitation of Powers - The Executive Committee is subject to the Division, Rules and Operating Procedures, if any. Any action taken must be in harmony with the actions of the Board. Only expenditures provided for in the budget and approved by the Board are allowed.
- (c) Minutes - Minutes of each Executive Committee meeting will be distributed promptly to all Board members. Upon the request of three or more Board members any committee action must be submitted to the Board for consideration.
- (d) Meetings - Meeting locations and times are designated by the Division Chair. A meeting

can be called upon the request of any three members of the Executive Committee and at least a seven-day notice must be given prior to each meeting. However, this notice can be waived provided at least three-fourths of the Executive Committee agrees. A quorum will consist of a simple majority. No proxies may be accepted.

ARTICLE VI

DIVISION ELECTIONS

Section 1. Division Elections. At the close of each fiscal year, the terms of one-third of the total number of elected Directors will expire. Directors are elected at the same time as the Councilor. They are elected by secret mail ballot to the Division membership. Division Officers are elected annually at the Society of Plastics Engineers Annual Technical Conference (ANTEC®) board meeting of the Division and no later than June 1st.

Section 2. Division Nominating Committee. The committee will nominate eligible members for each vacancy for the next fiscal year and present its nominations to the Board by April 15th. Nominations are required every two years for Officers, every year for Directors, and every three years for Councilor.

Section 3. Eligibility of Members to Serve. Every Board Member must be a member of the Society of voting grade in good standing at the time of nomination, election and during their term. To be eligible for election as a Division Officer, a candidate must be a Division Director at the time of the nomination. The Councilor may not serve as a Division Officer during their term as Councilor. Certain members are restricted or have limited eligibility to serve on the Board of Directors.

- (a) The following are eligible to vote and to hold Division office: Members, Senior Members, Fellows, Honored Service Members and Distinguished Members.
- (b) The following are not eligible to vote and hold office: Students, Student Affiliates and Honorary Members.

Section 4. Election of Officers. By April 15th the Division Nominating Committee will nominate from the eligible Directors at least one but no more than three candidates for the positions of: Chair, Chair-Elect, Secretary, Treasurer, and Councilor.

The criteria for a candidate for Division officer position eligibility are as follows:

- (a) be a member in good standing,
- (b) must have indicated a willingness and ability to serve, and
- (c) be a member of the Division Board of Directors at the time of nomination.

Directors completing their terms in fiscal year can be nominated, Nominations can be made by any Director if accepted, seconded, and the nominee gives consent.

The Board of Directors will meet in April or May to elect officers for the next fiscal year.

Section 5. Election Procedure for Division Officers. If more than one nomination for an office is made, election will be by secret ballot. Election to office is determined by a simple majority vote, no proxy ballots are permitted. If there are more than two candidates, and the first ballot does not produce a majority vote, then the

candidate receiving the least votes will be dropped from the ballot. The ballot will be repeated until one candidate receives the majority vote.

Officers are elected in the following order: Chair, Chair-Elect, Secretary, and Treasurer.

Section 6 Election of Councilor. The Division Nominating Committee will nominate at least two eligible members of the Division for the office of Councilor in the year the current Councilor's three-year term expires or in the event of a vacancy more than one year before the Councilor's term expires.

- (a) Nominations will be considered at a meeting of the Board of Directors. Nominees may be accepted or rejected by a majority vote. Nominations may be made from the floor, if seconded and if the nominee gives consent.
- (b) The Board will select at least two, but no more than three candidates.
- (c) A Councilor is only allowed to serve two consecutive terms. A Councilor who has served more than 1-1/2 (4-1/2 years) consecutive terms is not eligible for re-election for another consecutive term of office.

Section 7. Election of Directors. Nominations are carried out at the time and in the manner prescribed for Councilor. At the close of each fiscal year, one-third of the total elected Directors will retire. On the ballot the names of candidates are listed in a random manner (determined by drawing of lots). Voters will be instructed to "vote up to" (number of positions vacant), and spaces for the same number of write-in-votes will be provided.

Section 8. Election Procedure Councilors and Directors. Councilors and directors shall be elected as follows:

- (a) Consent is given by nominee.
- (b) Ballot is sent to all voting members affiliated within the Division.
- (c) Ballots are returned and counted with the highest number of votes winning.
- (d) In the case of a tie, of the candidates receiving the least votes, the winning officer will be selected by a flip of the coin by the head of the nominating committee.

Section 9. Balloting for Councilor and Directors. Between March 1st and April 15th, the Nominating Chair (through the SPE webmaster) will send ballots to all voting members affiliated with the Division, preferably by e-mail or first class mail. A ballot will include the following:

- (a) Name of the Division
- (b) Separate election information for Councilor and Directors
- (c) For each office, the ballot will provide the following:
 - instructions on how many candidates to vote for,
 - names of all candidates,
 - Candidate statements, including education, experience, SPE activities, reason for running
 - space to vote for write-in candidate(s)
- (d) Notice of when the ballot will close, (preferably two weeks, (14 days) after the ballot was e-mailed (or sent).

Section 10. Counting of Ballots for Councilors and Directors. The Nominating Chair will verify that each ballot returned is that of a voting-class-member (member in good standing). All valid ballots will be counted. The candidates receiving the highest number of votes will be elected. The results will be reported to the Chair and the winning candidates prior to the ANTEC® board meeting. All results will also be reported to the Board at the ANTEC® board meeting. (Voting results will be retained by the Nominating Committee for at least 90 days, and will be delivered to the Board for examination if so ordered)

ARTICLE VII

BOARD POSITIONS

The members of the Board of Directors and Officers shall fulfill those duties prescribed by the laws of the State of Connecticut.

ARTICLE VIII

FISCAL YEAR

The fiscal year of the Division shall be July 1 to June 30 of the following year.

ARTICLE IX

COMMITTEES

The Division shall establish and operate committees as described in the Society's Division Procedures Manual.

ARTICLE X

SEPARATE LEGAL ENTITIES

The Division is a legal entity, separate from the Society. The Division is not responsible for the debts or obligations of the Society and the Society is not responsible for the debts or obligations of the Division.

ARTICLE XII

AMENDMENTS

These bylaws may be amended by the Board of Directors with the approval of the Council of the Society.