

# P.A.D. REVIEW

## Polymer Analysis Division Society of Plastics Engineers

Vol. 43 No. 1  
April 2016

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Dear PAD Members

Happy Spring! This is always an enjoyable time of year. In many parts of the USA, the cold of winter is yielding to the comfortable temperatures of spring. It's also the time when many of us who are involved in some way in the plastics industry are planning on attending ANTEC.

From a professional standpoint, the ANTEC conference is one of the best benefits our membership in SPE. It is the premier conference for the plastics industry and gives us a chance to see the developments that are occurring in materials, machinery, and instrumentation. It is a great way to network with other professionals as well. In the past few years, there have been additional ANTEC's, not just the one in the US, so these opportunities have been extended to our colleagues in other parts of the world to make use of their SPE membership benefits.

This year's US ANTEC will be held in the centrally located city of Indianapolis from May 23 through May 25. Given the timing of ANTEC, you might be able to see some of the big time racers who are in Indianapolis for the Indy 500. Indianapolis should be an exciting town when we are holding ANTEC, so please try to attend. PAD will have 3 excellent sessions. Thanks to Joel Lischefski for chairing the Technical Committee and to all those who submitted papers for ANTEC. The papers are what makes this such a great conference.

If you are at ANTEC, please feel free to stay for our annual Board meeting. At this meeting, I will pass the chairmanship to Joel Lischefski. I am grateful for the support I have had as PAD Chair for the last few years and am confident that Joel will raise our performance level to new heights. I appreciate Joel's willingness to serve the PAD members in this role.

Enjoy the comfortable spring weather, and plan to attend ANTEC and learn how to make full use of your SPE membership. If you go to the SPE website, [www.4spe.org](http://www.4spe.org), you will see even more opportunities to have your membership provide you with numerous benefits that will help your technical knowledge and your career.

Thanks everyone  
Greg Kamykowski  
PAD Chair

The PAD webpage is: <http://www.4spe.org/technical-groups/divisions/polymer-analysis>

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## From the Editor

Note our webpage address has changed: please note it is now at:

<http://www.4spe.org/technical-groups/divisions/polymer-analysis>

We also have a group on Linked In called the Polymer Analysis Division, SPE. Please note that due to spamming, we will not be approving members without contacts or photos. Also if you have time constraints on your promotions, please email me directly to make sure it gets approved in time.

KPM

**Treasurer's Report**  
**V. Galiatsatos, PAD Treasurer**

Below is the activity of our account since the last newsletter:

Starting balance: \$26,219.62

11/30/15	Interest	\$0.43	\$26,220.05
12/31/15	Interest	\$0.45	\$26,220.50
01/31/16	Interest	\$0.44	\$26,220.94
02/29/16	interest	\$0.42	\$26,221.36

No expenses were recorded during this period.

Submitted on March 9, 2016

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# ANTEC<sup>o</sup> 2016

Polymer Analysis Division Call for Paper  
 Indianapolis, IN, USA  
 May 23-25, 2016

Session:	Tuesday AM	Moderator: Greg Kamykowski
PAD Session Title:	<b>Thermal Analysis and Barrier Properties</b>	

Session	Day	Time	Control ID	Title
	5/24/2016	8:00	211	Improved Model of Thermal Diffusivity for Semicrystalline Polymers as a Function of Temperature, Temperature Gradients, Cooling Rate, and Injection Molding
	5/24/2016	8:30	177	Blends Characterized by Thermal Analysis
	5/24/2016	9:00	448	The Role of Additives and Free Volume on the Gas Barrier Properties of PET
	5/24/2016	9:30	282	The effect of ozone ageing on the chemical, physical, and barrier Properties of Packaging Films
	5/24/2016	10:00	374	Effect of Silica Filler Concentration on the Mechanical and Diffusion Properties of Commercial Gasoline Through Polyether-Polyurethanes

Session:	Tuesday PM		Moderator: Greg Kamykowski
PAD Session Title:	<b>Modelling and Innovative Methods</b>		

Session	Day	Time	Control ID	Title
	5/24/2016	1:30	178	Modeling and Simulation of the Foaming Process in Elastomers
	5/24/2016	2:00	459	Time Temperature Superposition of Short Term Stress Relaxation Behavior to Understand Retention of Material Modulus Over Time
	5/24/2016	2:30	210	Non-Destructive Characterization of Hygrothermally Aged Polymers
	5/24/2016	3:00	78	Capacitance to Digital Converter Method for Dielectrostriction of Polymeric Materials
	5/24/2016	3:30	280	Ultrasonic Measurement of Particle Concentration in Polystyrene/Glass Beads Composites by a Differential Scheme
	5/24/2016	4:00	352	Understanding Reaction Products of Polyethylene-Acrylic Acid Dispersions with Calcium Chloride

Session:	Wednesday AM		Moderator: Joel Lischefski
PAD Session Title:	<b>Spectroscopy</b>		

Session	Day	Time	Control ID	Title
	5/25/2016	8:00	255	Determination of the Compositions of Fully Biodegradable Ternary Blends with Near-Infrared Spectroscopy
	5/25/2016	8:30	164	Rapid Spectral Measurement of the Mechanical Properties of Polypropylene Recovered from Shredded End of Life Vehicles
	5/25/2016	9:00	205	Molecular Weight Analysis of Polyethylenimine using Dynamic Light Scattering Detector
	5/25/2016	9:30	457	Surface Mechanicals and Microscopy Methodologies for Coating Characterization

## Commerical Papers at Antec

Recently SPE has announced that it is beginning an initiative to encourage commercial papers to be solicited and presented at ANTEC. The initiative is aimed at providing technical oriented talks that present the latest innovations in polymer technology from companies. The talks are intended to present new applications or show new technologies that are supported by data rather than simple sales pitches. These commercial papers would be presented in a separate session from the normal technical program and would not require a paper to be submitted for review. It is expected, however, that the presentation itself would be submitted and be made available to the attendees of ANTEC like the papers.

A decision has not yet been made on how the commercial paper presentation sessions will be organized (separately by division or as one larger group). They have just recently announced this change in strategy and will be using ANTEC 2016 as a pilot for a broader launch at ANTEC 2017.

If you have anyone that may be interested in providing a commercial presentation please get the word out and have them contact Joel Lischefski or Ida Chen

<b>Xue (Ida) Chen</b> Technical program chair <a href="mailto:Chen2c7ab2@dow.com">Chen2c7ab2@dow.com</a>	<b>Joel Lischefski</b> Technical Program Co-chair <a href="mailto:jlischefski@teel.com">jlischefski@teel.com</a>
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# Polymer Insight

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**Differential Scanning Calorimetry (DSC)** to investigate glass transition and melting behavior



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**Dielectric Analysis (DEA)** for cure monitoring of thermosets





# Society of Plastics Engineers Membership Application

P.O. Box 403, Brookfield, CT 06804-0403 USA  
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www.4spe.org

European Member Bureau  
Eric Sasselaan 51, BE-2020 Antwerpen, BELGIUM  
Tel: 32 (0)3 541 7755 Fax: 32 (0)3 541 8425 www.speurope.org

## Applicant Information

**Name:**  
first last mi

**Company Name and Business Address (or College):**  
company/college:  
job title:  
address:  
address:  
city: state:  
zip: country:

Phone/Fax Format: USA & Canada: (xxx) xxx-xxxx All Others: +xx(xx) x xxx xxxx

**Work Phone:** \_\_\_\_\_ **Fax:** \_\_\_\_\_

**Email:** *used for society business only* \_\_\_\_\_

**Home Address:**  
address:  
city: state:  
zip: country:

**Home Phone:** \_\_\_\_\_

Preferred Mailing Address:  Home  Business

**Gender:**  Male  Female

**Birth Date:** (mm/dd/yyyy) \_\_\_\_\_

**Demographics**

**Job Function** (choose only one)

Consulting  Purchasing  
 Design  Quality Control  
 Education (Faculty)  R & D  
 Engineer  Retired  
 General Management  Self-Employed  
 Manufacturing  Student  
 Marketing/Sales  Tech Support  
 Other

**Materials** (choose all that apply)

Composites  Polyolefins  
 Film  Polystyrene  
 General Interest  TPEs  
 Nylon  Thermoset  
 PET  Vinyls  
 Foam/Thermoplastics  No Interest

**Process** (choose all that apply)

Blow Molding  Injection Molding  
 Compression  Mold Making  
 Compounding  Product Design  
 Engineering Properties  Rotational Molding  
 Extrusion  Thermoforming  
 Fabrication  General Interest  
 Foam  No Interest

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Exclude my email from the Online Member Directory  
 Exclude all my information from the Online Member Directory  
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## Payment Information

<b>New Member 1 Year</b> <input type="checkbox"/> US (\$125.00) <input type="checkbox"/> Canada (\$145.00) <input type="checkbox"/> Euro** (€127.00)	<b>New Member 2 Years *</b> <input type="checkbox"/> US (\$217.00) <input type="checkbox"/> Canada (\$253.00) <input type="checkbox"/> Euro** (€221.00)	<b>Student Member</b> <input type="checkbox"/> US (\$28.00) <input type="checkbox"/> Canada (\$33.00) <input type="checkbox"/> Euro** (€24.00)	<p><b>Students must supply graduation date:</b> _____</p> <p><b>Membership Amount</b> _____</p> <p><b>Primary Division</b> <b>FREE</b></p> <p><b>Additional Division(s)</b> costs for each Additional Division</p> <table border="1"> <thead> <tr> <th></th> <th>1yr.</th> <th>2 yrs.</th> </tr> </thead> <tbody> <tr> <td>US</td> <td>\$6.00</td> <td>\$12.00</td> </tr> <tr> <td>Canada</td> <td>\$7.00</td> <td>\$14.00</td> </tr> <tr> <td>Euros</td> <td>€5.00</td> <td>€10.00</td> </tr> </tbody> </table> <p><b>TOTAL</b> _____</p>		1yr.	2 yrs.	US	\$6.00	\$12.00	Canada	\$7.00	\$14.00	Euros	€5.00	€10.00												
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