International Elastomer Conference

International Rubber Expo, 194th Technical Meeting & Educational Symposium

Show Guide

October 9 - 11, 2018
Kentucky International Convention Center • Louisville, KY USA

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Rubber is our future

Sustainable rubber to ensure long-term viability

Corrie MacColl represents change for the natural rubber industry. We have the resources to revolutionise the way rubber is grown, processed and distributed.

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Talk to us at Booth 259
Chair’s Welcome

Welcome to the 2018 International Elastomer Conference, International Rubber Expo and the 194th Technical Meeting and Educational Symposium of the Rubber Division, American Chemical Society. On behalf of the Executive Committee, I would like to personally welcome you to Louisville and promise we will do all we can to make certain your experience during the week is both personally and professionally rewarding. My sincere hope is this year’s educational programs, interactive activities and technical discussions will offer ample opportunity to advance yourself, your organization and the industry we participate in.

While we are officially here to work, one can’t ignore the strong desire to explore our host city. Louisville has much to offer the foodie or craft cocktail connoisseur in us all. It has been called one of “Americas Friendliest Cities” and has also been labeled “Bourbon City,” offering a one-of-a-kind Urban Bourbon Experience™. With over 100 restaurants within walking distance of the Convention Center and iconic attractions found nowhere else, Louisville is the perfect place to explore and unwind after a work day. I hope you find time during your stay to experience much of what our host city has to offer.

I would like to thank you for your participation and continued support of Rubber Division, ACS. We appreciate the opportunity to serve you and wish you a pleasant stay in Louisville.
## Schedule of Events

**Rubber Division, ACS members are welcome to attend all open committee meetings.**

*Closed meeting*

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event</th>
<th>Facility</th>
<th>Room</th>
<th>Floor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Monday</strong></td>
<td>7:00 a.m. - 7:00 p.m.</td>
<td>Registration</td>
<td>Convention Center</td>
<td>South Hall A</td>
<td>Upper Concourse</td>
</tr>
<tr>
<td>10.8.2018</td>
<td>8:00 a.m. - 9:00 a.m.</td>
<td>Steering Committee Breakfast*</td>
<td>Marriott Louisville Downtown</td>
<td>Porch Kitchen &amp; Bar</td>
<td>Level 1</td>
</tr>
<tr>
<td></td>
<td>9:00 a.m. - 12:00 p.m.</td>
<td>Steering Committee Meeting*</td>
<td>Marriott Louisville Downtown</td>
<td>Rose</td>
<td>Level 2</td>
</tr>
<tr>
<td></td>
<td>1:00 p.m. - 2:00 p.m.</td>
<td>Membership Committee Meeting</td>
<td>Marriott Louisville Downtown</td>
<td>Rose</td>
<td>Level 2</td>
</tr>
<tr>
<td></td>
<td>1:00 p.m. - 3:00 p.m.</td>
<td>Executive Committee/Rubber Group Chairs Training Session</td>
<td>Marriott Louisville Downtown</td>
<td>Bluegrass 1 &amp; 2</td>
<td>Level 2</td>
</tr>
<tr>
<td></td>
<td>2:00 p.m. - 5:00 p.m.</td>
<td>Program Planning Committee Meeting</td>
<td>Marriott Louisville Downtown</td>
<td>Rose</td>
<td>Level 2</td>
</tr>
<tr>
<td></td>
<td>2:30 p.m. - 4:00 p.m.</td>
<td>Education &amp; Publications Committee Meeting</td>
<td>Marriott Louisville Downtown</td>
<td>Filly</td>
<td>Level 2</td>
</tr>
<tr>
<td></td>
<td>3:00 p.m. - 4:30 p.m.</td>
<td>Area Directors Meeting*</td>
<td>Marriott Louisville Downtown</td>
<td>Bluegrass 1 &amp; 2</td>
<td>Level 2</td>
</tr>
<tr>
<td></td>
<td>5:00 p.m. - 6:00 p.m.</td>
<td>Best Paper Committee Meeting</td>
<td>Marriott Louisville Downtown</td>
<td>Filly</td>
<td>Level 2</td>
</tr>
<tr>
<td><strong>Tuesday</strong></td>
<td>7:00 a.m. - 5:30 p.m.</td>
<td>Registration</td>
<td>Convention Center</td>
<td>South Hall A</td>
<td>Upper Concourse</td>
</tr>
<tr>
<td>10.9.2018</td>
<td>8:00 a.m. - 12:00 p.m.</td>
<td><strong>Course:</strong> Essentials of Rubber Technology</td>
<td>Convention Center</td>
<td>M109 &amp; M110</td>
<td>Main Concourse</td>
</tr>
<tr>
<td></td>
<td>8:30 a.m. - 4:30 p.m.</td>
<td><strong>Course:</strong> Introduction to Rubber Technology for Non-Technology Students</td>
<td>Convention Center</td>
<td>M105 &amp; M106</td>
<td>Main Concourse</td>
</tr>
<tr>
<td></td>
<td>9:00 a.m. - 10:00 a.m.</td>
<td>Keynote Speaker Address: Florian Schattermann, Vice President Performance Materials &amp; Coatings R&amp;D, The Dow Chemical Co.</td>
<td>Convention Center</td>
<td>Ballroom A &amp; B</td>
<td>Main Concourse</td>
</tr>
<tr>
<td></td>
<td>10:00 a.m. - 10:15 a.m.</td>
<td>Expo Opening Ceremony &amp; Ribbon Cutting</td>
<td>Convention Center</td>
<td>South Hall A &amp; B</td>
<td>Upper Concourse</td>
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<tr>
<td></td>
<td>10:15 a.m. - 5:00 p.m.</td>
<td>International Rubber Expo</td>
<td>Convention Center</td>
<td>South Hall A &amp; B</td>
<td>Upper Concourse</td>
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<tr>
<td></td>
<td>1:00 p.m. - 5:15 p.m.</td>
<td>Technical Sessions - Sponsored by Lianda</td>
<td>Convention Center</td>
<td>M107, M108, M111 &amp; M112</td>
<td>Main Concourse</td>
</tr>
<tr>
<td></td>
<td>1:00 p.m. - 2:00 p.m.</td>
<td>Service Awards Committee Meeting</td>
<td>Convention Center</td>
<td>M113</td>
<td>Main Concourse</td>
</tr>
<tr>
<td></td>
<td>1:00 p.m. - 3:00 p.m.</td>
<td>Exhibits &amp; Meeting Sites Committee Meeting</td>
<td>Convention Center</td>
<td>M101 &amp; M102</td>
<td>Main Concourse</td>
</tr>
<tr>
<td></td>
<td>1:00 p.m. - 3:00 p.m.</td>
<td>Southern Rubber Group Meeting</td>
<td>Convention Center</td>
<td>M114</td>
<td>Main Concourse</td>
</tr>
<tr>
<td></td>
<td>1:00 p.m. - 5:00 p.m.</td>
<td><strong>Course:</strong> Silicone Rubber Chemistry and Technology</td>
<td>Convention Center</td>
<td>M109 &amp; M110</td>
<td>Main Concourse</td>
</tr>
<tr>
<td></td>
<td>2:00 p.m. - 3:00 p.m.</td>
<td>Student Affairs Committee Meeting</td>
<td>Convention Center</td>
<td>M113</td>
<td>Main Concourse</td>
</tr>
<tr>
<td></td>
<td>3:00 p.m. - 4:00 p.m.</td>
<td>Marketing Committee Meeting</td>
<td>Convention Center</td>
<td>M114</td>
<td>Main Concourse</td>
</tr>
<tr>
<td></td>
<td>3:00 p.m. - 5:00 p.m.</td>
<td>Strategic Partnership Committee Meeting</td>
<td>Convention Center</td>
<td>M113</td>
<td>Main Concourse</td>
</tr>
<tr>
<td></td>
<td>5:00 p.m. - 7:00 p.m.</td>
<td>Welcome Reception - Open To All Attendees</td>
<td>Convention Center</td>
<td>Ballroom C</td>
<td>Main Concourse</td>
</tr>
</tbody>
</table>

| **Wednesday** | 6:45 a.m. | Check-in | 5K Walk/Run - Presented by: H.M. Royal, Inc. | Marriott Louisville Downtown | Lobby | Level 1 |
| 10.10.2018    | 7:00 a.m. | Check-in | Registration                                    | Convention Center       | South Hall A | Upper Concourse |
|               | 8:00 a.m. | - 9:30 a.m. | Advisory Committee on Testing Procedures Meeting | Convention Center | M113 | Main Concourse |
|               | 8:00 a.m. | - 12:00 p.m. | **Course:** Compound Mixing and Consistency | Convention Center | M109 & M110 | Main Concourse |
|               | 8:00 a.m. | - 3:30 p.m. | 15th Annual Student Colloquium - Presentations | Convention Center | M107 | Main Concourse |
|               | 8:00 a.m. | - 5:00 p.m. | 15th Annual Student Colloquium - Posters        | Convention Center | Technical Meeting Area | Main Concourse |
|               | 8:00 a.m. | - 5:15 p.m. | Technical Sessions - Sponsored by Lianda        | Convention Center | M107, M108, M111 & M112 | Main Concourse |
|               | 8:30 a.m. | - 4:00 p.m. | **Course:** Internal Mixers and Mixing Parameters | Convention Center | M105 & M106 | Main Concourse |
|               | 10:00 a.m. | - 11:00 a.m. | Finance & Budget Committee Meeting*             | Convention Center | M114 | Main Concourse |
|               | 10:00 a.m. | - 5:00 p.m. | International Rubber Expo                      | Convention Center | South Hall A & B | Upper Concourse |
|               | 11:30 a.m. | - 1:00 p.m. | 25-Year Club Luncheon                           | Convention Center | M103 | Main Concourse |
|               | 1:00 p.m. | - 3:00 p.m. | Bourbon Trail Elastomer Group Meeting           | Convention Center | M101 & M102 | Main Concourse |
|               | 1:00 p.m. | - 5:00 p.m. | **Course:** Establishing a Rubber Molding Process | Convention Center | M109 & M110 | Main Concourse |
|               | 3:00 p.m. | - 4:30 p.m. | Area Directors Caucus*                          | Convention Center       | M101 & M102 | Main Concourse |
| **Thursday**  | 7:00 a.m. | - 2:00 p.m. | Registration                                   | Convention Center | South Hall A | Upper Concourse |
| 10.11.2018    | 8:00 a.m. | - 12:00 p.m. | **Course:** Silicone Basics                     | Convention Center | M105 & 106 | Main Concourse |
|               | 8:00 a.m. | - 3:30 p.m. | Technical Sessions - Sponsored by Lianda        | Convention Center | M107, M108, M111 & M112 | Main Concourse |
|               | 9:00 a.m. | - 10:30 a.m. | Executive Committee Meeting                     | Convention Center | M101 & M102 | Main Concourse |
|               | 10:00 a.m. | - 2:00 p.m. | Career Fair                                     | Convention Center | Ballroom A | Main Concourse |
|               | 10:00 a.m. | - 2:00 p.m. | International Rubber Expo                      | Convention Center | South Hall A & B | Upper Concourse |
|               | 1:00 p.m. | - 2:00 p.m. | **Business & Awards Meeting**                   | Convention Center | Expo Theater | Upper Concourse |
### Expo Theater Schedule

The Expo Theater is located in the Rubber Division, ACS Booth #273.

These presentations provide an opportunity to learn about what some of the best companies in our industry have to offer and how they can be of value to you.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday</td>
<td>10.9.2018</td>
<td>TA Instruments Presentation</td>
<td><strong>Analytical Tools for Curing Process Optimization</strong>&lt;br&gt;Accurate prediction of curing processes within complex geometries demands understanding of reaction kinetics and heat transfer, both of which vary significantly with compound formulation. TA Instruments offers complementary solutions for the measurement of cure curves and thermal conductivity, and software modeling capabilities. Come see how the combination of these powerful tools can be used to predict and optimize curing processes to obtain desired material performance while saving time and money through process efficiency.</td>
</tr>
<tr>
<td></td>
<td>11:30 a.m. – 12:00 p.m.</td>
<td>Lord Corporation Presentation</td>
<td><strong>Hybrid Adhesive Systems: Performance Characteristics for Rubber-to-Substrate Bonding</strong>&lt;br&gt;Development of novel materials and formulation of effective compositions enables aqueous-based adhesives to meet or exceed performance standards set by solvent-based systems. Combining aqueous primer and solvent adhesive or solvent primer and aqueous adhesives, also known as hybrid adhesive systems, has shown commercial success by combining the performance and application benefits of aqueous and solvent systems while allowing manufacturers to gradually transition from solvent to aqueous systems. Combining Chemlok® 8009B aqueous primer with Chemlok® 6411 solvent adhesive provided outstanding performance and met VOC limitations. This presentation focuses on the performance of hybrid adhesive systems in comparison to corresponding solvent- and aqueous-adhesive systems.</td>
</tr>
<tr>
<td></td>
<td>2:30 p.m. – 3:00 p.m.</td>
<td>Preferred Compounding Presentation</td>
<td><strong>Preferred Compounding Overview</strong>&lt;br&gt;If you need technical horsepower, experienced manufacturing, extensive capabilities, and expertise in the gamut of rubber polymers, Preferred Compounding is your solution. As the 2nd largest custom mixer in North America, Preferred Compounding brings customers the size to meet demand and solve problems, but the small company feel to ensure intimacy, communication, and execution. Call Preferred Compounding and start feeling like a customer again.</td>
</tr>
<tr>
<td>Wednesday</td>
<td>10.10.2018</td>
<td>Exhibitor Meeting</td>
<td><strong>AirBoss Rubber Solutions Presentation</strong>&lt;br&gt;<strong>AirBoss Rubber Solutions for Next Generation Products</strong>&lt;br&gt;Rubber is the solution to thousands of industrial challenges. AirBoss is an industry leader in many areas but also provides solutions to next-generation products in automotive, heavy industry, construction and infrastructure, oil and gas and defense applications. Join AirBoss as they present who they are and some of their compound solutions in demanding service, as well as next-generation products and some of their green initiatives that are leading the way.</td>
</tr>
<tr>
<td></td>
<td>9:00 a.m.</td>
<td>HEXPOL Compounding Presentation</td>
<td><strong>Solutions Using Organic and Silicone Rubber for Demanding Applications</strong>&lt;br&gt;HEXPOL Compounding will use its industry knowledge and technical expertise to demonstrate how to match the properties of Organic and Silicone Rubber to the right application. Customer collaboration and mixing innovation is imperative to produce the correct elastomer for the end use. This presentation will focus on characterizing the physical attributes of elastomer compounds to provide important information in order calculate correct materials for final products.</td>
</tr>
<tr>
<td></td>
<td>11:30 a.m. – 12:00 p.m.</td>
<td>Lianda Presentation</td>
<td><strong>Composite Zinc Oxide – Higher Activity &amp; Lower Cost</strong>&lt;br&gt;Composite Zinc Oxide is produced with a Calcium Carbonate core and an Active Zinc Oxide shell in a wet process. Compared with traditional French process Zinc Oxide, Composite Zinc Oxide is equally or more effective in activating the sulfur cure system. In the meantime, it provides significant advantages due to lower cost per pound and lower specific gravity, both contributing to final compound cost. Studies carried out in Lianda Corporation’s lab using Composite Zinc Oxide in EPDM and Polychloroprene compounds produce convincing data. Join Lianda for this presentation to find out more about the benefits of Composite Zinc Oxide.</td>
</tr>
<tr>
<td></td>
<td>1:00 p.m. – 1:30 p.m.</td>
<td></td>
<td><strong>Business &amp; Awards Meeting</strong>&lt;br&gt;Join us at the semi-annual Business &amp; Awards Meeting of Rubber Division, ACS. It includes general business of the Division, plus the announcement of winners for Student Colloquium, Service Awards and more.</td>
</tr>
</tbody>
</table>
Thank you to our valued Platinum, Gold, Silver & Bachelors sponsors and our exclusive IEC sponsors!

Stop by their booths to learn more about these great companies.
Special Events

KEYNOTE ADDRESS
Tuesday, October 9
9:00 a.m. – 10:00 a.m.
Ballroom A & B, Main Concourse

Florian Schattenmann - Vice President, Performance Materials & Coatings R&D at The Dow Chemical Company

Keynote Address Topic: Using Fundamental Polymer Science to Accelerate Elastomer Innovations

First-timers Program
First time attending the International Elastomer Conference? We want to help you make the most of your time here.

Meet-ups:
- **Tuesday, October 9; 10:15 a.m.**
  Expo Theater, Rubber Division, ACS booth #273
- **Tuesday, October 9; 12:45 a.m.**
  Technical Meeting Coffee Station, Main Concourse
- **Tuesday, October 9; 5:00 p.m.**
  Registration Area, Upper Concourse
- **Thursday, October 11; 1:00 p.m.**
  Business & Awards Meeting – Expo Theater, Rubber Division, ACS booth #273

Expo Opening Ceremony & Ribbon Cutting
Tuesday, October 9; 10:00 a.m. – 10:15 a.m.
South Hall A & B, Upper Concourse
Attend the official opening ceremony ribbon cutting for the expo. We look forward to welcoming you and having you help us kick off our expo!

Welcome Reception
Tuesday, October 9; 5:00 p.m. – 7:00 p.m.
Ballroom C, Main Concourse
This event is open to all registered attendees and there is no cost to attend. The reception features hors d’oeuvres and beverages. Get to know other attendees and exhibitors in a social, relaxed setting.

Expo Theater Presentations
Tuesday, October 9 & Wednesday, October 10
Expo Theater, Rubber Division, ACS Booth #273
Learn about what some of the best companies in our industry have to offer as they share their knowledge with you. These half-hour presentations take place in the Expo Theater during expo hours. There is no additional cost to attend these presentations.

5K Walk/Run – Presented by H.M. Royal, Inc.
Wednesday, October 10; 6:45 a.m. Check-in
Meet in Marriott Louisville Downtown Lobby
Runners, walkers and guests are invited to participate. Registration is requested for planning purposes, however, there is no cost to participate.

15th Annual Student Colloquium
Wednesday, October 10
Presentations: M107, Main Concourse – 8:00 a.m. – 3:30 p.m.
Posters: Technical Meeting Area – 8:00 a.m. – 5:00 p.m.
The Student Colloquium includes oral and poster presentations by students. All student participants are eligible to compete for four awards. Conference attendees are encouraged to sit in on these presentations and stop by to view the posters. The Student Colloquium is open to all conference attendees and exhibitors at no additional cost.

25-Year Club Luncheon
Wednesday, October 10; 11:30 a.m. – 1:00 p.m.
M103, Main Concourse
Celebrate individuals who have been active in the rubber industry for 25 or more consecutive years. All are invited to attend. Cost is $60 per person. Reservations are required.

Career Fair
Thursday, October 11; 10:00 a.m. – 2:00 p.m.
Ballroom A, Main Concourse
Looking for a new opportunity in our great industry? Meet with representatives from several respected companies about career and professional opportunities. There is no cost to attend and everyone is welcome.

Business & Awards Meeting
Thursday, October 11; 1:00 p.m. – 2:00 p.m.
Expo Theater, Rubber Division, ACS Booth #273
Join us at the semi-annual Business & Awards Meeting of Rubber Division, ACS. It includes general business of the Division, plus the announcement of the winners for the Student Colloquium, Service Awards and more.
3M Advanced Materials .......................... 316
6744 53rd St. N.
Oakdale, MN 55128
3M.com/advancedmaterials
jwcaskey@mmm.com
Built to Endure. 3M™ Dyneon™ Fluoropolymers are developed to withstand the most challenging conditions—from extreme temperatures to harsh chemical environments—enhancing production efficiency, performance and reliability. Together, we can identify and develop solutions to meet your most demanding applications.

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Minerva, OH 44657
(330) 894-2818
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sales@polyblast.com
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ACE Products & Consulting LLC ............... 340
6800 North Chestnut St.
Ravenna, OH 44266
aceprodc.com
eric.k@aceprodc.com
ACE Products & Consulting is an ISO /IEC 17025: 2017 accredited independent laboratory providing testing services, expert technical consulting and product development resources. Our services specialize in rubber, silicone, plastics and asphalt markets. Equipped with experienced backgrounds, a world class laboratory and strategic material sources we are changing the industry. We provide innovative solutions with world class service.

AirBoss Rubber Solutions ....................... 215
101 Glasgow St.
Kitchener, ON N2G 4X8
(519) 576-5565
airbossam.com
ggpazatos@airboss.ca
AirBoss Rubber Solutions is one of North America’s leading custom rubber mixers with the capacity to supply over 400 million pounds annually. The largest facility located in Kitchener, Ontario is supplemented by a state of the art mixing facility in Scotland Neck, NC and a facility in Acton Vale, Quebec. With on-site testing labs, inclusive of AZLA accredited lab, with a staff of chemists. AirBoss Rubber Solutions manufactures custom rubber compounds, calendar goods and extruded products. AirBoss Rubber Solutions is a smart choice for manufacturers of rubber products. Visit www.airbossamerica.com to learn what AirBoss can do for you.

Akrochem Corporation ........................... 213
3770 Embassy Parkway
Akron, OH 44333
(330) 535-2100
akrochem.com
gregoryblackmon@akrochem.com
For more than 85 years, Akrochem has strived to provide only the very best in chemicals and compounding materials to the rubber and plastics industries from polymers, chemicals, pigment and additive dispersions to simple fillers. Akrochem has the right rubber compounding ingredients because we have the broadest line of materials anywhere. Our experienced technical staff always goes above and beyond the call of duty to help you find the most intelligent solutions. To find the perfect chemistry in your application, look no further than Akrochem.

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(330) 794-6600
ardl.com
squad@ardl.com
ARDL, Inc. is an ISO 9001:2008 registered, AZLA accredited to ISO 17025 and FDA compliant international independent testing, development and problem solving laboratory serving all facets of the rubber, plastic and latex industries. ARDL has expertise in materials testing, evaluation and failure analysis and resources to be your single-source polymer laboratory.

ALL-TRA Rubber Processing .................... 537
154B Potomac Ave.
Tallmadge, OH 44278
alltrarubber.com
sglibraith@polymermachineryco.com
Over the last few decades, All-Tra has been serving the rubber processing needs of many companies in the Midwest and Southeast. Our primary focus is in the production of rubber preforms for the compression molding industry. All-Tra is able to provide consistent quality, performance, and economy to your rubber processing needs. All-Tra rubber also offers molding work. Please stop by our booth for more information!

Alpha Technologies .............................. 312
6279 Hudson Crossing Parkway #200
Hudson, OH 44236
(330) 848-7203
AlphaTechnologies.com
melissa.kollar@alpha-technologies.com
Alpha Technologies is the world leader in the design, manufacture, service and support of precision rubber and elastomeric materials process analytics and metrology instruments, data acquisition, and analysis software systems since 1964. Headquartered in Akron, Ohio, Alpha Technologies, a Roper Technologies company (NYSE: ROP) is staffed with highly trained professionals around the world. Alpha Technologies works closely with our clients to improve and advance product development enabling performance, value, and safety to the end user.

Altmann Manufacturing Company .............. 145
1990 Ohio St.
Lisle, IL 60532
(630) 963-0031
altnanmfg.com
brian@altnanmfg.com
Altmann Mfg. is a machine builder that specializes in secondary equipment to finish rubber products. Machinery includes trimming dies, slitting, presses, multi-function rotary systems, vision inspection, automation systems, drilling, buffing, spin trimming, and part checkers. Altmann has been building equipment for the rubber industry for 75 years.

Alttran ............................................... 539
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Hudson, OH 44236
alttran.com
mmcdonnell@alttran.com
ALTTRAN specializes in mixing clean and consistent color and black rubber compound, developing formulas, and providing lab testing for many companies throughout the rubber industry. Our technical team has the knowledge to help improve product quality, performance, reduce scrap rates, and lower cost while maintaining physical properties. For more information, contact Mike McDonnell in sales, or visit our website to see full capabilities. We look forward to providing solutions to better your business!

American Kuhne ................................. 431
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(444) 386-6830
americankuhne.com
ghaines@grahamengineering.com
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Americas International, Inc. ................... 224
3517 Embassy Parkway
Akron, OH 44333
(800) 503-3055
americasinternational.com
beverly@americasinternational.com
Americas International is a leading North American distributor of polymers and rubber additives, representing some of the world’s leading chemical and polymer manufacturers. Founded in 1997, A.I. has grown from its birthplace and headquarters in Akron, Ohio, to include national sales coverage along with a network of warehouse operations that ensure on-time deliveries of the right product to the right place. By combining technical and product expertise, dedicated customer service staff, and comprehensive logistical support, we are able to provide positive long-term solutions for our customers.

Arkema Inc. ........................................... 514
900 First Ave.
King of Prussia, PA 19406
(844)-LUPEROX
arkema-americas.com
michael.sauerwald@arkema.com
Arkema Lupercox® and Vul-Cup® organic peroxides are available worldwide for crosslinking of rubber and elastomers! Recent developments include the novel Luperox® AIR® organic peroxide system for efficient, tack-free crosslinking in the presence of oxygen and separation by a Scorch Protection products to help improve throughput and reduce loss in high-temperature molding. Present at the 2018 International Elastomer Conference will be Arkema’s Senior Account Manager Marty Gregor, celebrating his 50th year working in the North American market and Leonard Palys - Arkema’s Principal Scientist for Crosslinking Applications. Please join us to learn more about exciting new products from Arkema during the show!
Visit us at IEC booth #215

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RUBBER REIMAGINED

We reimagine rubber’s possibilities every day. For longer-lasting belts and treads. Tighter seals and stronger hoses. Better-performing infrastructure components and tougher oil field equipment. Every compound is custom-formulated, A2LA-tested onsite, and expedited from start to delivery as if your business is our top priority. Which it is.

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111 RIDC Park West Drive
Pittsburgh, PA 15275
arlanxexo.com
leanne.traveline@lanxess.com
ARLANXEO is a world-leading synthetic rubber company with sales of around EUR 2.8 billion in 2015, about 3,800 employees and a presence at 20 production sites in nine countries. The company's core business is the development, manufacturing and marketing of synthetic high-performance rubber. ARLANXEO was established in April 2016 as a joint venture of LANXESS and Saudi Aramco. The two partners each hold a 50-percent interest in the joint venture. The business operations of ARLANXEO are assigned to the high performance elastomers and tire & specialty rubbers business units.

ARP Materials, Inc. ........................................ 429
200 Creekside Drive
Buffalo, NY 14228
(888) 611-0220
altrubber.com
nfasolino@arpmaterials.com
At ARP Materials our superior customer service, sales ingenuity and responsiveness have proven to be lasting competitive advantages. Our goal is to build this foundation by staying close to our customers and responding to their changing needs. We are an ISO 9001 certified distribution company and our product lines are recognized by our customers to be of the finest quality. In utilizing a global strategy that combines vertical integration, lower costs, and high quality raw materials we’re confident you cannot find a better supplier for your raw material needs.

ASCO Carbon Dioxide, Inc. .......................... 533
5409 Highway Ave.
Jacksonville, Fl 32254
(904) 278-6503
ascco2.com
jason.beasley@ascco2.com
ASCO Carbon Dioxide Ltd. is a provider of complete CO2 and dry ice solutions. The product range includes dry ice blasting units, dry ice production machines, dry ice storage containers, CO2 production, recovery plants, various CO2 and dry ice accessories, as well as ongoing special projects. With this all-embracing approach ASCO has been a leading provider in the field of dry ice blasting technology for decades. ASCO offers not only powerful dry ice blasting machines, but complete individual solutions, including comprehensive advice, e.g. optimal integration into the production process, dry ice logistics, including in-house dry ice production and noise control.

Association for Rubber Products Manufacturers (ARPM) ........................................ 141
7321 Shadeland Station Way #285
Indianapolis, IN 46256
arpminc.com
bjerffries@arpminc.org
The ARPM has been the association of choice for rubber manufacturers since 2010. ARPM provides its 90+ members with access to international standards, resources and networking events throughout the year. Services include best practices and industry studies, company savings programs and more.

Barwell Global USA ..................................... 235
2868 Westway Drive
Brunswick, OH 44212
(330) 225-9557
barwellusa.com
tammy@barwellusa.com
Barwell is a leader in the manufacturer, design and supply of high-quality processing machinery for the rubber industry. The product range includes ram preformers and extruders for blank production, continuous gear pump preformers, compression presses, rubber deflashing machines, cooling conveyors, and industrial drying ovens. Our equipment is designed to improve production efficiency and accuracy, reduce material wastage and provide safe, user-friendly operation and maintenance. Barwell also offers machine sales, genuine spares and service care throughout the USA.

Burlan Manufacturing ................................ 244
2740 W Franklin Blvd.
Gaston, NC  28214
(704) 874-0453
burlan.com
kwassil@burlan.com
Burlan Manufacturing is a North Carolina based manufacturer of engineered industrial textiles. We are the leading U.S. manufacturer and global supplier of cut tape and reinforcing knit fabrics used extensively in industrial/hydraulic hose, valves, gaskets, rubber coated rolls, belts, pulleys, packers, calendering and textile processors.

Cabot Corporation ........................................ 130
1702 Brier Park Cres. NW
Medicine Hat, AB  T1C 1N9
(403) 527-1121
cabotcorp.com
brian.thomson@cabotcorp.com
Cabot Corporation (NYSE: CBT) is a global specialty chemicals and performance materials company, headquartered in Boston, Massachusetts. The company is a leading provider of rubber and specialty carbon blacks, activated carbon, inkjet colorants, cesium formate drilling fluids, fumed silica and aerogel. For more information on Cabot, please visit the company’s website.

Carrier Vibrating Equipment ....................... 564
3400 Fern Valley Rd.
Louisville, KY 40213
(502) 969-3171
carriervibrating.com
mentwistle@carriervibrating.com
Carrier Vibrating Equipment is internationally known for its pioneering work in the field of vibratory processing technology. For almost 70 years Carrier has been developing and engineering custom-designed processing equipment for the rubber industry. Vibrating Fluid Bed Dryers and Coolers · Vibrating Feeders · Vibrating Conveyors · Vibrating Screeners · Static Fluid Beds · Media Slurry Dryers · Flash Dryers.

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(905) 823-3200
blackfordcics.com
hkmckray@blackfordcics.com
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Bolder Industries ............................................ 180
3510 16th St. Suite 204
Boulder, CO 80304
(720) 910-1800
bolderindustries.com
darren.slattery@bolderindustries.com
Bolder Industries solves challenging environmental issues for the industrial waste industry by developing sustainable products and services through technology. Our charter product, Bolder Black™, is a sustainable alternative to traditional carbon black produced using waste tires that would otherwise be placed in landfills or incinerated. Bolder Black has reinforcing properties similar to N550 and N660, demonstrates excellent elongation, tear resistance, and tensile strength. We have real-world applications of our material in products today. We create Bolder Black in a net energy positive facility that emits 90% less CO2e and uses 90% less H20 than traditional methods.

Burgess Pigment Company ............................ 216
525 Beck Blvd.
Sandersonville, GA 30152
burgesspigment.com
tom.adrian@burgesspigment.com
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Gaston, NC  28214
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burlan.com
kwassil@burlan.com
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<th>Contact Person</th>
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<tbody>
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<td>Cold Jet</td>
<td>(513) 831-3211</td>
<td>2195 Arbor Tech Drive</td>
<td><a href="mailto:scheidstedt@coldjet.com">scheidstedt@coldjet.com</a></td>
</tr>
<tr>
<td>Dow Chemical</td>
<td>(989) 636-1000</td>
<td>2211 H.H. Dow Way</td>
<td><a href="mailto:dowcig@dow.com">dowcig@dow.com</a></td>
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<td>Denka Performance Elastomer LLC</td>
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<td>2195 Arbor Tech Drive</td>
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<td>Chem-Trend L.P.</td>
<td>(440) 773-2741</td>
<td>Middlefield, OH 44062</td>
<td><a href="mailto:nasaales@chemtrend.com">nasaales@chemtrend.com</a></td>
</tr>
<tr>
<td>Chemours</td>
<td>(513) 831-3211</td>
<td>560 Highway 44</td>
<td><a href="mailto:exp@chemours.com">exp@chemours.com</a></td>
</tr>
<tr>
<td>Chem Rep, Inc.</td>
<td></td>
<td>2357 Hassell Rd., Ste. 216</td>
<td><a href="mailto:tim@chemrep.com">tim@chemrep.com</a></td>
</tr>
<tr>
<td>China United Rubber Corporation</td>
<td></td>
<td>2211 H.H. Dow Way</td>
<td><a href="mailto:zhao@chemtrend.com">zhao@chemtrend.com</a></td>
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<tr>
<td>Davis-Standard LLC</td>
<td></td>
<td>1 Extrusion Drive</td>
<td><a href="mailto:jwuk@davis-standard.com">jwuk@davis-standard.com</a></td>
</tr>
<tr>
<td>Dekalb Metal Finishing</td>
<td></td>
<td>620 West 15th St.</td>
<td><a href="mailto:dnmors@dekalbmetal.com">dnmors@dekalbmetal.com</a></td>
</tr>
<tr>
<td>Denka Performance Elastomer</td>
<td></td>
<td>552 560 Highway 44</td>
<td><a href="mailto:gaito-kiyofuji@denka-pe.com">gaito-kiyofuji@denka-pe.com</a></td>
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Exhibitor List

DuPont
974 Centre Road, Chestnut Run Plaza
Wilmington, DE 19805
(302) 774-1000
plastics.dupont.com
eric-jiexin.wang@dupont.com
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chemical markets with revenues estimated at up to
more than 700 million dollars and a production of
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dynasolgroup.com
ana.medellin@dynasol.com
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to advantages in the production of tire and MRP
compounds. TAC and TACTROS coagents, used in
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thermoplastics, increase crosslinking density, lower
compression set and improve aging properties. Su-
perabsorbent polymers (SAP) used for hydrophilic
swelling and expanding of rubber compounds.

INTERNATIONAL ELASTOMER CONFERENCE
Excalibur Minerals LLC ................................. 214
21920 Merchants Way
Katy, TX 77449
(281) 716-9065
mbrooks@excalibar.com
Excalibur Minerals LLC is a quality processor and supplier of barium sulfate/barytes and calcium carbonate. Our services include sourcing, processing, packaging and distributing high quality minerals used as fillers/extenders in the rubber industry.

ExxonMobil Chemical ................................... 173
22777 Springwoods Village Parkway
Spring, TX 77389
exxonmobilchemical.com
w.bing.kao@exxonmobil.com
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Cuyahoga Falls, OH 44221
(330) 928-2332
shall@facts-inc.com
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1374 Markle St.
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(330) 773-6654
kkleve@finitefiber.com
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Akron, OH 44319-000
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firestonepolymers.com
mgallagher@firestonepolymers.com
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Elk Grove Village, IL 60007
(847) 299-8400
fisa.com
f.leon@fisa.com
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FTDM LLC ......................................................... 152
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Eastlake, OH 44095
ftdm-llc.com
adriano@ftdm-llc.com
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Repeatability
Glassven Yangzhong Silicas and Chemicals J.V. Ltd. ............................................................. 268
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Yangzhong City, Jiangsu Province, 212216, China
865-118-8525-968
glassvenchina.com
maryori.barragan@glassven.com
Glassven Yangzhong Silicas and Chemicals J.V. Ltd. as a manufacturer has been working through the years to develop advanced technologies and to offer high performance silicas for the rubber and tire industries. Rubbersil products range are white reinforcing fillers that provide excellent performance and processing properties to mechanical and technical rubber goods.

Goodpack USA ................................................ 134
118 Vintage Park Blvd, Unit W
Houston, TX 77070
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R.D. ABBOTT is a full-service supplier that’s been serving the rubber industry since 1948. They are staffed with rubber industry veterans, equipped with comprehensive testing laboratories, and stocked with leading elastomeric products in warehouse locations throughout North America. Featured lab services include in-house design and development capabilities (under ISO 9001:2008) with a technical team that specializes in formulation development and optimization, material testing, process engineering assistance, and product characterization. Their product line encompasses a best-in-class of elastomeric polymers, rubber chemicals, fillers, bonding agents, and testing equipment—all from respected manufacturers with trusted name brands.

R.E. Carroll Inc............................................. 139
1570 N Olden Ave.
Ewing, NJ 08638
(800) 257-9365
recarroll.com
davide@recarroll.com
R.E. Carroll Inc. is a 93 year old distributor of petroleum products and specialty chemicals to elastomer industry. Our product line includes aromatic, naphthenic, and paraffin process oils and waxes as well as polymers, curatives, additives, fillers and pigments. We serve our customers from our 5 strategically located warehouses in GA, NJ, OH, and TX. We provide our raw materials in package sizes ranging from bags to super sacks and pails to liquid bulk. Come see us for all your elastomer compounding raw material needs!

Regloplas Corporation.................................... 566
1088 Miners Rd
St. Joseph, MI 49085
(269) 428-1100
regloplasusa.com
hvagemert@regloplasusa.com
Regloplas designs and manufactures temperature control units for the rubber and tire industry. With water units up to 446 F and oil units up to 662 F we have a TCU for almost every application. We offer standard and custom units that are designed specifically for your needs. A wide range of accessories are available to ensure a quick, easy and affordable installation. Our technical, sales and service center is located in St. Joseph, MI with our satellite office located in Charlotte, NC.

REP Corporation.......................................... 368
8N470 Tameling Ct.
Bartlett, IL 60103
(630) 697-7210
repinjection.com
dwilliams@repcorp.com
Where Rep Corporation remains your rubber molding partner! Experienced, advanced manufacturer of rubber molding machines, REP provides high efficiency solutions for the rubber industry. From injection molding to compression molding, 510 Extended High-tech applications to rugged G10 Core- we can truly be all things to all people. To those seeking lower capital equipment with European design need look no further than our RT9 Injection presses. REP Corporation’s 35-year presence with offices in Bartlett, Illinois and our new facility under construction in Kodak, Tennessee offer quick dispatch of replacement parts, service response and onsite support to our valued client base.

Royal Elastomers........................................ 172
4401 Page Ave.
Michigan Center, MI 49254
(517) 764-0334
royaladhesives.com
thomas.farrel@rascp.com
Royal Elastomers produces specialty rubber intermediates for adhesives, sealants, coatings and rubber components. This family of liquid and cross-linked intermediates provides robustness to rubber products, enhancing the processing for the final manufacturer. Royal Elastomers manufacturing is in Michigan, serving customers worldwide. Our product line consists of three families: ISOLENE - liquid synthetic rubber, an extender for S-I-S copolymers; KALENE - liquid butyl rubber, a high-performance base additive for moisture resistant coatings, construction sealants and PSA’s; KALAR - partially cross-linked butyl rubber, pellet form, a foundry polymer for single component sealants, caulks, tapes and acoustical.

RSS ............................................................. 257
PO Box 189
Germantown, OH 45327
rsshrmanote.com
kthomas@dupps.com
RSS manufactures, Harmonite® powders for use in a wide variety of rubber compounding applications. Harmonite has a plasticizing effect and has been shown to reduce mix times and power consumption, as well as improving rubber to metal adhesion, abrasion resistance and other key performance characteristics.

RT Instruments, Inc..................................... 140
1240 Churchill Downs Ave.
Woodland, CA 95776
rтинstruments.com
ashly.rivas@rtinstruments.com
RT Instruments, Inc. offers a wide variety of instrument solutions for the rubber industry. RTI is proud to offer Elastocon’s stress relaxation testers, low temperature testers, aging testers, shear adhesion failure testers, hot set testers for cable testing, and electrical testers. RTI offers a vast array of instrument solutions to consumers. From new to refurbished to gently used, RTI has the laboratory equipment to fit most budgets. Skilled technicians also provide repair and preventative maintenance services to keep customer’s labs running smoothly.

Rubber & Plastics News ................................ 518
1725 Merriman Rd., Suite 300
Akron, OH 44313
(330) 836-9180
rubbernews.com
sarnold@crainc.com
Founded in 1971, Rubber & Plastics News is a tabloid newspaper reaching 12,000 rubber product manufacturers and others allied to the rubber industry. It provides news, features, commentary, technical and marketing information in print, and daily on its website.

Rubber Consultants...................................... 555
TARRC (MRB UK)
Buckendenbury, Hertford, UK SG13 8NL
(01922) 554857
rubberconsultants.com
dcawthra@tarrc.co.uk
Rubber Consultants is the independent consultancy unit of one of the world’s leading polymer and elastomer R&D laboratories, the Tun Abdul Razak Research Centre in the UK. We have been assisting companies since 1984 to improve their businesses by offering world-class elastomer testing and R&D services.

Rubber Division, ACS................................. 273
306 N. Cleveland Massillon Rd.
Akron, OH 44333
(330) 595-5538
rubber.org
bethb@rubber.org
The Rubber Division of the American Chemical Society is an international association of chemists, engineers, technicians, scientists, plant managers, sales and marketing professionals and others in the rubber, polymer or related fields within industry, academia and government. We enhance science, technology and business across the evolving elastomeric community through working to expand the elastomeric profession and individual development through educational, technical and interactive activities.
Rubber World is proud that it publishes each year, more technical editorial content than any other industry publication, and year in and year out is read by more technical buying influences than our closest competitor. The strength and longevity of this internationally circulated publication has been its unwavering editorial philosophy that “products are sold on the technical level.”

Sanyu USA, Inc .................................................................................................. 228
1720 Indianwood Circle, Suite A
Maumee, OH 43537
(419) 897-9595
sanyu-sti.com
mark.beaver@sanyusa.com

Scrap Tire News ................................................................. 242
PO Box 4430
Leesburg, VA 20177
(571) 258-0500
scraptirenews.com
mike@scraptirenews.com
Publications: Scrap Tire News; The Scrap Tire & Rubber Users Directory

Seika Machinery ................................................................. 178
1580 Boggs Rd., Suite 900
Duluth, GA 30096
770-446-3116
seikausa.com
jeremy@seikausa.com
Seika Machinery, Inc supplies a line of advanced testing equipment manufactured by Ueshima Seisakusho Co., Ltd., a Japanese specialist in the tire and plastics industry. Products include testers for blow point analysis, fatigue, strain, abrasion, wear, friction and much more.

Shandong Chambroad Jointo New Material Co., Ltd. .................................. 166
Boxing Economic Development Zone, Binzhou City 256599 China
+86 543-2512848
jbshihsu.com
justingao@jingbo.net
Shandong Chambroad Jointo New Material Co., Ltd is wholly owned subsidiary of Shandong Chambroad Petrochemicals Co., Ltd, which was found in 1988. The company can provide IIR, BIIR and TBIR Chambroad rubber is one of the leaders in (Bromo)butyl rubber market in China, which devotes itself to developing, manufacturing and selling various high grade high performance special synthetic rubber.

Shandong Nicest Carbon Black Co., Ltd ..................................................... 239
No.68 Yongshen Road, Dongying, Shandong, 257000 China
86-546-7732069
nicestcarbonblack.com
kathydong@nicestcb.com
Nicest carbon black, a leading carbon black manufacturer in China, dedicated in producing high quality carbon black and providing solutions for customers.

Shandong Yanggu Huatai Chemical Co., Ltd ........................................... 132
No.217 Qinghexi Road, Yanggu County 252300 China
0635-5106619
yghuatai.com
ck@yghuatai.com
The company’s products cover 6 major series of products: 1. standard rubber chemicals PVI accelerator TBBS, TS, CBS, CBBS, TBBT, TBTD, ZBE CK300, HT1 and HT9188 18710, DTD; 2. pre dispersed rubber chemicals; 3. insoluble sulfur: HD OT20; 4. processing aids; 5. rubber protective wax; 6 Homogenizer H4OMSF

Shanghai Amino-Chem Co., Ltd ................................................................. 254
01-04/31F King Tower, No. 28 Xinjinqiao Road
Shanghai 201206 China
00862150309558
amino-chem.com
eric@amino-chem.cn
Amino-Chem is the world’s largest manufacturer of Resorcinol, Meta Phenylene diamine and Para Phenylene diamine used for rubber and tyre industries. Amino-Chem continuously focuses on R&D and sustainable development to expand its product portfolio and to stay competitive in the value chain. We has become the suppliers and strategic partners of many well-known multinational companies, through our globalized mindset and good reputation.
The mechanical effect of Spherix Mineral Products that reduce processing time and product cost of matrices 100% post-industrial recycled mineral products designed to provide greater efficiency and flexibility for specific rubber and plastic applications. The company's extensive range of products, i.e. dispersants, homogenizers, lubricants, tackifiers, the incorporation of Spherix additives can significantly improve processing in all stages of rubber production.

Stair Chemical And Technology Co., Ltd. 256
Nanhuan Road, Gaokuan, Shandong
Heze 274400 China
stairchem.com
fsz@stairchem.com
Stair Chemical & Technology Co. Ltd Shandong is a high-tech enterprise which combines the strengths of research, production and sales as a whole. We are mainly produce rubber antioxidant, rubber accelerator, rubber processing additives, which has taken the leading position in the rubber industry. We have passed ISO series certificates, TS16949 quality certificate and cooperating with the major tire manufacturers all over the world and provide the best service with the reliable product.

Stoner Molding Solutions 138
1070 Robert Fulton Hwy.
Quarryville, PA 17566
(800) 227-5538
stonemolding.com
creck@stonersolutions.com
Stoner manufactures solvent and water based molding solutions for the plastic, polyurethane, composites, rotational, rubber and investment casting industries. Stoner has a release for any molding process. Stoner is celebrating 75 years of business, a reflection of the company's humble beginnings and one man's passion for serving customers. If you can mold it, we can release it. Please visit our website or call to start the process of finding a value based solution for your specific molding needs.

Struktol Company of America, LLC 443
201 E. Steels Corners Rd., PO Box 1649
Stow, OH 44224-064
(330) 928-5188
struktol.com
knates@struktol.com
Struktol Company of America manufactures a complete line of additives that function individually or in combination in both natural and synthetic rubber. By providing a full range of material-enhancing products, i.e. dispersants, homogenizers, lubricants, peptizers, plasticizers, silane coupling agents and tackifiers, the incorporation of Struktol additives can significantly improve processing in all stages of rubber production.
TSE Industries ..................................................636  
TSE Industries is a manufacturer of rubber and polymer nanocomposites, substrates for flexible electronics, novel filaments for 3D printing, sensors, biosensors, metamaterials, and nanomedicine. Founded in 1962, TSE Industries is the world’s largest producer of milliMILLATHANE®. MilliMILLATHANE® compounds offer exceptional abrasion resistance, strength, oil resistance and ozone resistance.

Unimatec Chemicals America, Inc. ..........225  
3955 Orchard Hill Place, Suite 184  
Novi, MI 48375  
(248) 778-3301  
unimatec-chemicals.com  
d.bernardi@unimatec-chemicals.com  
UNIMATEC is a producer of specialty elastomers and chemicals. We’ve been manufacturing NOXITITE® ACM and FKM elastomers and CHEMINOX® additives for more than 30 years in Japan and at our Singapore site since 2008. Our Noxtite® FKMs include bisphenol/peroxide curable co and ter-polymers, LT FKM’s, TR -10 -30°C. NOXITITE® ACMs include standard and HF grades, with service from -40°C to 185°C, intermittent to 200°C. Our Cheminox® curatives for crosslinking of ACM and FKM rubber.

United Feed Screws ........................................550  
487 Wellington Ave.  
Akron, OH 44305  
(330) 798-5532  
unitedfeedscrews.com  
jfegerlin@unitedfeedscrews.com  
United Feed Screws has been providing quality polymer processing equipment new, used and rebuilding of existing equipment for the rubber and plastic industry since 1998. Engineering, field service and other services also provided. Quality products and prompt delivery. Rush, breakdown delivery and repairs also available. Stop by both booth 550 to see Paul Norton, Larry Pinkerton or Jeff Fegerlin.

United Soybean Board ..........542  
2715 Ashman St.  
Midland, MI 48640  
(982) 237-6392  
soynewuses.org  
rbenint@onmitchnet.com  
The United Soybean Board (USB) is a farmer-funded organization that supports research to develop industrial applications using chemical derivatives from soybeans and works to help commercialize the technology. Stop by at the USB Booth #542 to learn about: using modified soy oil as a process aid for rubber compounds; using soy oil-based polymers in rubber compounds; and polymerizing soy oil-based monomers to make thermoplastic elastomers. Today, manufacturers are turning to renewable resources for performance advantages, as well as to manage for price volatility and increasing regulations of petrochemicals. Soy offers a number of advantages as a viable feedstock.

University of Massachusetts Nanomanufacturing Center .......................................636  
1 University Ave.  
Lowell, MA 01854  
(978) 934-3188  
uml.edu/research/nano  
lois.Heath@uml.edu  
The Nanomanufacturing Center at UMass Lowell develops state-of-the-art nanomanufacturing processes for high-rate, high-volume production of nano-enabled polymer materials. Applications include rubber and polymer nanocomposites, substrates for flexible electronics, novel filaments for 3D printing, sensors, biosensors, metamaterials, and nanomedicine.
Valley Rubber Mixing ........................................ 212
115 West Bartges St.
Akron, OH 44311
(330) 434-4442
valleyrubber.com
dniss@valleyrubber.com
Custom mixing of color & black compounds. Custom calendering.

Vanderbilt Chemicals, LLC ............................... 245
30 Winifield St.
Norwalk, CT 06855
(203) 853-1400
vanderbiltchemicals.com
dcoreau@vanderbiltglobalservices.com
From its early beginnings in 1916, Vanderbilt Chemicals, LLC has grown to supply a wide range of products to many different industries, including rubber, plastics, petroleum, paint, CASE, pharmaceutical, agricultural, ceramic, personal care, and household products. In addition to offering a variety of products from key suppliers, LLC, produces a number of ultra accelerators and antioxidants out of its large chemical manufacturing facility in Murray, Kentucky.

Venango Machine Company, Inc. .................... 555
PO Box 239, 14118 Route 8-99
Wattsburg, PA 16442
(814) 450-3322
venongomachine.com
nvogel@venangomachine.com
Venango has specialized in manufacturing custom platens since 1954. We have become a global leader in leading edge platen technology that has set the stage for critical advancements in the rubber/composite industries. All platens are custom designed with specialty systems designed for high temperature and close temperature uniformity applications offering the customer a multi-terrain of solutions and solutions to existing concerns. Replacement platens are designed/manufactured for all your existing equipment regardless of the original press manufacturer. Refurbishing platens to "like new" condition is also available.

Versalis s.p.a ............................................. 559
Piazza Boldrini, 1
San Donato Milanese (MI) 20097 Italy
versalis.eni.com
lucia@triumphasia.com.cn
Versalis (Eni) is Italy’s largest chemical company and holds market stewardship in manufacturing intermediates, polyethylene, styrenics and elastomers. It is interfacing with markets through globally-oriented strategies and market-driven product portfolio, emphasizing R&D and licensing. Versalis prides itself on its wide range of proprietary technologies and state-of-the-art production processes, a wide-reaching distribution network and a highly-customized after-sales assistance.

VitaFlex LLC ............................................. 558
1305 Graham St., PO Box 565
Burlington, NC 27216
vitaflexusastore.com
dtsai@vitaflexusa.com
VitaFlex’s Soft-stretch Hoods is an innovative PPE for primary head protection that provides barrier protection against micron-sized particles, powder, and pigment. They securely cover the entire head, face and neck with a soft, comfortable form-fit which becomes an effective isolation layer next to the skin. The ultrafine intertexture gaps between fibers allow body heat and perspiration to escape which keep heads cool for extended wear. 100% made in the USA, high quality and very affordable.

VMI Group ................................................ 469
4670 Allen Road
Stow, OH 44224
(330) 929-6800
vmi-group.com
llogan@vmi-group.com
VMI Group is comprised of five groups: Tire, Rubber, and Case & Parts. With over 1,200 people across the globe, VMI Group, a subsidiary of TKH Group NV, continuously strives to bring our industries to the next level by providing state-of-the-art, innovative technology. VMI Rubber offers a wide variety of customized solutions ranging from coating the required cutting to our special pin-type and gear pump extruders, strangling and preforming solutions, tire tread and strip winding systems, including our renowned cushion gum extrusion-smearing technology, batch-offers, and cutters and feeders for the rubber millroom.

Wabash MPI/Carver, Inc. ............................. 543
1569 Morris St.
Wabash, IN 46992
(260) 563-1184
wabasmpni.com
dsinger@acciscorporate.com
Wabash MPI/Carver, Inc. is a premier manufacturer of molding presses for laboratory and production rubber, plastic, composite and laminating applications. Wabash MPI also offers the hybrid servo-pneumatic MICROUM Liquid Injection Molding Machine for your silicone medical molding applications. Carver, the world leader in lab presses, introduces its new AutoSeries Plus bench top lab press to complement its full line of manual and automatic presses. Wabash MPI/Carver, Inc., can also custom design pneumatic or hydraulic presses to fit your specific molding application in sizes from .5 to 1,000 ton and plate sizes to 8’ X 12’.

Western Reserve Chemical Corporation ........... 330
4837 Darrow Road
Stow, OH 44224
(330) 650-2244
wrchem.com
pam@wrchem.com
Western Reserve Chemical is an ISO certified distributor serving formulators and compounders in the rubber, plastics, adhesives, sealants, and coatings industries. Our quality products are easily accessible from 8 locations throughout the NAFTA region. We offer a wide range of cost effective chemicals and additives including, antioxidants, accelerators, co-agents, stabilizers, resins, waxes, process aids, carbon black and silica reinforcing fillers.

Whitford Corporation ................................. 118
47 Park Ave., Box 80
Elverton, PA 19520
(610) 288-3500
whitfordww.com
cbuchanan@whitfordww.com
Alpha Coatings is a Whitford company. Whitford is headquartered in Pennsylvania with offices worldwide. Alpha is a manufacturer of low-friction Resilon custom automotive coatings designed to improve the performance of any flexible substrate. Resilon is a waterborne, VOC-compliant, user-friendly coating. Alpha is also a coating applicator for automotive sealing systems tackling problems of “itch and squeak”, weathering, abrasion, freeze-release, consistent appearance, chemical resistance and reduced friction, etc. Substrates for the Resilon coating include EPDM rubber (sponge and dense), TPV, TPE and PVC (polyvinyl chloride) plastics. In addition to coatings, Alpha performs secondary operations: flock, mastic, pin insertion.

Zeon Chemicals L.P ....................................... 342
4111 Bells Lane
Louisville, KY 40211
(502) 775-2027
zeonchemicals.com
jlangford@zeonchemicals.com
Zeon is a world leader in specialty elastomers, polymers, and specialty chemicals. We are one of the top producers of polymers in the world, operating a global network of plants in Asia and North America, and research and development laboratories in the United States, Japan, China, and Singapore. Zeon operates a truly global network of technical support and sales offices. We are able to assist your engineers and scientists, beginning with central discussion through to prototyping, pre-launch and mass production.

ZeppeLIN Systems USA, Inc. ......................... 513
13330 Bynd Drive
Odessa, FL 33556
(813) 920-7434
zeppelin-systems.us
ZeppeLIN Systems USA Recognized worldwide as the leading manufacturer of bulk material handling equipment for the tire and rubber industry. The Tire and Rubber Industry: Systems and Solutions. To be successful in the rubber and tire industries, you need to have sound operating procedures that guarantee consistent, high quality, accurate feeding, and precise weighing. In short, you need to make sure that you’re producing a quality product every single batch. That’s where Zeppelin can help. Products and Services: pneumatic conveying systems, silo systems, weighing and batching systems for solids and liquids, mixer feed systems, small chemical preparation systems.

Zhou Shan Yuzwe Plastic & Rubber Machinery Co., Ltd. ............................ 263
Xihou Industrial Zone, Jintang Town, Dinhaı́ District Zhoushan City 316032 China
(86-580-806711)
zhoushan Rubber Plastics & Rubber Machinery Co., Ltd. is a professional design and manufacture of rubber extruder, plastic extruder, screw and barrel for extruder machinie’s company.

Zn Nacional .............................................. 157
Serafin Pena No 338 Sur
dickson, TN 37055
xihou@chocolz.com
Zn Nacional is a privately owned company found- ed in 1952. Serving more than 22 countries world-wide, Zn Nacional is a leading supplier to the tire, rubber, chemical, paint, ceramics and agricultural industries. Zn Nacional is the only North American supplier with the ability to manufacture zinc oxide by both the American (from zinc bearing ores / by- products) and French Process (from refined zinc in-gots) production methods. This flexibility allows us to produce tailor made zinc oxides for any application, often resulting in significant economic savings to our customers.

Zochem .................................................... 264
600 Printwood Drive
Dickson, TN 37055
(615) 375-5058
zochem.com
Zochem is a privately owned company found- ed in 1952. Serving more than 22 countries world-wide, Zn Nacional is a leading supplier to the tire, rubber, chemical, paint, ceramics and agricultural industries. Zn Nacional is the only North American supplier with the ability to manufacture zinc oxide by both the American (from zinc bearing ores / by- products) and French Process (from refined zinc in-gots) production methods. This flexibility allows us to produce tailor made zinc oxides for any application, often resulting in significant economic savings to our customers.

The largest zinc oxide manufacturer in North America offering the broadest product range of high purity, high & low m2/g surface area, USP and pellets. Two plants for supply chain security, producing zinc oxide since 1933, nine high capacity French Process muffle furnace technology lines and four pelletizers. Closer to you, with 15 North American distributors and 35 strategically-located warehouses, six export agents in Asia, Europe, Caribbean and India. ISO 9001:2015 Certified.
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➢ receive communication of any real-time updates on important events

Available in your device’s app store - search Rubber Division ACS or IEC.
**EXPO HOURS:**

**Tuesday, Oct. 9**
10:00 a.m. – 5:00 p.m.

**Wednesday, Oct. 10**
10:00 a.m. – 5:00 p.m.

**Thursday, Oct. 11**
10:00 a.m. – 2:00 p.m.
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Florian Schattenmann is the Vice President for Performance Materials & Coatings R&D at The Dow Chemical Company, where he oversees innovation across a diverse set of businesses leveraging unique chemistries and advanced technology to drive market-focused product development. Prior to taking on this role, he was the Vice President for Corporate R&D at Dow, where he led a broad portfolio of corporate research programs and world leading innovation capabilities. Visit rubberiec.org for full bio.

**Keynote Address: Using Fundamental Polymer Science to Accelerate Elastomer Innovations**

The rapid pace of global growth demands unparalleled innovation. This mandate is critical for true progress on leading megatrends, such as globalization, urbanization, digitalization and sustainable development. It is also a significant driver shaping today’s material science capabilities. Recent advancements in high-throughput research, analytical sciences and material modeling have enriched our capabilities to apply fundamental polymer science to discover next-generation materials. In particular elastomers, research has experienced an acceleration of innovation. Three examples will highlight how such advancements have resulted in new elastomer technologies meeting increasingly more challenging customer and market requirements:

- High-throughput catalyst research techniques enabled development of a new EPDM rubber that offers tailored molecular-design structures
- Enhanced analytical science regarding material optical properties resulted in unique moldable optical silicone elastomers for creating complex lighting designs that cannot be achieved with plastics or glass
- Advanced material modeling and application simulations demonstrated the relationship between elastomer seal performance and specific material properties to help accelerate the rubber part design process
194th Technical Meeting

October 9 - 11, 2018

Paper #s contain the corresponding session letter. Each presentation is 30 minutes.

**Session A - Room M112, Main Concourse**

**Advances in Material and Processes of Car and Truck Tires**
Co-Chairs: Cal Moreland, Michelin; Sy Mowdood, Retired from Pirelli Tire

**Biobased and Renewable Materials**
Co-Chairs: Catrina Cornish, The Ohio State University; Collen McMahan, US Dept. of Agriculture

**Thermoplastics and Specialty Elastomers**
Chair: Lena Nguyen, Dow Chemical

**Session B - Room M111, Main Concourse**

**Contributed Session**
Chair: Jeffrey Lin, Eastman Chemical

**Nano Fillers for Rubber Reinforcement**
Co-Chairs: Howard Colvin, Cooper Tire & Rubber Company; Lewis Tunnicliffe, Birla Carbon

**Plasticizers and Processing Promoters**
Chair: Ken Bates, Struktol Company of America

**Rubber Testing & Characterization**
Co-Chairs: Ed Terrill, Akron Rubber Development Laboratory, Inc.; Crittenden Ohlemacher, The University of Akron

**Session C - Room M108, Main Concourse**

**Aging and Stability of Rubber-Additives & Mechanisms**
Co-Chairs: Richard Pazur, Department of National Defence; Chris Scilla, Eastman Chemical

**New Commercial Developments**
Co-Chairs: Chris Napier, ExxonMobil Chemical; Peter Cameron, Sid Richardson Carbon & Energy Co.

**Rubber Friction and Abrasion**
Co-Chairs: Chris Robertson, Endurica LLC; Xiao-Dong Pan, ExxonMobil Chemical

**Session D - Room M107, Main Concourse**

**Advances in Synthetic Elastomers**
Co-Chairs: Terry Hogan, Firestone Polymers; Jia Li, University of Akron

**Heat, Fluid and Flame-Resistant Elastomers**
Chair: Mark Jones, Zeon Chemicals

**Reducing Carbon Footprint**
Chair: Kim Dempsey-Miller, Consultant

**Student Colloquium**
Chair: Joel R. Karczewski, Hexpol Compounding
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<td>1:00 p.m.</td>
<td>A01</td>
<td>The Spectrum of Ionic Crosslinking with Zinc-based Monomers</td>
<td>Steven Henning, Total Cray Valley</td>
<td>Thermoplastics and Specialty Elastomers</td>
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<td></td>
<td>B01</td>
<td>Failure Analysis of Rubber Materials Using Pyrolysis Gas Chromatography/Mass-Spectrometry-Nitrogen Phosphorus Detector (PY-GC/MS/NPD)</td>
<td>Rojin Belganeh, Frontier Lab</td>
<td>Rubber Testing &amp; Characterization</td>
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<td>C01</td>
<td>Functionalized SSBR for Fuel Efficient &amp; Safe Tires</td>
<td>Sven Thiele, Trinseao Deutschland GmbH</td>
<td>New Commercial Developments</td>
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<td>D01</td>
<td>Novel Means to Improving Low Temperature Mechanical Properties in a Silicone Elastomer</td>
<td>Erick Sharp, Ace Products &amp; Consulting</td>
<td>Advances in Synthetic Elastomers</td>
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<td>1:30 p.m.</td>
<td>A02</td>
<td>Programmable Rubber Composites</td>
<td>Amit Das, Leibniz-Institut für Polymerforschung Dresden e.V.</td>
<td>Thermoplastics and Specialty Elastomers</td>
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<td>B02</td>
<td>Fatigue Performance of Metal Rubber Adhesion</td>
<td>Xuming Chen, Schlumberger</td>
<td>Rubber Testing &amp; Characterization</td>
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<td>C02</td>
<td>Micronized Rubber Powder, A High Value Sustainable Solution</td>
<td>Peter Hetzel, Michelin Americas Research Corporation</td>
<td>New Commercial Developments</td>
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<td>D02</td>
<td>Evaluation of LPB Modified Silicone</td>
<td>Erick Sharp, ACE Products &amp; Consulting</td>
<td>Advances in Synthetic Elastomers</td>
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<td>2:00 p.m.</td>
<td>A03</td>
<td>Tailoring the Properties of Hydrogenated Styrenic Block Copolymers for Medical Tubing, including Kink Resistance, Solvent Bonding, and Processability</td>
<td>Aparajita Bhattacharya, Kraton Corporation</td>
<td>Thermoplastics and Specialty Elastomers</td>
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<td>B03</td>
<td>Why Cutting Strength is an Indicator of Fatigue Threshold</td>
<td>Will Mars, Endurica, LLC</td>
<td>Rubber Testing &amp; Characterization</td>
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<td>C03</td>
<td>New Alkylphenol Tackifier Resins for Rubber Compounding</td>
<td>Ashok Reddy, Hexion</td>
<td>New Commercial Developments</td>
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<td>D03</td>
<td>Effects of Polymer Structure and Functionality on Final Compounded Properties</td>
<td>Jeffrey Cicerchi, Bridgestone Firestone</td>
<td>Advances in Synthetic Elastomers</td>
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<td>2:30 p.m.</td>
<td>A04</td>
<td>Synthesis and Characterization of Tetracopolymer of Ethylene and Propylene with Norbornene-Containing Dienes Catalized by Titanium-phosphinimide Complexes</td>
<td>Jianjun Chen, Yanshan Branch, SINOPEC BRICI</td>
<td>Thermoplastics and Specialty Elastomers</td>
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<td>B04</td>
<td>The Challenges of Modelling Elastomeric Packer Seals for Oilfield Applications</td>
<td>Travis Hohenberger, Queen Mary University of London</td>
<td>Rubber Testing &amp; Characterization</td>
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<td>C04</td>
<td>Performance Hydrocarbon Resins in Tread Formulations – Balancing the Magic Triangle</td>
<td>Mark Arigo, Eastman Chemical Company</td>
<td>New Commercial Developments</td>
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<td>D04</td>
<td>Very High Cure Rate EPDM for High Productivity</td>
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<td>3:15 p.m.</td>
<td>A05</td>
<td>Functionalization: a Key Differential Factor in the Design of SSBRs for High Performance Tires</td>
<td>Luis Rodriguez-Guaderrama</td>
<td>Dynasol Group</td>
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<td>B05</td>
<td>Advanced Cure and Rheology Kinetics Characterization and Modeling to Simulate Manufacturing Processes for High-temperature Elastomers</td>
<td>Mithun Bhattacharya</td>
<td>Green Tweed &amp; Company</td>
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<td>C05</td>
<td>Using Innovative Highly Dispersible Silica Grades to Improve Agriculture Tires</td>
<td>Marcus Copperwheat</td>
<td>Solvay Silica Division</td>
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<td>D05</td>
<td>Advantages of New Developmental Cariflex™ Elastomer in Healthcare and Industrial Applications</td>
<td>Aparajita Bhattacharya</td>
<td>Kraton Corporation</td>
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<td>3:45 p.m.</td>
<td>A06</td>
<td>Dry Crosslinked Thermoplastic Elastomers Based on Silicone Rubber and Ethylene Octene Copolymer for Cable Insulation / Sheathing Applications</td>
<td>Padmanabhan Ramachandran</td>
<td>Indian Institute of Technology Kharagpur</td>
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<td>B06</td>
<td>The Basics of Fiber Reinforcement in Rubber Compounds</td>
<td>Mike Gmerek</td>
<td>Finite Fiber</td>
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<td>Viton™ VTR-7667 - a New Peroxide Crosslinkable Fluoroelastomer Optimized for Dynamic Applications</td>
<td>Chris Grant</td>
<td>The Chemours Company</td>
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<td>NORDEL™ EPDM Technical Solution for Automotive Dense Weatherstrip</td>
<td>Xiaosong Wu</td>
<td>Dow Chemical</td>
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<td>4:15 p.m.</td>
<td>A07</td>
<td>New HNBR Elastomers With Improved Fluid Resistance and Low Temperature Flexibility</td>
<td>Victor Nasreddine</td>
<td>ARLANXEO</td>
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<td>D07</td>
<td>Introduction of New Oil-Resistant Elastomer for Industrial Applications</td>
<td>Dr. Mousumi DeSarker</td>
<td>Denka Corporation</td>
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<td>4:45 p.m.</td>
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<td>ASTM International and ISO TC45 Rubber Standards in Today’s World Economy</td>
<td>John Dick</td>
<td>AlphaTechnologies</td>
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<td>C08</td>
<td>The Next Generation NORDEL™ EPDM for Extruded Profiles</td>
<td>Lena Nguyen</td>
<td>Dow Chemical Co.</td>
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Wednesday
October 10

8:00 a.m.  A09  Advances in Vulcanization of Diene Rubber Blends
          Thomas Hanel, Pirelli Tyre spa

          B09  Effective Dispersion of Compounding Ingredients
          Frederick Ignatz-Hoover, Eastman Chemical Company

          C09  The Development of an Ultra-High Molecular Weight Amorphous
                EPDM Polymer for Highly Filled Low Temperature Applications
          Russ Vogelsong, Lion Elastomers

          S01  Preparation and Characterization of Shear Sensitive Smart Thermoplastic
                Elastomers (TPEs) from Poly (Vinylidene Fluoride) and Hydrogenated
                Nitrile Rubber with Tunable Mechanical Properties
          Subhabrata Saha, Indian Institute of Technology Kharagpur

          Advances in Material and Processes of Car and Truck Tires

          Rubber Testing & Characterization

          New Commercial Developments

          Student Colloquium Presentations

8:30 a.m.  A10  Performance Improvements with SYLVATRAXX™ Tread Enhancement
          Additives - Influence of the Resin Chemistry on Visco-elastic Properties
          of Binary and Ternary Polymer Blends
          Wolfgang Pille-Wolf, Kraton Chemical BV

          B10  Visualization of Polymer-Filler Interface using Atomic Force Microscopy
          Anna Kepas-Suwara, Rubber Consultants

          C10  Olefinic POSS Additive Effects in HNBR Elastomers
          Xuesong Ou, National Oilwell Varco

          S02  Wound Healable and Antimicrobial Cotton Fibre Coated with UV Cured
                Modified Natural Rubber Latex: A Sustainable Utilization of Thiol-ene Chemistry
          Sovan Lal Banerjee, Indian Institute of Technology Kharagpur

          Advances in Material and Processes of Car and Truck Tires

          Rubber Testing & Characterization

          New Commercial Developments

          Student Colloquium Presentations
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<tbody>
<tr>
<td>9:00 a.m.</td>
<td>A11</td>
<td>The Compatibility of Pure Monomer Resins with Tire Tread Elastomers</td>
<td>Megan Casey, Total Cray Valley</td>
</tr>
<tr>
<td></td>
<td>B11</td>
<td>The Variation of the Dynamic-mechanical Properties of a Butyl Rubber</td>
<td>Sandra Regina Scagliusi Martin, Instituto de Pesquisas Energéticas e Nucleares-IPEN</td>
</tr>
<tr>
<td></td>
<td>C11</td>
<td>Specialty Latex Material for Sustainable Product Applications</td>
<td>Fatimah Rubaizah Mohd Rasdi, Malaysian Rubber Board</td>
</tr>
<tr>
<td></td>
<td>S03</td>
<td>An Approach to Fabricate Mechanically Robust full IPN Strengthened</td>
<td>Sabyasachi Ghosh, Indian Institute of Technology Kharagpur</td>
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<td></td>
<td></td>
<td>Conductive Cotton Fabric for High Strain Tolerant Electromagnetic Wave</td>
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<tr>
<td>9:30 a.m.</td>
<td>A12</td>
<td>The Origin of Marching Modulus of Silica Filled Tire Tread Compounds</td>
<td>Jungmin Jin, 1. University of Twente, The Netherlands</td>
</tr>
<tr>
<td></td>
<td>C12</td>
<td>New Rubber to Substrate Bonding Systems for Fibers and Fabrics-</td>
<td>Roger Cassell, Dow Chemical</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reducing Environmental Concerns and Expanding the Bonding System</td>
<td></td>
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<td></td>
<td>S04</td>
<td>Reinforcement of Industrial Rubber by Rubber Grafted Nanoparticles</td>
<td>Zaid Abbas, University of South Carolina</td>
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<tr>
<td>10:15 a.m.</td>
<td>B12</td>
<td>Energy Dissipation Characteristics of Crosslinks in Natural Rubber</td>
<td>Anas K, SRF Limited</td>
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<tr>
<td></td>
<td>C13</td>
<td>Chemlok CB Cold Bonding Adhesive for Vulcanized Elastomers</td>
<td>Scott Durso, Lord Corporation</td>
</tr>
<tr>
<td></td>
<td>S05</td>
<td>Eggshell Fillers Improve the Fatigue, Aging and Ozone Resistance of</td>
<td>Xianjie Ren, Ohio State University</td>
</tr>
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<td></td>
<td></td>
<td>Guayule Natural Rubber Composites when Replacing Precipitated silica</td>
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<td></td>
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<td>and Carbon Black</td>
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<tr>
<td>10:45 a.m.</td>
<td>A14</td>
<td>Comparison of Silica-NR Masterbatches with in-situ Silica/Silane</td>
<td>Anke Blume, University of Twente, The Netherlands</td>
</tr>
<tr>
<td></td>
<td>B13</td>
<td>Rheological Characterization of Mixing Effects on Natural Rubber</td>
<td>Alina Latshaw, TA Instruments</td>
</tr>
<tr>
<td></td>
<td>C14</td>
<td>Chemlok® 300 Series Film Adhesives for Tank and Pipe Lining</td>
<td>Scott Durso, Lord Corporation</td>
</tr>
<tr>
<td></td>
<td>S06</td>
<td>Design of a Molecular Architecture via a Green Route for an Improved</td>
<td>Pranabesh Sahu, Indian Institute of Technology Kharagpur</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Silica Reinforced Rubber Nanocomposite using Bioresources</td>
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</tr>
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</table>

**Cancelled**
### Wednesday (continued)

#### 11:15 a.m.

<table>
<thead>
<tr>
<th>A15</th>
<th>Improvement of Natural Rubber - Silica Interaction by Silane-grafting of the Polymer</th>
<th>Wilma Dierkes, University of Twente, The Netherlands</th>
</tr>
</thead>
<tbody>
<tr>
<td>B14</td>
<td>Dynamic Mechanical Characterization of NR and BR including Investigation of Mixing Effects</td>
<td>Troy Nickel, TA Instruments - Waters Corporation, LLC</td>
</tr>
<tr>
<td>C15</td>
<td>Advances in Primer Technology for Bonding Silicone to Plastics and Metals</td>
<td>Paul Wheeler, LORD Corporation</td>
</tr>
<tr>
<td>S07</td>
<td>Comparisons of Physical Properties between Concrete Paver vs. Rubber Cement Composite Paver</td>
<td>Ratnadip Bhoi, Abstract Displays Inc.</td>
</tr>
</tbody>
</table>

#### 1:00 p.m.

<table>
<thead>
<tr>
<th>A16</th>
<th>Effect of Planetary Roller Extruder on Filler Dispersion</th>
<th>Edward Terrill, Akron Rubber Development Laboratory, Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>B15</td>
<td>Recent Studies on Nanofillers for Rubber Reinforcement</td>
<td>Anil Bhowmick, Indian Institute of Technology-Kharagpur</td>
</tr>
<tr>
<td>C16</td>
<td>LORD Introduces LokRelease™ 800-Series Adhesive and Coating Removal Solutions</td>
<td>James Williams, Lord Corporation</td>
</tr>
<tr>
<td>S08</td>
<td>Synthesis, Characterization and Mechanical and Dynamical Studies of Beta-alanine Trimer-grafted SBR</td>
<td>Yihong Zhao, The University of Akron</td>
</tr>
</tbody>
</table>

#### 1:30 p.m.

<table>
<thead>
<tr>
<th>A17</th>
<th>New Benefits of Highly Dispersible Silica in Truck/Bus Tires and Retreads</th>
<th>Thomas Chaussee, Solvay silica</th>
</tr>
</thead>
<tbody>
<tr>
<td>B16</td>
<td>Application of Graphene Nano-Platelets in Technical Elastomers</td>
<td>Jan Plagge, Deutsches Institut Fur Kautschuktechnologie (DIK)</td>
</tr>
<tr>
<td>C17</td>
<td>Kobelco New Mixing Technology</td>
<td>Frank Pappas, Kobelco Stewart Bolling, Inc.</td>
</tr>
<tr>
<td>S09</td>
<td>Effect of Type of Fillers on Abrasion Resistance of Acrylonitrile-Butadiene Rubber Compounds using a Blade-type Abrasion Tester</td>
<td>Hakhyun Kim, Chonbuk National University</td>
</tr>
</tbody>
</table>

#### 2:00 p.m.

<table>
<thead>
<tr>
<th>A18</th>
<th>Silica Reinforced Natural Rubber: Synergistic Effects by Addition of Small Amounts of Secondary Fillers to Silica-Reinforced Natural Rubber Tire Tread Compounds</th>
<th>Jacques Noordermeer, University of Twente, The Netherlands</th>
</tr>
</thead>
<tbody>
<tr>
<td>B17</td>
<td>Why Do Small Additions of Natural Rubber Greatly Improve the Fatigue Lifetime of Ethylene-Propylene-Diene Rubber?</td>
<td>Christoph Goegelein, ARLANXEO</td>
</tr>
<tr>
<td>S10</td>
<td>Analysis of the Diffusion Limited Oxidation and its Consequences in a Thermally Aged Peroxide Cured HNBR</td>
<td>Nyhal Meghiref, Laboratoire de Recherches et de Contrôle du Caoutchouc et des Plastiques</td>
</tr>
</tbody>
</table>
### 2:30 p.m.  
**A19** Enhancements in Off-the-Road (OTR) Tire Formulations with Discrete Surface Functionalized Multi-wall Carbon Nanotubes: Wear, Abrasion and Tear Resistance  
*Sateesh Peddini*, Molecular Rebar Design  

**B18** The Mechanics of Reinforcement of Elastomers by Graphene Nanoplatelets  
*Robert Young*, University of Manchester  

**C19** A GBIE/HEXPOL Compounding Joint Study: Interactions Between Waterbased Coatings and EPDM Formulations  
*David Bareich*, G. Bareich Import-Export Inc. (GBIE Inc)  

**S11** Cross-linker Free Thermally-induced Cross-linking of Hydrogenated Nitrile Butadiene Rubber (HNBR)  
*Nina Verdier*, University of Montreal  

### 3:00 p.m.  
**S12** Activated Isobutylene-Isoprene Rubber  
*Yu Sun*, University of Akron  

### 3:15 p.m.  
**A20** Liquid Rubber for Improved Compound Characteristics  
*Marcel Gruendken*, Kuraray Europe GmbH  

**B19** Nanometric High Aspect Ratio Fillers: Chemical Reactivity with The Polymer Matrix  
*Maurizio Galimberti*, Politecnico di Milano  

**C20** Radiation Induced Degradation of Hydrogenated Nitrile Rubber Crosslinked without Filler  
*Masayuki Ito*, Waseda University  

### 3:45 p.m.  
**A21** Novel Functionalized SSBR for Truck and Bus Tires Tread  
*Bartlomiej Janowski*, Synthos S.A.  

**B20** The Payne Effect: Primarily Polymer-Related or Filler-Related Phenomenon?  
*Chris Robertson*, Endurica, LLC  

**C21** Thermal Oxidative Aging Mechanisms in Single and Two Phase Elastomer Systems – Characterization of Kinetics and Spatial Evolution  
*Ulrich Giese*, German Institute of Rubber Technology (DIK)  

**D09** SSBR and Bio-sourced Plasticizers for Sustainable Performance in Conveyor Belt Application  
*Fabio Bacchelli*, versalis spa
### Wednesday (continued)

**October 10**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Speaker(s)</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>4:15 p.m.</td>
<td>A22</td>
<td>The Quantitative Analysis of Fatty Acids in Styrene Butadiene Rubber (SBR) by Thermally Assisted Hydrolysis and Methylation GC/MS</td>
<td>Rojin Belganeh, Frontier Lab</td>
<td>Advances in Material and Processes of Car and Truck Tires</td>
</tr>
<tr>
<td></td>
<td>B21</td>
<td>Tear Testing Nano-Reinforced Compounds &amp; the Relation to Macro-Abrasive Wear Tests</td>
<td>August Krupp, Molecular Rebar Design</td>
<td>Nano Fillers for Rubber Reinforcement</td>
</tr>
<tr>
<td></td>
<td>C22</td>
<td>Importance of Synergism for Combined Radiation plus Temperature Environments</td>
<td>Kenneth Gillen, Retired Scientist</td>
<td>Aging and Stability of Rubber-Additives &amp; Mechanisms</td>
</tr>
<tr>
<td></td>
<td>D10</td>
<td>Characterization and Potential Commercial Uses of Pyrolytic Carbon Black Obtained in an Industrial Scale Waste Tire Recycling Process</td>
<td>Maria Pina, SILKYMIA LLC</td>
<td>Reducing Carbon Footprint</td>
</tr>
</tbody>
</table>

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<tr>
<td>4:45 p.m.</td>
<td>A23</td>
<td>Comparison of States of Mix for Silica Loaded Compounds Using New ASTM Methods</td>
<td>John Dick, Alpha Technologies</td>
<td>Advances in Material and Processes of Car and Truck Tires</td>
</tr>
<tr>
<td></td>
<td>B22</td>
<td>Butyl Rubber Cellulose Nanocomposites – Lightweight and Low Permeability</td>
<td>Irina Weilert, German Institute for Rubber Technology</td>
<td>Nano Fillers for Rubber Reinforcement</td>
</tr>
<tr>
<td></td>
<td>D11</td>
<td>5 Reasons to Celebrate Tool Cleaning in Rubber Molding</td>
<td>Steve Wilson, Cold Jet LLC</td>
<td>Reducing Carbon Footprint</td>
</tr>
<tr>
<td>Time</td>
<td>Session</td>
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<tr>
<td>8:00 a.m.</td>
<td>A24</td>
<td>Eucommia Ulmoides Gum—an Ideal Elastomer Material for Applying in Engineering Tire</td>
<td>Jichuan Zhang, Beijing University of Chemical Technology</td>
<td>Biobased and Renewable Materials</td>
</tr>
<tr>
<td></td>
<td>B23</td>
<td>Multifunctional Thermoset Elastomer Nanocomposites Reinforced by Graphene</td>
<td>Dimitrios Papageorgiou, University of Manchester</td>
<td>Nano Fillers for Rubber Reinforcement</td>
</tr>
<tr>
<td></td>
<td>C23</td>
<td>A Chemo-mechanical Model for Predicting the Lifetime of EPDM Rubbers</td>
<td>Xavier Colin, ENSAM</td>
<td>Aging and Stability of Rubber-Additives &amp; Mechanisms</td>
</tr>
<tr>
<td></td>
<td>D12</td>
<td>New Developments in Ethylene Vinyl Acetate Rubber</td>
<td>Victor Nasreddine, ARLANXEO</td>
<td>Heat, Fluid and Flame-Resistant Elastomers</td>
</tr>
<tr>
<td>8:30 a.m.</td>
<td>A25</td>
<td>Soybean Oil as a Replacement for Petroleum-Based Oils in Tire Tread Compounds</td>
<td>Lauren Brace, The Goodyear Tire &amp; Rubber Company</td>
<td>Biobased and Renewable Materials</td>
</tr>
<tr>
<td></td>
<td>B24</td>
<td>Single Wall Carbon Nanotube Technology Expands Mechanical and Electrical Properties of Elastomers</td>
<td>Charles Kutchin, OCSIAL LLC</td>
<td>Nano Fillers for Rubber Reinforcement</td>
</tr>
<tr>
<td></td>
<td>C24</td>
<td>Experimental Determination of the Quantity and Distribution of Chemical Crosslinks in Unaged and Aged Natural Rubber, Part 2: A Sulfur Donor System</td>
<td>Richard Pazur, Department of National Defence</td>
<td>Aging and Stability of Rubber-Additives &amp; Mechanisms</td>
</tr>
<tr>
<td></td>
<td>D13</td>
<td>Elastomers in Extreme Conditions</td>
<td>Andy Anderson, Eutsler Technical Products</td>
<td>Heat, Fluid and Flame-Resistant Elastomers</td>
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<tr>
<td>9:00 a.m.</td>
<td>A26</td>
<td>Silica-coated Starch for Rubber Reinforcement Filler</td>
<td>Yusheng Chen, The Goodyear Tire &amp; Rubber Company</td>
<td>Biobased and Renewable Materials</td>
</tr>
<tr>
<td></td>
<td>B25</td>
<td>Dispersion of Polyethyleneimine-Coated Chopped Fibers in Rubber Matrix</td>
<td>Charles Kerobo, BASF Corporation</td>
<td>Nano Fillers for Rubber Reinforcement</td>
</tr>
<tr>
<td></td>
<td>C25</td>
<td>Static Sealing Performance in an Application where Environmental Conditions can Result in Degradation; The Effects of Elastomer Compound Composition, Processing and Design</td>
<td>Paul Tuckner, Grace Technology &amp; Development</td>
<td>Aging and Stability of Rubber-Additives &amp; Mechanisms</td>
</tr>
<tr>
<td>9:30 a.m.</td>
<td>A27</td>
<td>Filler Interaction in Thermoplastic Elastomer Compositions</td>
<td>Judit E. Puskas, University of Akron</td>
<td>Biobased and Renewable Materials</td>
</tr>
<tr>
<td></td>
<td>C26</td>
<td>Solvent Swell and Time Dependent NMR Characterization of Aged Nitrile Compounds</td>
<td>Deidre Tucker, SKF Sealing Solutions</td>
<td>Aging and Stability of Rubber-Additives &amp; Mechanisms</td>
</tr>
<tr>
<td></td>
<td>D15</td>
<td>FKM and FFKM Cross Linking Methods and their Effect on Upper Use Temperature of Seals</td>
<td>Ronald Campbell, Greene Tweed &amp; Company</td>
<td>Heat, Fluid and Flame-Resistant Elastomers</td>
</tr>
<tr>
<td>Time</td>
<td>Session</td>
<td>Title</td>
<td>Authors</td>
<td>Affiliations</td>
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<td>10:15 a.m.</td>
<td>A28</td>
<td>Water Responsive Mechano-adaptive Elastomer Composites based on Active Filler Morphology</td>
<td>Tamil Selvan Natarajan, Leibniz-Institut für Polymerforschung Dresden e.V.</td>
<td>Biobased and Renewable Materials</td>
</tr>
<tr>
<td></td>
<td>B27</td>
<td>Overcoming Tear and Hot Tear Strength Issues in EPDM Compounds</td>
<td>Pete Spanos, ARLANXEO</td>
<td>Contributed Session</td>
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<tr>
<td></td>
<td>C27</td>
<td>Long-Term Service Performance Assessment of Downhole Elastomeric Seals</td>
<td>Goang-Ding Shyu, Baker Hughes, a GE company</td>
<td>Aging and Stability of Rubber-Additives &amp; Mechanisms</td>
</tr>
<tr>
<td></td>
<td>D16</td>
<td>Evaluating Peroxide Blends in HNBR and How this Impacts Cure Speed and Compound Aging Properties</td>
<td>Dana Stripe, Zeon Chemicals</td>
<td>Heat, Fluid and Flame-Resistant Elastomers</td>
</tr>
<tr>
<td>10:45 a.m.</td>
<td>A29</td>
<td>Characterization of Composites Containing Renewable Fillers for Anti-Vibration Applications</td>
<td>Cindy Barrera, Ford Motor Company</td>
<td>Biobased and Renewable Materials</td>
</tr>
<tr>
<td></td>
<td>B28</td>
<td>Effect of Ultrasonic Extrusion of Star SBR on Properties of Carbon Black- and Silica-Filled Compounds and Vulcanizates</td>
<td>Avraam Isayev, The University of Akron</td>
<td>Contributed Session</td>
</tr>
<tr>
<td></td>
<td>D17</td>
<td>New Generation HT-ACM Technologies for Highly Demanding Automotive Applications</td>
<td>Samuel Harber, Zeon Chemicals</td>
<td>Heat, Fluid and Flame-Resistant Elastomers</td>
</tr>
<tr>
<td></td>
<td>D18</td>
<td>Perfluoroelastomers: Compounding &amp; Application Engineering</td>
<td>Ed Cole, 3M FMSCO</td>
<td>Heat, Fluid and Flame-Resistant Elastomers</td>
</tr>
<tr>
<td>1:00 p.m.</td>
<td>A30</td>
<td>Influence of Strain-Induced Crystallization on Mullin-like Effect of Sulfur Cross-linked Guayule and Dandelion Natural Rubbers</td>
<td>Yuko Ikeda, Kyoto Institute Of Technology</td>
<td>Biobased and Renewable Materials</td>
</tr>
<tr>
<td></td>
<td>B30</td>
<td>Evaluating Flow Property Improvements of Alumina Silicate Ceramic Spheres</td>
<td>Doug Foster, ACE Products &amp; Consulting</td>
<td>Plasticizers and Processing Promoters</td>
</tr>
<tr>
<td></td>
<td>C30</td>
<td>Characterisation of the Sticky Debris Generated During Smearing Wear</td>
<td>James Busfield, Queen Mary University of London</td>
<td>Rubber Friction and Abrasion</td>
</tr>
<tr>
<td></td>
<td>D19</td>
<td>High Heat Resistant EPDM Solution</td>
<td>Greg (Guangming) Li, Dow Chemical Co.</td>
<td>Heat, Fluid and Flame-Resistant Elastomers</td>
</tr>
</tbody>
</table>
Thursday (continued)

October 11

1:30 p.m. A31 Rubber Particle Lipids in Guayule and Hevea: a Study of Structure and Function
Colleen McMahan, US Dept of Agriculture

B31 Analysis of UV Deterioration of Ethylene-Vinyl Acetate Copolymer Using Pyrolysis-Gas Chromatography/Mass Spectrometry
Alan Owens, Shimadzu Scientific Instruments

C32 Effects of Temperature, Speed and Mechanical Properties on the Frictional Behaviour of Elastomers
Eduardo Yanes, Queen Mary University of London

D20 High Performance HNBR (Zetpol®): New Opportunities for Sealing Applications – Improvements in Compression Set, Long Term Aging and Processability
Kai Kremer, Zeon Europe GmbH

2:00 p.m. A32 Guayule Plant Extracts as Binder Modifiers in Flexible (Asphalt) Pavement Mixtures
Steven Lusher, Missouri University of Science and Technology

B32 New Polymeric Esters for Low Polarity Elastomers
Erica Anderson, Hallstar

C33 Various Routes to Improve Wet and Dry Traction were Evaluated
Edward Terrill, Akron Rubber Development Laboratory, Inc.

D21 Understanding and Winning the Market for Heavy Duty Oil Bath Seals
Albrecht Becker, SKF Sealing Solutions

2:30 p.m. A33 Elucidation of Rubber Biosynthesis and Accumulation in Rubber Producing Shrub, Guayule (Parthenium argenatum Gray)
David Dierig, Bridgestone Americas

B33 Plasticizers for Increased Surface Energy of Rubber Articles
Erica Anderson, Hallstar

C34 Numerical Multi-Scale Modeling of Rubber Friction on Rough Pavements Using Finite Element Method
Ashkan Nazari, Virginia Polytechnic Institute & State

D22 A New Fluoroelastomer for High pH Environments
Kyle Brundin, Daikin America Inc.

3:00 p.m. A34 Tools to Evaluate the Sustainability of Natural Rubber Production
Amy Landis, Colorado School of Mines

B34 Transoctenamer (TOR) for Improved Dispersion, Reduced Mixing Time, and Best Dimensional Stability for Rubber Parts
Ankur Kant, Evonik Corporation
Student Presentations
Wednesday, October 10; 8:00 a.m. – 3:30 p.m.
Room M107, Main Concourse

8:00 a.m. S01 Preparation and Characterization of Shear Sensitive Smart Thermoplastic Elastomers (TPEs) from Poly (Vinylidene Fluoride) and Hydrogenated Nitrile Rubber with Tunable Mechanical Properties - Subhabrata Saha, Indian Institute of Technology Kharagpur

8:30 a.m. S02 Wound Healable and Antimicrobial Cotton Fibre Coated with UV Cured Modified Natural Rubber Latex: A Sustainable Utilization of Thiol-ene Chemistry - Sovan Lal Banerjee, Indian Institute of Technology Kharagpur

9:00 a.m. S03 An Approach to Fabricate Mechanically Robust full IPN Strengthened Conductive Cotton Fabric for High Strain Tolerant Electromagnetic Wave Absorber - Sabyasachi Ghosh, Indian Institute of Technology Kharagpur

9:30 a.m. S04 Reinforcement of Industrial Rubber by Rubber Grafted Nanoparticles - Zaid Abbas, University of South Carolina

10:15 a.m. S05 Eggshell Fillers Improve the Fatigue, Aging and Ozone Resistance of Guayule Natural Rubber Composites when Replacing Precipitated Silica and Carbon Black - Xianjie Ren, Ohio State University

10:45 a.m. S06 Design of a Molecular Architecture via a Green Route for an Improved Silica Reinforced Rubber Nanocomposite using Bioresources - Pranabesh Sahu, Indian Institute of Technology Kharagpur

11:15 a.m. S07 Comparisons of Physical Properties between Concrete Paver Vs Rubber Cement Composite Paver - Ratnadip Bhoi, Abstract Displays Inc.

1:00 p.m. S08 Synthesis, Characterization and Mechanical and Dynamical Studies of Beta-alanine Trimer-grafted SBR - Yihong Zhao, The University of Akron

1:30 p.m. S09 Effect of Type of Fillers on Abrasion Resistance of Acrylonitrile-Butadiene Rubber Compounds using a Blade-type Abrasion Tester - Hakhyun Kim, Chonbuk National University

2:00 p.m. S10 Analysis of the Diffusion Limited Oxidation and its Consequences in a Thermally Aged Peroxide Cured HNBR - Nyhal Meghiref, LRCCP (Laboratoire de Recherches et de Contrôle du Caoutchouc et des Plastiques)

2:30 p.m. S11 Cross-linker Free Thermally-induced Cross-linking of Hydrogenated Nitrile Butadiene Rubber (HNBR) - Nina Verdier, University of Montreal

3:00 p.m. S12 Activated Isobutylene-Isoprene Rubber - Yu Sun, The University of Akron
### Student Posters

**Wednesday, October 10; 8:00 a.m. – 5:00 p.m.**  
Posters displayed in Technical Meeting Area, Main Concourse

<table>
<thead>
<tr>
<th>Number</th>
<th>Title</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>P01</td>
<td>Comparative Evaluation of RAFT ESBR Synthesized by Raft Emulsion Polymerization and ESBR Synthesized by Emulsion Polymerization</td>
<td>Hyunsung Mun, Pusan National University</td>
</tr>
<tr>
<td>P02</td>
<td>Effect of Surfactant on the Physical Properties and Crosslink Densities of Silica Filled and Carbon Black Filled ESBR Compounds</td>
<td>Kiwon Hwang, Pusan National University</td>
</tr>
<tr>
<td>P03</td>
<td>Multilayer Elastomer Laminates for Chemical Protection</td>
<td>Jianan Yi, University of Massachusetts Lowell</td>
</tr>
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<td>P04</td>
<td>Preparation and Characterization of a Unique Microfiltration Membrane Derived from Poly(ethylene-co-methylacrylate)/poly(vinylidene fluoride) Blend</td>
<td>Sanjay Remanan, Rubber Technology Centre, Indian Institute of Technology</td>
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<td>Preferentially Fixing Nanoclays in the Phases of Incompatible Carboxylated Nitrile Rubber (XNBR)-Natural Rubber (NR) Blend Using Thermodynamic Approach and its Effect on Physico-mechanical Properties</td>
<td>Satyanarayana Mallupura Srirangaiah, Indian Institute of Technology Patna</td>
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<td>Carbon dot - Unique Reinforcing Filler for Polymer with Special Reference to Physico-mechanical properties</td>
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Rubber Division, ACS (American Chemical Society) is an organization committed to enhancing science, technology and business across the evolving elastomeric community. We work to expand the elastomeric profession and individual development through educational, technical and interactive activities.

Conferences & Expos
Our highly respected conferences, expos, technical meetings and educational symposiums attract professionals across all areas of the rubber and elastomeric industries. We host a technical meeting in the spring and our International Elastomer Conference in October.

Training & Development
When it comes to elastomers education, we’re your best resource. We offer instructor led and e-Learning training covering materials supply to end-use production in rubber, plastics, polymers and other advanced materials. From basic to advanced rubber technology to hot industry topics, we cover it all.

Journal
Stay informed about the latest rubber industry issues, trends and events through a subscription to Rubber Chemistry and Technology, the leading industry journal on rubber science and technology research. Articles date back to 1928.

Library Services
Our librarian can help answer your questions regarding the science and business of rubber. Our librarian conducts searches and provides access to the latest scientific information and scholarly research, as well as industry statistics and market information.

Individual & Corporate Memberships
Joining Rubber Division, ACS is an investment that pays big dividends through exclusive members-only savings and benefits, including free online access to the Rubber Chemistry and Technology journal and significant discounts on our technical meetings, expos, educational components and library services.

Stay Social!
Follow us on Twitter: @RubberDivision
Join our LinkedIn Group: Rubber Division, American Chemical Society

VISIT RUBBER.ORG FOR MORE INFORMATION.
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Educational Symposium

We call it the Imagination Component -- the fluoroelastomers you know as Viton™. It’s the original, genuine fluoroelastomer that lets creative engineers and designers conjure up the latest breakthroughs. Viton™ makes whater you make tougher, more reisistant and more durable. Viton™ fluoroelastomers have been on the job for over 60 years, leading the industry with the breadth of products and depth of knowledge to ensure you have the optimal solution for you product. Learn more at viton.com.

Essentials of Rubber Technology

Tuesday, October 9, 2018 • 8:00 a.m. - 12:00 p.m.  
M109 & M110, Main Concourse Level

The training is designed for those individuals who are seeking an increased degree of knowledge related to the science behind the design and creation of rubber parts. The course is designed to give practical assistance in answering day-to-day questions related to shop floor issues and customer questions. By applying the principles outlined in this training, the participant should expect to be able to improve the quality of their rubber fabrications.

Course content includes:
- What is rubber
- Why do engineers use it
- Differences between rubber and plastic
- Types of rubber; how are they different
- How to select the type of rubber for the application
- How rubber compounds are formulated basic overview of constituents
- How rubber compounds are mixed; overview of mixers and mixing methods
- Rubber curing and its relationship to properties
- How to test rubber
- Rubber bonding
- Rubber molding
- Improving rubber part quality

Instructor: Joe Walker, Elastomer Technologies - CEUs: 0.4

Introduction to Rubber Technology for Non-Technologists

Tuesday, October 9, 2018 • 8:30 a.m. - 4:30 p.m.  
M105 & M106, Main Concourse

If you are new to the industry, working in Engineering, Sales, Administration, Human Resources or any other non-technical area, and you’d like a very basic, easy to understand introduction to the jargon of the trade and what goes on in the factory and lab, then this one-day course is perfect for you. You won’t come out a rubber expert, but you will understand all the basics of the technology and the language of the business.

The course material will cover:
- What polymers are, how rubber is different from plastic
- How recipes for rubber compounds are created and why
- What’s involved in mixing, processing and vulcanizing rubber
- Testing, specifying and quality control of rubber products

Instructor: Eli Miller, HEXPOL Compounding - CEUs: 0.7

Silicone Rubber Chemistry and Technology

Tuesday, October 9, 2018 • 1:00 p.m. - 5:00 p.m.  
M109 & M110, Main Concourse

The focus of this training session is to provide the attendee an increased level of insight into the silicone rubber family of polymers. The course will take the participant through the process of making silicone polymer, selecting the polymer architecture, cure systems, formulating and fabrication.

Course content includes:
- How silicones are made
- What makes silicone a specialty polymer; when to use it over other polymers
- The influence of polymerization on suitability of manufacturing process
- Essential differences between high consistency (millable), RTV and liquid silicone rubber
- Influence of filler types
- Cure systems
- Mixing/manufacturing compounds
- Fabrication technologies; how to set up the process
- Adhesion
- Troubleshooting guide

Instructor: Joe Walker, Elastomer Technologies - CEUs: 0.4

Compound Mixing and Consistency

Wednesday, October 10, 2018 • 8:00 a.m. - 12:00 p.m.  
M109 & M110, Main Concourse

This course is designed to provide the attendee an in depth understanding of the influence of the mixing process and the characteristics of the mixed compound. The focus of the training will be on reducing the batch to batch variation commonly associated with batch mixed rubber compounds. The use the Association of Rubber Products Manufactures Compound Consistency Guideline will be used to walk each aspect of rubber compound manufacture.

Course content includes:
- Raw material specifications
- Storage of raw materials
- Error proofing
- Weigh-up controls
- Integrated power mixing
- Compound properties vs. the mix fingerprint
- Testing the compound

Instructor: Joe Walker, Elastomer Technologies - CEUs: 0.4

Interested in attending a course, but haven’t registered? 
Stop by registration to see if there is still seating available.
Educational Symposium (Continued)

Internal Mixers and Mixing Parameters
Wednesday, October 10, 2018 • 8:30 a.m. - 4:00 p.m.
M105 & M106, Main Concourse
This presentation covers many topics dealing with Internal Mixers and Mixing Parameters (the things that affect rubber mixing). It starts off with a brief history of mixing equipment, goes into what an internal mixer is and some of its different options, covers the different types of rotors and how they differ, then spends a great deal of time looking into the influence of various mechanical and non-mechanical parameters and the effects they have on rubber mixing, production uniformity, wear and damage, the mixing process and finishes with actual examples of problems encountered in the field, what caused them and how they were resolved.

Instructor: Richard J. Jorkasky II, Consultant - CEUs: 0.7

Establishing a Rubber Molding Process
Wednesday, October 10, 2018 • 1:00 p.m. - 5:00 p.m.
M109 & M110, Main Concourse
This program is designed to show how to establish a rubber molding process based on cross link density. The course is designed to show the influence of cross link density on mechanical properties as well as its influence on de-molding. The overall focus is the design of a rubber molding process that yields the most consistent properties.

Course content includes:
• Selection of the correct polymer characteristics to match the molding process
• Understanding curing of rubber
• How to measure cure state
• Relationship between cure state and physio-mechanical properties
• Role of mold temperature and it variation reduction
• Heat transfer models in predicting cure time
• Insert molding
• Selecting mold release
• Post mold curing
• Verification of the molding process

Instructor: Joe Walker, Elastomer Technologies - CEUs: 0.4

Silicone Basics
Thursday, October 11, 2018 • 8:00 a.m. - 12:00 p.m.
M105 & M106, Main Concourse
The course will cover the following topics:
• Silicone Characteristics and Benefits
• Different Types (I would focus on primarily VMQ, not fluro or phenyl)
• How it is made
• Why it is different than other materials
• Curing
• Silica Powders
• Additives for different properties and applications
• HCR Processing
• LSR Differences – properties and processing
• Q&A

Instructor: Todd Kamyszek, Silmix - CEUs: 0.4

Interested in attending a course, but haven’t registered?
Stop by registration to see if there is still seating available.
**Business & Awards Meeting**

Thursday, October 11 • 1:00 p.m. – 2:00 p.m.
Expo Theater/Rubber Division ACS Booth #273
Kentucky International Convention Center, Louisville, KY

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Rubber Division, ACS 2018 Executive Committee

Steering Committee
- Chair - Jerry McCall, R.D. Abbott Company, Inc.
- Chair-Elect - Michael Morrow, MBG Associates, LLC
- Treasurer - Brian Barkes, GFL Americas, LLC
- Assistant Treasurer - Kim Dempsey-Miller, Consultant
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- Alt. Councillor - Leonard Thomas, Consultant
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- Chicago Rubber Group - Rick Webb, SKF Sealing Solutions NA
- Detroit Rubber Group - John Fahy, Alternative Rubber & Plastics
- Energy Polymer Group - Andy Anderson, Eutsler Technical Products
- Fort Wayne Rubber Group - Brian Barkes, GFL Americas, LLC
- Indian Rubber Institute* - P. K. Mohamed, Apollo Tyres

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- Education & Publications - Joel Karczewski II, Hexpol Compounding
- Exhibits & Meeting Sites - Stephen O’Rourke, Consultant
- Marketing - Anthony Mariniello, ChemSpec, Ltd.
- Membership - Russ Vogelsong, Lion Elastomers
- Program Planning - C. Jeffrey Lin, Eastman Chemical Corporation

2018 Program Planning Committee

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Eastman Chemical Company

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Endurica, LLC

Jerry McCall
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Struktol Company of America, L.L.C.

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Lena Nguyen
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Marvin Myhre
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