

# Spring 2013

www.ohiorubbergroup.org
PO Box 341, Bath, OH 44210

### 2013 Events

### OHIO RUBBER GROUP

www.ohiorubbergroup.org

Be sure to renew your membership for 2013

Spring Technical Meeting Tuesday, April 16, 2013 Twinsburg Hilton Inn

ORG MEMBER SCHOLARSHIP DEADLINE May 1, 2013

Info in this issue and on website

Golf Outing Tuesday, June 18, 2013 Yankee Run, Warren

### Forms in this issue

Golf Outing Monday, August 26, 2013 Portage CC, Akron

### NEW DATE!!!!!!

Fall Technical Meeting Wednesday, October 2, 2013 Twinsburg Hilton Inn

### **RUBBER DIVISION**

www.rubber.org

183nd Technical Meeting April 22-24, 2013 Hilton Inn, Akron, OH

184th Technical Meeting International Elastomer Conference October 7-10, 2013 I-X Center, Cleveland, OH

# CLEVELAND CHEMICAL ASSOCIATION

www.clevelandchemical association.com



## A Message from Jon Karas, 2013 ORG Chair

We need volunteers! If you have an interest in growing your professional network in the rubber industry, if you would like to help make college more affordable for students at the University of Akron, or if you would like to learn more about rubber technology and the rubber industry, let us know!

All current members and members in 2012 should have received an email containing information on proposed changes to the bylaws. These changes are being proposed in order to modernize and streamline the structure and operations of the Ohio Rubber Group. We will be voting on the proposed changes at the upcoming meeting on April 16th. If you have any questions about the changes, please feel free to contact me.

We have created a new scholarship opportunity! If you are already in the industry and are continuing your education, please visit our website and submit an application. The total amount available is up to \$2,000!

See you on the 16th!

Jonathan Karas DuPont Performance Polymers 4330 Allen Rd Stow, OH 44224 (330) 929-6955 Jonathan.A.Karas@dupont.com





2013 Directors: Mike Meade, Sean Djuricic, Paulo Meneghetti, Jon Karas, Nicki Hershberger

### 2013 Directors

Chair - Jonathan Karas DuPont Performance Elastomers 330- 929-6955 jonathan.a.karas@dupont.com

Vice-Chair – Paulo Meneghetti Momentive Performance Materials 440-923-7837 paulo.meneghetti@momentive.com

*Treasurer* Sean Djuricic ARDL 330-794-6600 seand@ardl.com

Secretary – Michael Meade Production Systems, Inc. 330-865-0444 mike.meade@productionsys.com

Area Director – Andrew L. Tisler Omnova Solutions, Inc. 440-318-488 andrew.tisler@omnova.com

Alt. Area Director – Ken Kemerer Wacker-SILMIX® 330-628-5024 ken.kemerer@wacker.com

Past Chair – Nicki Hershberger ARDL 330-794-6600 x 252 nicole.hershberger@ardl.com

#### 2013 Committee Chairs

Program – Sean Djuricic
Akron Rubber Development Laboratory
330-794-6600 seand@ardl.com

Program – Paulo Meneghetti Momentive Performance Materials 440-923-7837 paulo.meneghetti@momentive.com

Membership - Jim Lipinski Harwick Standard Dist. 330-798-6808 lipinskij@harwickstandard.com

Scholarship/Education – Joel Neilsen Sid Richardson Carbon & Energy Co. 330-666-2777 jgneilsen@sidrich.com

June Golf Outing —
Paul Glasgow, Stemaco USA
paul.glasgow@stemacos.com
Tom Rickey, Hexpol
330-690-7492
tom.rickey@hexpol.com

August Golf Outing – Greg Sibley and Kevin Geron Intertex 330-665-5533 greg@intertexworld.com

Publicity – Thomas McGee Retired 419-289-6339 ncem046@yahoo.com

Web Master – Denise Kotz DuPont Performance Elastomers 330-929-6926 denise.kotz@dupont.com

Historian/Raffle – Shelby Washko 330-273-5155 shelbywashko@frontier.com

Newsletter/Rec.Secy – Mary Puskas Ohio Rubber Group 330-848-8847 mpuskas@littlern.com

### **Division News**

- 1. <u>2013 Spring and Fall Meetings</u>: Remember to register for the 2013 Spring Technical Meeting to be held at the Akron/Fairlawn Hilton Hotel on April 21-24. Registration and Housing are posted on the website, www.rubber.org, as well as the technical program and schedule of events. <u>The Early Registration Discount ended March 15<sup>th</sup>!</u> We currently have 114 registrants as of March 11. This compares to 76 registrants in San Antonio at this time for the 2012 Spring Meeting and 37 registrants in Akron at this time for the 2011 Spring Meeting. The 2013 fall International Elastomer Conference is also doing well this early in the year (biggest addition of booths typically comes in July-September). We currently have 182 booths at 47,800 sf and \$493,350 paid. At this time for the 2011 expo, we had 168 booths at 41,100 sf and \$409,550 paid.
- 2. <u>Bike Ride at 2013 Spring Meeting</u>: Dave Schultz is organizing a Bike ride on Saturday, April 20<sup>th</sup> starting at 8:00 a.m. in Peninsula, Ohio (Trail head). He would like to invite anyone from the Division to join him. He plans for a 50 mile ride and for those who would like shorter or longer, he can adjust. He plans to head north and then return. Please contact Dave Schultz (schultzd@harwickstandard.com) before April 20<sup>th</sup> if you want to participate. He can also be reached at 330-798-6535 (Office) or 330-283-5721 (Cell). He may also stop at the end at Winking Lizard for refreshments.
- 3. <u>Education</u>: The following course "Introduction to Compounding and Testing of Elastomers" will be held on March 20<sup>th</sup> at Ferris State University (Chair Leonard Thomas will also be there). Additionally, Christie Robinson is working with instructors to develop courses to be held in Akron in May and August, in Charlotte in July and September, and at the October International Elastomer Conference in Cleveland. Contact Christie, crobinson@rubber.org, for more information. The Rubber Division Training Directory can also be found on the Division website at http://www.rubber.org/uploads/47481361823576.pdf.
- 4. New Student Chapter: The Division is working with the Ohio Rubber Group to establish a new Student Chapter at the University of Akron's College of Engineering. Dr. Judit Puskas from the College of Engineering has agreed to serve as the faculty advisor to help set up the chapter. Linda McClure is currently setting up a meeting with the Dean of the College of Engineering along with the Rubber Division and Ohio Rubber Group to obtain approval for the student chapter. The goal is to get the chapter up and running this year and present a Student Chapter plaque during our October 2013 Business & Awards Meeting. As an FYI, we attempted over the past 12 years to establish a Student Chapter with the College of Polymer Science & Polymer Engineering; however they have not been interested. Linda will also be working to get the Rubber Division more involved in all of the Student Chapters.
- 5. <u>Chairs' Corner</u>: If you want to know what the Rubber Division has accomplished since restructuring to the new Professional Staff organization in 2001, then take a look at the Chairs' Corner located on the Division website at http://www.rubber.org/chairman. You will see 2013 Chair Leonard Thomas' Theme and Goals for 2013. You will also see the Themes and Accomplishments under each Chair from Rudy School (2001) to Joe Walker (2012) via the link http://www.rubber.org/uploads/44991362670297.pdf. Gretchen Spear is also working on how to make this section more prominent.

Edward L. Miller, PE, Executive Director Rubber Division, ACS

Tel: 330-972-6527 Fax: 330-972-5269

emiller@rubber.org



**Schedule** 

4:00 - Registration

**4:30 – Technical Presentations** 

\*\*\*please turn off cell phones\*\*\*

6:00 - Social Hour

7:00 – Dinner (Reserve by 4/12/13)

# Spring Technical Meeting Tuesday, April 16, 2013

Hilton Garden Inn, 330-405-4488 8971 Wilcox Drive, Twinsburg, Ohio

### **Technical Presentations**

\*\*\*\*\*\*\*Please turn off cell phones during the presentations\*\*\*\*\*\*

## "Scorch Protection Technology for Peroxide Crosslinking"

Peter R. Dluzneski, Ph.D., Sr. Research Scientist, Polymer Applications, Arkema Inc.

Peroxides can be used to crosslink a wide variety of elastomers and plastics including totally saturated polymers that are not curable by other means. In selecting the appropriate peroxide to use for a particular rubber compound, the stability of the peroxide, as measured by the half-life temperature, is usually the first criterion to consider. In a specific temperature range, a more stable peroxide (higher half-life temperature) will provide better protection against premature crosslinking (i.e. scorch). Unfortunately it may be so stable that it requires excessive time to complete the cure which could lead to unreasonable cycle times. A less stable peroxide would provide a quicker overall cure but may be more prone to scorch leading to higher scrap rates and clogged processing equipment. To address this predicament, Arkema has developed a series of scorch protected peroxides which are capable of providing protection against scorch while not affecting the overall cure time. This presentation will include data on these scorch protection peroxide products as well as a discussion of the advantages that they provide.

## <u>"Improving Dispersion and Filler—</u> Polymer Interaction Through Chemical Modification of Carbon Black"

Michael Jacobsson, Sid Richardson Carbon & Energy Co.

Sid Richardson Carbon & Energy Company has developed Energy Saver Blacks, a new series of chemically treated carbon blacks that reduce hysteresis while maintaining equivalent or improved abrasion resistance. These blacks also display improved dispersion and increased filler–polymer interaction in a variety of synthetic and natural rubber compounds.

# <u>Lignin - Carbon Black Hybrids:</u> Towards Development of Energy Efficient Rubber Compounds

**Kushal Bahl** and **Sadhan C. Jana**, Department of Polymer Engineering, The University of Akron (Kushal Bahl is a 2013 ORG Scholarship Recipient)

Lignins possess strong mechanical properties and contain a number of reactive functional groups, which make them suitable as fillers in polymer compounds of thermoplastic and thermosetting resins. The present study aims at producing rubber compounds with reduced rolling resistance by partially replacing the carbon black with lignin. The first part of this study focuses on cyclohexylamine (CA) modification of lignin to derive compatibility with the rubber matrix. Lignins, due to polar nature, retard rubber curing and give poor mechanical properties. Consequently, reduction of lignin polarity is a major issue in the development of synergistic rubber compounds. CA reduces polarity of lignin via proton transfer and hydrogen bonding interactions. The second part of this study investigates hybrid fillers of lignin/carbon black by exploring the non-covalent interactions between the two and studying how the hybrid fillers play a role in reducing the rolling resistance of rubber compounds. The effect of the hybrid fillers on the tensile, dynamic mechanical, cure properties, and morphology of SBR compounds will be discussed in the talk.

After Dinner Raffle - Raffle tickets will be available for purchase at the meeting

### 2013 Winter Technical Meeting - DINNER RESERVATIONS - Reserve by April 12, 2013

**Advanced Reservation - \$35.00 each** 

Without prior reservation - \$40.00 each

E-mail reservations to mpuskas@littlern.com OR mail to Ohio Rubber Group, PO Box 341, Bath, OH 44210





Thank you 2013 ORG Hospitality Sponsors

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# Hospitality Sponsors

Please consider a contribution to the 2013 Technical Meeting social Hours. As a 2013 Hospitality Sponsor your company will be recognized in the newsletters, on the website and at the meetings.

The social hour is an important adjunct to the technical meetings and is possible only through the generosity of our Hospitality Sponsors.

A yearly donation of \$200 is suggested; any amount is appreciated

Please send your 2013 contribution to: Ohio Rubber Group, PO Box 341, Bath, Ohio 44210

# Scholarship News

### \*\***NE**W\*\*

# **ORG Member Scholarship Award:**



Joel Neilsen, 2013 Scholarship Chair

The Ohio Rubber Group has announced the creation of a new scholarship award for \$2000. Potential recipients must be ORG members and currently in the pursuit of higher education or training to advance their careers in the Rubber Industry. <a href="mailto:Application Form">Application Form</a>. Please contact Joel Neilsen (<a href="mailto:jgneilsen@sidrich.com">jgneilsen@sidrich.com</a>), Scholarship Chair for further information.

## **Deadline to apply is May 1, 2013.**

http://www.ohiorubbergroup.org/ upload/ORG%20Member%20Scholarship%20Application.pdf

## **Graduate Student Awards:**

The Ohio Rubber Group has selected two students at The University of Akron to receive the ORG Graduate Student Award for 2013. PhD Candidates Joseph Scavuzzo (Polymer Science) and Kushal Bahl (Polymer Engineering) each received an award of \$3000. Both recipients plan on presenting overviews of their research at upcoming meetings of the Ohio Rubber Group. They were also presented with gratis student memberships to the ORG. (ORG membership is free to any interested student). Joseph and Kushal were both very grateful to the ORG for these awards, and look forward to meeting its members in person.

The ORG Graduate Student Award was created to promote the academic efforts of graduate students in the College of Polymer Science and Polymer Engineering. Each year with the assistance of the Polymer Science and Polymer Engineering Departments, candidate students submit applications along with transcripts and letters of recommendation to the ORG Scholarship Committee. This information is then used to select a group of students for face-to-face interviews with the Committee. The very high caliber of the candidates makes the final selection very difficult, but the democratic process of voting is used to make the determinations.



The ORG started 2013 with a great winter meeting at the lovely Hilton Garden Inn in Twinsburg, OH. ORG Program Chairs, Sean Djuricic and Paulo Meneghetti, put together a very well-received technical program. Approximately 96 attended the technical presentations (87 stayed for dinner).

Thanks to all who attended for supporting the Ohio Rubber Group.

A special thank you to the presenters for this meeting: Josh Guilliams (LANXNESS CORP); Chris Ryan (CHEMSPEC, LTD); Bob McNabb and Pete Glasser (HF MIXING GROUP-FARREL CORP).









## **Register NOW!**

## ORG Summer Golf Outing - Tuesday, June 18, 2013

Calling all golfers! It's time to register for the annual Ohio Rubber Group June Golf Outing. Tee times fill up quickly so please complete the following registration form and mail it promptly. The deadline is June 3<sup>rd</sup>, however, if there is remaining space after that date you can still join the fun. This year we will again play the beautiful Yankee Run golf course so get your registrations in quickly as there are a limited number of slots available.

Date: Tuesday, June 18, 2013 Tee Time: Shotgun start – 9:30 am

Dinner: Yankee Run Pavilion 4:00 pm

Golf course: Yankee Run Golf Course

7610 Warren-Sharon Road Brookfield, Ohio 44403

www.yankeerun.com 330-448-8096

Cost: \$120.00 per person

Includes golf w/cart, lunch, dinner, beverages, door prize, raffle ticket, and awards, gifts and BLIND BOGEY

All golfers are encouraged to become members of the Ohio Rubber Group.

For those needing accommodations in Warren, rooms are available at the Avalon Inn and Resort. Make reservations directly with the Avalon Inn and resort at 800-828-2566.

Thanks for your support – we look forward to seeing you on the 18th!

## Calling All Corporate Sponsors! - 2013 Golf Hole Sponsorship

As you may know, the primary purpose of the ORG Summer Golf Outing is to provide funding for our annual scholarships. The success of this event relies primarily on the generous support of our corporate members. Once again, we are asking that you consider sponsoring a golf hole for the outing .

For each hole sponsored, you will receive your company name on a sign placed at one hole. In addition, your company will be recognized the day of the event, and in the upcoming ORG newsletter.

The cost per hole is \$150.00 or 2 for \$225.00. To participate, simply complete the bottom portion of this letter and return to the address provided w/payment no later than June  $3^{rd}$ . This will be the last day to sign up for a sponsorship – please sign up early.

Thank you in advance for your support.

	Yes! I would like to sponsor hole(s) $1 = $150, 2 = $225$			
	Company Name			
Contact Name	Contact email:			

Please mail check payable to ORG or Credit Card info to: ORG Golf, P.O. Box 341, Bath, OH 44210 Fax: 330-848-8947 or e-mail to: mpuskas@littlern.

## **OHIO RUBBER GROUP SUMMER OUTING**

Tuesday, June 18, 2013 - Yankee Run Golf Course, Brookfield, Ohio Tee Time: Shotgun start – 9:30 AM

	PLEASE NOTE: All golfers are encour		) and 90
Foursome captain:	Choose a number that win aujust yo	Captain Blind Bo	
Name	Company		Phone
Address	City, State, Zip		E-mail
Other Foursome Members (include r FULL NAME AND EMAIL ADDRESS 2	name, company, email and blind bogey nu	mber) COMPANY	BLIND BOGEY
3			
4			
PRICE: \$120 per perso	on (includes golf w/cart, lunch, dinner, bo <u>Price does include the Bi</u> DINNER ONLY: <b>Tee-Time: Shotgun st</b>	lind Bogey	cket, award and gifts)
	<u>PAYMENT</u>		
	Rubber Group) \$ (OF		iscover

**DEADLINE:** June 3, 2013 \*\*\*\*\*\* NO REFUNDS after June 11, 2013

Return this form with payment to: Ohio Rubber Group, PO Box 341, Bath, Ohio 44210



### MEMBERSHIP RENEWAL TIME!

It's a new year and that means it's time to renew your membership for 2013 Please use the form below OR on the website at <a href="www.ohiorubbergroup.org">www.ohiorubbergroup.org</a>

Still only \$25 – Join today – Don't miss anything!

	2013 OHIO RUBBER GROUP MEMBERSHIP APPLICATION	·	
DATE.	A SUBDIVISION OF THE RUBBER DIVISION OF THE AMERICAN CHEMICAL SOCIETY		
DATE: NAME:	TITLE	Are you a member of: (Circle Answer)	
		American Chemical Society	
		Yes No	
		Rubber Division, ACS	
CITY, STATE, ZIP:		Yes No	
PHONE:	FAX:	Work on a committee	
Membership fee: \$25 Co	ontribution to Scholarship Endowment Fund: \$ Total \$	Yes No	
Payment (circle one): Cash	Check (US dollars/US Bank) Visa MasterCard Discover A	AMEX	
Card #	Exp. Date		
EMERITUS/LIFE MEMI	BERS: No renewal necessary but please use this form for any mailing	g or email changes	
Return application w/paymen	nt to: OHIO RUBBER GROUP PO BOX 341 BATH, OHIO 44	210	
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