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A PUBLICATION OF THE AUTOMOTIVE DIVISION OF THE SOCIETY OF PLASTICS ENGINEERS









AUTOMOTIVE COMPOSITES CONFERENCE & EXHIBITION

Novi, MI • September 6-8, 2023

Presented by SPE Automotive and Composites Divisions

WORLD'S LEADING AUTOMOTIVE COMPOSITES FORUM

SPE® ACCE ANNOUNCES CALL FOR PAPERS, **SPONSORS & EXHÍBITORS FOR 2023 EVENT**



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MEETING SCHEDULE & SPECIAL EVENTS CALENDAR

2023 SPE Electric and Autonomous Vehicles Detroit Troy Marriott Troy, MI USA	8:00 a.m8:00 p.m. April 16-19, 2023
2023 AUTOEPCON Conference Detroit Troy Marriott Troy, MI USA	8:00 a.m5:00 p.m. May 3, 2023
SPE Auto. Div. Board Meeting Hybrid (Virtual & In-person) Location TBD, MI	5:30 - 7:30 p.m. June 19, 2023
2023 SPE Detroit Golf Outing Bay Point Golf Club West Bloomfield, MI USA	11:00 a.m5:00 p.m. June 20, 2023
SPE Auto. Div. Board Meeting Hybrid (Virtual & In-person) Location TBD, MI	5:30 - 7:30 p.m. August 21, 2023
28 th -Annual SPE Automotive Division Golf C Fieldstone Golf Course Auburn Hills, MI USA	Outing All Day September 5, 2023
23 rd -Annual Automotive Composites Conference and Exhibition (ACCE) Suburban Collection Showplace Novi, MI USA	All Day September 6-8, 2023
2023 SPE TPO Global Engineering Polyolefi Detroit Troy Marriott Troy, MI USA	ns Conference 8:00 a.m5:00 p.m. October 1-4, 2023
SPE Auto. Div. Board Meeting Hybrid (Virtual & In-person) Location TBD, MI	5:30 - 7:30 p.m. October 23, 2023
52 nd - Annual Innovation Awards Competition Burton Manor Livonia, MI USA	& Gala (IAG) 4:30 - 11:00 p.m. November 8, 2023
SPE Auto. Div. Board Meeting Hybrid (Virtual & In-person) Location TBD, MI	5:30 - 7:30 p.m. December 4, 2023

Automotive Division Board of Directors meetings are open to all SPE members. All events are listed on our website at http://speautomotive.com. Email **Dr. Sassan Tarahomi** at auto-div-chair@speautomotive.com for more information.

CHAIR'S WELCOME

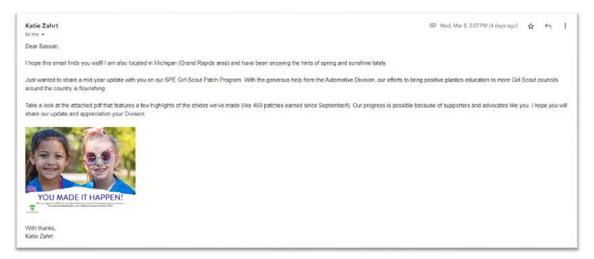
SASSAN TARAHOMI, SPE AUTOMOTIVE DIVISION CHAIR



My dear SPE members, we just completed our first hybrid board meeting on February 20, 2023. We had about 20 board members and guest who attended the meeting in person and dozen or so who attended virtually. I like to extend our gratitude to **Dr. Jeff Helms** who offered the Celanese large conference room and a great meal for everyone from a local Italian restaurant. I am happy to tell you that our division is in great shape and all volunteers are working hard to support our activities.

I am proud to share the good news with you that our board unanimously approved the 2023 budget which included \$41,020 increase to our education budget. This enables us to assist with after school STEM Clubs, SPE summer programs, Polymer/Plastics Science fair, PlastiVan Visits, Girls Scout Polymer Patch Events, PlastiVan STEM Events for Schools and Communities, Ecotek Lab & Junior Researcher Support, 3D Printer Grants, Field trip for Ecotek students, Polymer Material Education and Mentoring Program, Local Teacher Training, Program Coordinator Support and PlastiVan Educator Professional Development as well as Supporting student activities and awards at our ACCE, EAV Conferences and the IAG event. Many thanks to our education chair Chuck Jarett and foundation CEO, Eve Vitale for working behind the scene by organizing, coordinating and managing many of these activities. Next time you see Chuck and Eve, please thank them and let them know how much we appreciate their hard work.

I like to share an email and two slides from Katie Zahrt a Girl Scout leader from Grand Rapids.









Troy, MI • April 17-19, 2023
Powered by SPE Automotive Division

Our second annual **Plastics in Electric and Autonomous Vehicle Conference** is coming up in April 17-19 at Detroit Marriott, in Troy. We do expect to pack the hotel and have 800+ attendance over 2 ½ days of the conference. Our dedicated committee members are working hard to make it all happen. We will have **Five great keynote speakers:**

- Jamie Brewer, GM Executive Chief Engineer Electric SUVs, GM's EV/AV Strategy and Innovation
- Jeff Makarewicz, Group Vice President Technical Resources Toyota North America R&D, Key Challenges, and Innovative Ideas to Navigate the Road to Future Mobility
- Dean Stevenson, Rivian Senior Director of Interiors, Systematizing Sustainability
- Alan Amici, President and CEO of Automotive Research (CAR), Assessment of Inflation Reduction (IRA) Act Impacts on North American Electric Vehicle Supply Chain
- Dr. Kevin Swift, Senior Economist, ICIS Global Chemicals, Long-term Scenarios for Automotive Plastics

Our sustainability panel discussion was so overpacked in the 2022 EAV conference that we decided to hold this year's panel discussion in the main hall on Tuesday morning, April 18. Topic of the Panel Discussion is *Thermal Runaway Protection*, which will be moderated by Dhanendra Nagwanshi, SABIC, Dr. Jeff Helms, Celanese and Maggie Baumann, PPA/Pinfa NA.

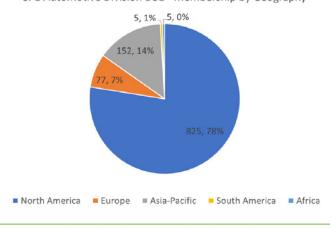
Conference technical program is planned for 66 presentations in eight sessions on three parallel tracks. Many thanks to Dr. Norm Kakarala and Dr. Suresh Shah for managing the technical program, Keynotes and Panel discussion. I am really excited to attend this conference and I hope to see many of you there.

2023 ACCE is planned for September 6-8. **Dr. David Jack** from Baylor University and **Dr. Christoph Kuhn** from Volkswagen Group of America, Inc. are the co-chairs of this conference. I am looking forward to attending this conference and plan to meet many new friends in the composite industry there.



I am very happy to announce we have gained another 40 new members since January 1, 2023. Our total registered members are 1,340. Here is our membership geographic distribution.

SPE Automotive Division D31 - Membership by Geography



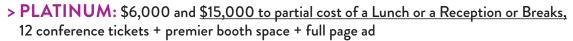
Our Awards Committee was formed in December 2022. Dr. Umesh Gandhi from Toyota Technical Center was nominated and graciously has accepted to be the Award Chair. Dr. Norm Kakarala, Dr. Suresh Shah and I are member of the awards committee. Nomination for awards should be emailed to Dr. Gandhi.

2023 has started to be a great year for the Automotive Division and I am certain it will be a year to remember. We have about 9 more months to go. Let's work hard and make it all happen.

Your Division Chair Sassan



SPONSORSHIP OPPORTUNITIES





- > GOLD: \$6,000 6 conference tickets + high traffic booth space + 1/2 page ad
- > EXHIBITOR: \$4,000 2 conference tickets + booth space + 1/4 page ad

Contact: EAVConference@speautomotive.com or Call Sassan Tarahomi (989) 335-0060

REGISTER TODAY at https://speautomotive.com/plastics-in-electric-autonomous-vehicle-conference

3-day event cost: \$550 for SPE members; \$600 for non members

Be part of the all new SPE Automotive Plastics in Electric & Autonomous Vehicles Conference and learn how electric and autonomous vehicle development is driving innovative automotive solutions. This event will feature technical presentations, keynote speakers and panel discussions, networking breakfasts, breaks, lunches and receptions, and exhibits that highlight advances in this fast-growing industry.

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2023 EAV CONFERENCE SESSIONS, TOPICS, AND LEADERS:

- > BATTERY AND THERMAL MANAGEMENT SYSTEMS Dhanendra Nagwanshi, SABIC Dr. Jeff Helms, Celanese Corp. Maggie Baumann, PPA/Pinfa NA
- MANUFACTURING ENABLING TECHNOLOGIES David Kosse, Ascend Performance Materials Steve Vanloozen, Lotte Chemical
- SUSTAINABILITY AND CARBON NEUTRALITY Dr. Rohit Srivastava, Amazon Drew Geda, Hyundai-Kia America
- ADVANCED DRIVER ASSISTANCE SYSTEM (ADAS) Dr. Rodrigo Orozco, Celanese JP Wiese, SABIC
- > EVOLUTION OF EXTERIORS AND LIGHTING Tom Pickett, General Motors Volker Plehn, SABIC Mark Lapain, Advanced Composites
- Dr. Rose Ryntz, Ryntz & Associates Jeff Crist, Ford Motor Co. Jim Keller, Mankiewicz Coatings LLC
- MATERIAL INNOVATIONS Mike Shoemaker, Borealis Paula Kruger, Ascend Performance Materials Sunit Shah, LyondellBasell
- NOISE, VIBRATION AND SEALING Andrea Frey, General Motors Dr. Xian Jiang, Dow

CONFERENCE CHAIR

Dr. Sassan Tarahomi +1.989.335.0060

TECHNICAL CO-CHAIRS

Dr. Norm Kakarala +1. 248.840.6747

Dr. Suresh Shah +1. 248.635.2482

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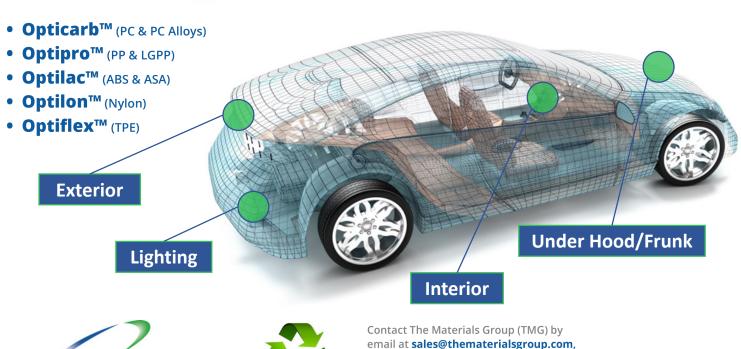








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TREASURER'S REPORT

JITESH DESAI, SPE AUTOMOTIVE DIVISION TREASURER



13 APRIL 2023

2023 has been an exciting year with opportunities to support division objectives and devote as much funds as possible towards education. First time SPE Automotive Division board has committed \$100,000 towards education activities with SPE Foundation education initiatives. HQ.

Financial status as of March 31, 2023, for the fiscal year net operating revenue of

AS OF MARCH 31, 2023, THE DIVISION'S ACCOUNT BALANCES WERE:

Checking: \$438,893.71 Savings: \$27,561.31 Total: \$466,455.02

\$141,091.11. Thank you to SPE Automotive Division for support, guidance and entrusting in me the confidence. I am looking forward to working with the team and commit to doing my best to support the organization to further our goals and carry out SPEAD mission.

Thank you to Sassan for his leadership, and Bonnie for supporting me while I was on vacation. Tax year 2022 ended on 31 December 2022. SPE Automotive will be filing IRS return in coming months (have applied for and obtained an extension of 180 days).

We have set a goal of external audit of our books before the end of 2023. As finalized accounts are audited results will be shared. 2023 Budget was passed during February 2023 Board Of Directors Meeting.





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BASF, FLEX-N-GATE, TOYOTA, AND L&L PRODUCTS NAMED FINALISTS FOR 2023 JEC INNOVATION AWARD



BASF, Flex-N-Gate, Toyota, and L&L Products were named as finalists for the **2023 JEC Innovation Award in the Automobile and Road Transportation – Design Part** category with the **composite seatback** design on the 2022 Toyota TundraTM. This project has previously won the 2022 Altair Enlighten Award for achievements in weight savings and the 2022 SPE Automotive Innovation Award.

"Pultrusion composite technology allowed us to design a seat structure that was 20% lighter compared to the previous model and to meet our cost goals," said Vik Bhatia, Group Manager for Engineering Design Chassis at Toyota. "BASF, L&L Products and Flex-N-Gate were great partners that help us reach our targets."

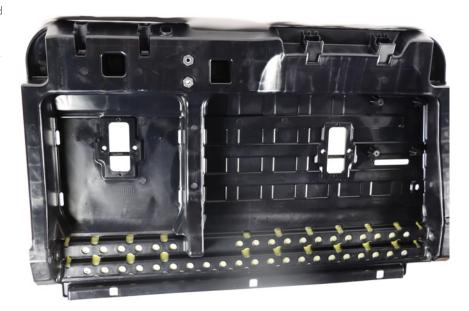
The seat structure is the first interior application for L&L Products' Continuous Composite Systems™ (CCS™) technology that uses BASF's polyurethane pultrusion system Elastocoat® 74850. CCS is a fiber-reinforced composite carrier with highly engineered sealants and adhesives in a two-dimensional profile. In this application it was overmolded with BASF's impact-modified polyamide 6 Ultramid® B3ZG7 CR to create the 3D shape of the 60% seat back.

"With this partnership, we were able to eliminate an all-steel assembly which contained 60 stamped and welded parts and integrate into four composite parts which reduced assembly and scrap costs associated with the

metal seat structure," said Hank Richardson, Product Engineering Manager, L&L Products. "This also allowed for greater functionality of the seating system."

"We continue to show how pultrusion can deliver lightweight, cost-effective solutions as well as integrated functionality," said Kipp Grumm, Technology Leader for Thermoplastic Composites, Performance Materials, BASF Corporation. "The unique design of the injection overmolded pultruded beam in the seat structure also passed all relevant crash test requirements and opens the door for more adoption of composites in automotive applications.

If you want to learn more about this, please reach out to BASFAutomotiveSolutions@basf.com.





SPE® ACCE (AUTOMOTIVE COMPOSITES CONFERENCE & EXPO) ANNOUNCES CALL FOR PAPERS, SPONSORS & EXHIBITORS FOR 2023 EVENT:

COMPOSITES THE KEYTO EV

AUTO & AIR MOBILITY

The SPE Automotive Composites Conference & Expo (ACCE) team is announcing its Call for Papers, Sponsors & Exhibitors for the 23rd annual event September 6 - 8, 2023 at the Suburban Collection Showplace in Novi, Michigan. **COMPOSITES: THE KEY TO EV - AUTO AND AIR MOBILITY** is the theme for the 2023 event. "Composites continue to play a key role in the development of electric vehicles, from safety to range to ergonomics, so we're continuing with our 2022 theme and expanding it to include air mobility which is the next frontier for transportation and composites," said Dr. David Jack, professor, Mechanical Engineering at Baylor University and ACCE 2023 co-chair. "The inherent lightweight strength, manufacturability, and design flexibility of composites make them the ideal material to take both ground and air transportation to the future, from the highway to the skyway," added Jack. "The industry speeding towards e-mobility is driving an increase in innovative composites applications," said Dr. Christoph Kuhn, assistant to EVP & Chief Engineering Officer, Volkswagen Group of America and ACCE 2023 co-chair. "Composites will soar like never before as air mobility vehicles take flight," continued Kuhn. "We're adding a new 'Composites in Air Mobility' emphasis to feature and highlight the role composites are playing in this next transportation wave," said Dr. Mehdi Tajvidi, associate professor, Renewable Nanomaterials at The University of Maine and ACCE 2023 Technical Program co-chair. "Last year's ACCE had 10 presentations in the new 'Composites in Electric Vehicles' category, and 5 keynotes on EV applications," said Dr. Dana Gabriela Miloaga, senior research scientist, Corporate R & D at Johns Manville and ACCE 2023 Technical Program co-chair. "The ACCE 2023 new emphasis on 'Composites in Air Mobility' will greatly enhance the program enabling a spark of ideas for e-mobility and composites technology transfers between automotive and aerospace industries and other markets."



TECHNICAL PROGRAM
CO-CHAIR
Dr. David Jack
Baylor University



CONFERENCE CO-CHAIR Dr. Christoph Kuhn Volkswagen Group of America



TECHNICAL PROGRAM
CO-CHAIR
Dr. Dana Gabriela Miloaga
Johns Manville



TECHNICAL PROGRAM
CO-CHAIR
Dr. Mehdi Tajvidi
The University of Maine

THE ACCE FEATURES technical sessions, panel discussions, keynotes, and exhibits highlighting advances in materials, processes, and equipment for both thermoset and thermoplastic composites in a wide variety of transportation applications. Networking breakfasts, lunches, and receptions enhance the value of the event that typically attracts over 800 attendees from across the globe. Since 2001, the Automotive and Composites Divisions of the Society of Plastics Engineers (SPE®) have jointly produced the ACCE to educate the industry about the benefits of composites in transportation applications.

THE 2023 ACCE TECHNICAL PROGRAM will include 80 - 100 technical presentations on current and future industry advances. In addition to the category added in 2022 'Composites in Electric Vehicles' and the new category for ACCE 2023 'Composites in Air Mobility', the presentations are organized into the following additional categories: Advances in Thermoplastic Composites; Advances in Thermoset Composites; Modeling of Composites; Additive Manufacturing & 3D Printing; Enabling Technologies; Sustainable Composites; Bonding, Joining & Finishing; Carbon Composites; and Business Trends/ Technology Solutions. Paper abstracts for non-commercial podium presentations are due as soon as possible. Before acceptance for a podium presentation, authors must submit either an archival scientific paper conforming to the conference quidelines or their completed technical presentation ready for archival. The archival papers or presentations are also due as soon as possible. Authors who submit scientific papers will be considered for the conference's Best Paper Awards, which are presented during the event's opening ceremony. A template for papers can be downloaded from the SPE ACCE website online via http://speautomotive.com/acce-forms. Inquiries about submitting abstracts, scientific papers, and technical presentations can be sent to **ACCEpapers@speautomotive.com**.

A VARIETY OF SPONSORSHIP AND EXHIBIT OPTIONS

offer companies and organizations the opportunity to support the event and promote their products and services to a very targeted and interested audience. Student Poster Competition and Scholarship sponsorships are also available. All sponsorships include passes to the event including access to all keynotes, panel discussions, technical sessions and daily networking opportunities. Sponsorship also includes corporate exposure on SPE ACCE websites, advertising, publicity, social media, signage throughout

the event venue and more. **EARLY BIRD SPONSORS** to date for ACCE 2023 include: **Premier Plus Sponsors - INEOS**Composites and Molding Products; **Premier Sponsors - Ascend**Performance Materials, AOC, BASF, and BYK USA; Associate
Sponsors - Baylor University MTACC, Dieffenbacher and
Schmidt & Heinzmann. Companies interested in supporting the event with sponsorship and showcasing their products and services should contact Teri Chouinard at **teri@intuitgroup.com**and go to www.speautomotive.com/acce-conference for more information.

ABOUT THE SPE ACCE

Held annually in suburban Detroit, the ACCE draws over 800 speakers, exhibitors, sponsors and attendees and provides an environment dedicated solely to discussion, education and networking about advances in transportation composites. Its global appeal is evident in the diversity of exhibitors, speakers, and attendees who come to the conference from Europe, the Middle East, Africa, and Asia/Pacific as well as North America. About 20% of attendees work for automotive and light truck, agriculture, truck & bus or aviation OEMs and another 25% represent tier suppliers. Attendees also work for composite materials processing equipment, additives, or reinforcement suppliers; trade associations, consultancies, university and government labs; media; and investment banks. The show has been produced by the SPE Automotive and Composites Divisions since 2001.

THE MISSION OF SPE is to promote scientific and engineering knowledge relating to plastics worldwide and to educate industry, academia, and the public about these advances. SPE's Automotive Division is active in educating, promoting, recognizing, and communicating technical accomplishments in all phases of plastics and plastic-based composite developments in the global transportation industry. The SPE Composites Division is dedicated to the growth of composites in multiple industries. Topic areas for both divisions include applications, materials, processing, equipment, tooling, design, and development.

For more information see http://speautomotive.com and https://composites.4spe.org. For more information on the Society of Plastics Engineers, see www.4spe.org.



BY TERI CHOUINARD, SPE AUTOMOTIVE DIV. COMMUNICATIONS CHAIR

SPE® ACCE 2023 – AUTOMOTIVE COMPOSITES CONFERENCE & EXPO ANNOUNCES CALL FOR APPLICATIONS FOR ACCE 2023 PARTS COMPETITION

There is no cost to nominate a part for the competition, although it is only open to conference participants (whether speakers, attendees, or sponsors/exhibitors).

Parts may be OEM or Aftermarket on a vehicle available for commercial sale anywhere in the world, or a development/prototype demonstrating a significant advancement in composites technology. Parts and/or prototypes can be for passenger vehicles, light- or heavyduty trucks, other vehicles or transportation applications.

Parts will be reviewed by a group of judges from the SPE ACCE organizing committee. These judges will pick: **2 winners in Materials Innovation** (1 from the Production Part Category/Part on a Vehicle, and 1 from the Prototype Category); and **2 winners in Process Innovation** (1 from the Production Part Category/Part on a Vehicle, and 1 from the Prototype Category). An additional prize, the **People's Choice Award,** will be selected by vote of conference attendees. The People's Choice will be from the Prototype or Production Part Category – there will only be 1 People's Choice Winner. Winners will be announced on the last day of the event. Winning nominating parties will be honored with a trophy.

Nominations will be judged on the impact and trendsetting nature of the application, including materials of construction, processing method, assembly methods, and other enabling technologies that made the application possible. Nominations should also emphasize benefits of design, weight and cost reduction, parts consolidation, functional integration, and improved performance.

NOMINATION ABSTRACTS (Brief descriptions 30 words approx.) are due June 30, 2023 and final write-ups are due July 30, 2023 via email to Dr. Leonardo Simon at LSimon@uwaterloo.ca Parts must be present at the SPE ACCE and available for display set-up on Sept. 5, 2023. There will be a formal walk-through for judges during the SPE ACCE to review parts. Final decisions will be made during the conference.

SPE ACCE PARTS COMPETITION NOMINATION INSTRUCTIONS

Use the format below for your nomination and limit it to 5 pages maximum (including description, photos, charts or graphs, etc.).

- Note Part Category (A. Materials Innovation: Production Part or Prototype OR B. Process Innovation: Production Part or Prototype). Include Name of Part, Part Description & Photo.
- 2. Describe the Most Innovative Features of the Part. (Include additional photos if applicable).
- 3. Describe the Material and/or Process Innovations, Weight savings, Cost savings, Performance improvements, Safety improvements, Functional improvements, Integration & Environmental Benefits, and any additional innovative benefits. Include Photos, graphs and/or charts, etc. if applicable.
- 4. OEM, Make & Model Year of Vehicle, Where Part is used, or will be used, if available.
- 5. Materials of Construction (resin, reinforcements, additives or other interesting aspects).
- 6. Resin Supplier/Reinforcement Supplier / Other Key Material Suppliers.
- Processing Methods used to Produce Part (how it is molded, how it is assembled, how it is finished) Include Photos and/or drawings if applicable.
- 8. Molder/Tier Integrator Who Produces Part.
- 9. Optional: Provide any additional background information, or other information that further describes the innovative nature of your part nomination.
- Name of Organization Submitting Nomination and Contact info for Part Champion.

FIRST KEYNOTE ANNOUNCED FOR SPE® ACCE 2023 EVENT:

WHAT DOES DISRUPTIVE ELECTRIFICATION OF TRANSPORT MEAN FOR INDUSTRIALIZATION OF COMPOSITES?

JOE SUMMERS, COMMERCIAL DIRECTOR AIRBORNE AND MANAGING DIRECTOR AIRBORNE UK

The executive planning committee for the SPE® Automotive Composites Conference & Expo (ACCE) is announcing the first keynote speaker for their ACCE 2023 event September 6 - 8, 2023 at the Suburban Collection Showplace in Novi, Michigan (Detroit suburb). Joe Summers, Commercial Director Airborne and Managing Director Airborne UK, will present "What Does Disruptive Electrification of Transport Mean for Industrialization of Composites?" The presentation will show how electrification is disrupting most transport segments and creating new ones. In all cases, the additional mass of batteries creates a need for some degree of weight-offsetting and composites are the obvious solution. However, the very specific demands of carrying batteries are a challenge for composites to meet. Many issues are typical to any new application for composites, trying to balance fixed vs recurring costs, functional performance, sustainability, qualification and repeatability, but scalability is bringing another dimension of challenge. This keynote will summarize the key functional challenges for composites in a variety of new and emerging segments and focus on how EVTOL brings functional challenges of aerospace, with production volumes more akin to automotive, and how technology developments are trying to solve them.

"I think the conference subject is a perfect description actually - 'Composites the Key to EV' encapsulates our thinking too and the approach of Airborne," said Summers. "Everyone recognizes that design-for-X is vital but more than ever, with the need for composites, and the drive to achieve rapid scaling of rate manufacture, design-for-automation is critical," continued Summers. "We support that through "Industrialization Partnership" which are all the steps before readiness for automation," added Summers.

The keynote will include how UAM/EVTOL (Urban Air Mobility/ Electric Vertical Take Off and Landing) combines the challenges of aerospace and automotive, how the demands of both sectors magnify the challenges to the composites industry, and how we might collectively rise to that challenge with solutions.

The keynote will refer to a specific example of the crossover between Automotive and Aerospace approaches. Airborne is working within the ASCEND consortium (Aerospace and Automotive Supply Chain Enabled Development) to accelerate the development of composite material and process technologies for the next generation of energy efficient aircraft and future mobility. Other industry partners include Assyst Bullmer, Cobham Mission Systems Wimborne, Cygnet Texkimp, Des Composites, Far-UK Ltd, GKN Aerospace, Hexcel Composites,

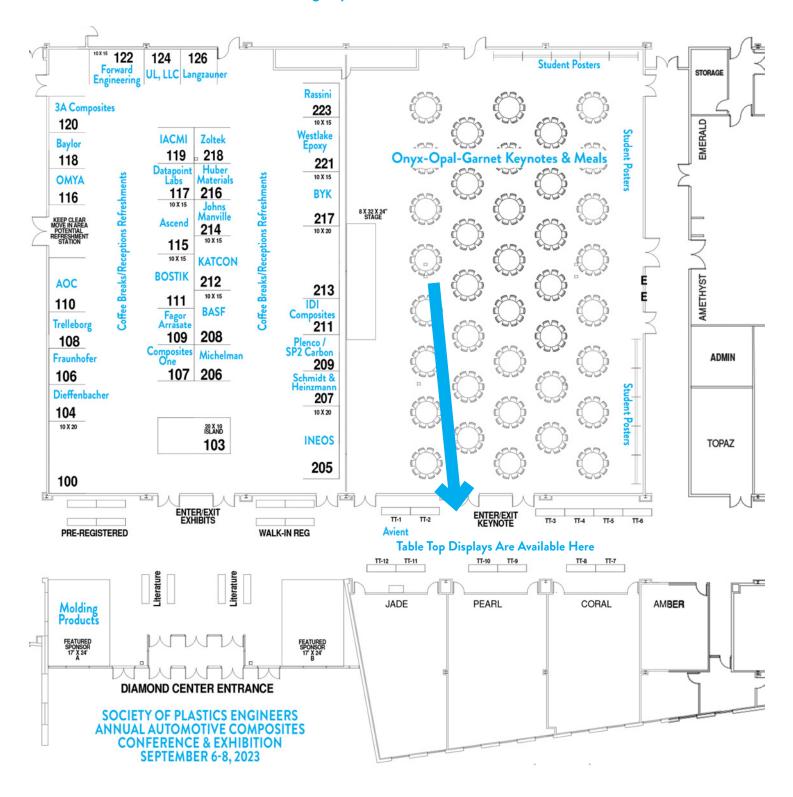
Hive Composites, LMAT, Loop Technology, McLaren Automotive, the National Composites Centre, Rafinex, Sigmatex (UK) and Solvay Composite Materials with collaboration and investment support from Axillium Research. Through a 3-year commitment established in March 2021, the £40 million consortium, funded by a £20 million commitment from industry and a £19.6 million commitment from the UK government via ATI, is focusing on greater adoption of composite technologies today, the industrialization of new technologies, as well as accelerating aerospace production rates to meet future high-volume requirements. ASCEND is helping to develop technologies from across the UK supply chain to develop the advanced materials and automation equipment required to manufacture lightweight structures for the sustainable air mobility, aerospace and automotive industry.



JOE SUMMERS has been in the composites industry for nearly 25 years, starting his career at Gurit where he held various roles including Head of Engineering and Program Management, and Director of Business Development. He joined Airborne in 2017 and is Commercial Director for the automation business, along with being Managing Director of the UK subsidiary. Joe is also a director of Composites UK, the UK composites trade association.

CURRENT ACCE EXHIBITS FLOOR PLAN

Exhibitor Booths Are Still Available Contact Teri@Intuitgroup.com or 248.701.8003 for details.





The automotive and transportation industries are advancing with composites playing a key role in the development of electric vehicles, air mobility, and sustainability initiatives worldwide. Lightweight composites are ideal materials for improving vehicle performance, reducing mass, extending range and compensating for battery weight. Polymer composites are enabling lower emission vehicles, reducing the carbon footprint and saving energy to benefit the environment now and in the future. Thermoset and thermoplastic composites are

For more information and to register, go to: https://speautomotive.com/acce-conference/ The presentations are organized into the following categories: Composites in Electric Vehicles, Thermoplastic Composites; Thermoset Composites; Modeling; Additive Manufacturing & 3D Printing; Enabling Technologies; Sustainable Composites; Bonding, Joining & Finishing; Carbon Composites; and Business Trends/Technology Solutions. Paper abstracts are due **ASAP**. Final scientific papers or non-commercial presentations are due by **May 31, 2023**. Authors who submit papers (not presentations) in the proper format will be considered for the conference's Best Paper Awards, which are presented during the event's opening ceremony. A template for papers can be downloaded from the SPE ACCE website online via http://speautomotive.com/acce-forms. Abstracts and papers or presentations must be submitted online via the SUBMIT 2023 ABSTRACTS/PAPERS OR PRESENTATIONS HERE button on https://speautomotive.com/acce-conference/.

SPONSORSHIP AND EXHIBIT OPTIONS offer companies the opportunity to support the event and promote their products and services to a very targeted and interested audience. All sponsorships include passes to the event including access to all keynotes, panel discussions, technical sessions and daily networking opportunities. Sponsorship also includes corporate exposure on SPE ACCE websites, advertising, publicity, social media, signage throughout the event venue and more. Companies interested in sponsorship should contact Teri Chouinard at **teri@intuitgroup.com**.

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SPE® ACCE 2023 IS PRESENTED BY SPE AUTOMOTIVE AND SPE COMPOSITES DIVISIONS





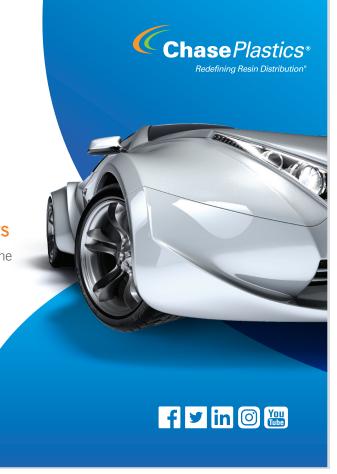
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SPE® ANNOUNCES "CALL FOR NOMINATIONS" FOR 52ND ANNUAL AUTOMOTIVE INNOVATION AWARDS COMPETITION & GALA – PLASTICS: CHARGING INTO THE AUTOMOTIVE REVOLUTION

Call for Nominations MOST INNOVATIVE USE OF PLASTICS AWARDS

The Automotive Division of the Society of Plastics Engineers (SPE®) is announcing a **CALL FOR NOMINATIONS** for its 52nd annual Automotive Innovation Awards Gala, the oldest and largest recognition event in the automotive and plastics industries (established in 1970). This year's Awards Gala will be held Wednesday, November 8, 2023 at the Burton Manor in Livonia, Mich. Winning part nominations, due by September 8, 2023, in 10 different categories, and the teams that developed them, will be honored with a MOST INNOVATIVE USE OF PLASTICS award. Categories include: Aftermarket & Limited Edition/Specialty Vehicles, Body Exterior, Body Interior, Chassis/Hardware, Electric and Autonomous Vehicle Systems, Sustainability, Materials, Powertrain, Process / Assembly / Enabling Technologies, and Safety. A GRAND AWARD will be presented to the winning team from all category award winners.

An application that has been in continuous use for 15 years or more, and has made a significant and lasting contribution to the application of plastics in automotive vehicles, nominations due by May 31, 2023, will be honored with a HALL OF FAME award. Additional criteria for a HOF award is that the nomination be: game changing; very successful worldwide; innovative in materials, process and application; and still being used. The HOF committee consists of engineers, managers, executives, technical experts, SPE Fellows, SPE Honored Service Members and automotive industry technical experts having served at least 30 plus years in the industry.

Nominations must be submitted online via:

https://speautomotive.com/wp-content/
uploads/2023/02/2023-SPE-Innovation-Awards-ProgramPart-Nomination-Form-V1.pdf

"Plastics are continuing to lead the charge in enabling innovative advancements in automotive electric vehicles, autonomous vehicles and traditional ICE (Internal Combustion Engine) vehicles" said **Dr. Jeffrey Helms,** global automotive director, Celanese Corp., who returns as the 2023 SPE Automotive Innovation Awards chair. "Plastics are the superior material enhancing the revolution in electic vehicles and other mobility applications," added Helms. "This year's event will highlight and celebrate how plastics are leading the advancement of the automobile."

Since 1970, the SPE Automotive Innovation Awards Competition has highlighted the positive changes that polymeric materials have brought to automotive and ground-transportation industries, such as weight and cost reduction, parts consolidation, increased safety, and enhanced aesthetics and design freedom. At the time the competition started, in 1970, many OEM designers and engineers thought of plastics as inexpensive replacements for more "traditional" materials. To help communicate that plastics were capable of far more functionality than their typical use as decorative knobs and ashtrays indicated, members of the board of directors of SPE's Automotive Division created the competition to recognize successful and innovative plastics applications and to communicate their benefits to OEMs, media, and the public.

Over the years, the competition drew attention to plastics as an underutilized design tool and made industry aware of more progressive ways of designing, engineering, and manufacturing automotive components. From its humble beginnings, the competition has grown to be one of the most fiercely contested recognition events in the automotive and plastics industries. Today, polymeric materials are no longer substitutes for more expensive materials, but rather are the materials of choice in hundreds of different applications throughout the vehicle. Without plastics, many of the auto industry's most common comfort, control, and safety applications would not be possible.

During the competition phase of the event, dozens of teams made up of OEMs and suppliers work for months to hone submission forms and presentations describing their part, system, or complete vehicle module to support claims that it is the year's **Most Innovative Use of Plastics.** To win, teams must survive a pre-competition review and two rounds of presentations before industry and media judges.

There is no cost to nominate parts, however, nominations that are accepted into the competition need to be presented (in person or via webinar) by their nominating teams to the SPE Automotive Div. Board of Directors during the first round of Automotive Innovation Awards Competition judging, September 21 - 22, 2023 at Celanese Corp. in Auburn Hills, Michigan. Finalists from that round advance to a second presentation before a panel of Blue Ribbon judges made up of media, retired chief engineers, and other industry experts on September 29, 2023 (also at Celanese Corp. in Auburn Hills, Mich.) Winners of each part category, the Grand Award, Hall of Fame, and Lifetime Achievement winner will all be honored during the Automotive Innovation Awards Gala on November 8, 2023. This annual event typically draws over 800 OEM engineers, automotive and plastics industry executives, and media. Funds raised from the event are used to support SPE educational programs including technical seminars and conferences, which help educate and secure the role of plastics in the advancement of the automobile. For more info go to: https://speautomotive.com/spe-automotive-div-innovation-awards/

THE MISSION OF SPE is to promote scientific and engineering knowledge relating to plastics worldwide and to educate industry, academia, and the public about these advances. SPE's Automotive Division is active in educating, promoting, recognizing, and communicating technical accomplishments in all phases of plastics and plastic-based composite developments in the global transportation industry. Topic areas include applications, materials, processing, equipment, tooling, design, and development.

For more information see http://speautomotive.com. For more information on the Society of Plastics Engineers, see www.4spe.org.



PUSHING BOUNDARIES, TOGETHER

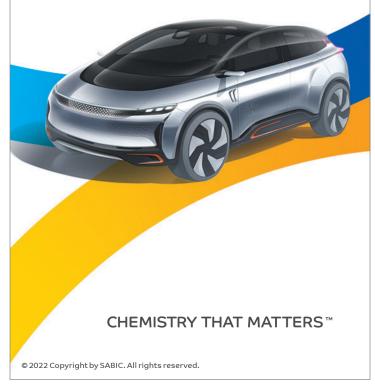
Vehicle technology is changing rapidly. Our global team can help you keep pace, and get ahead of the demands. With our growing portfolio of proven thermoplastic materials and solutions, and with support from local specialists and development experts, you can push the boundaries of engineering and design.

Combining our science and ingenuity with yours, so you can succeed. This is what we call Chemistry that MattersTM.

sabic.com/en/industries/automotive

in CONNECT WITH US

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Call for Nominations MOST INNOVATIVE USE OF PLASTICS AWARDS

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SPONSORSHIP OPPORTUNITIES

This annual event currently draws over 800 OEM engineers, automotive and plastics industry executives, and media. A variety of sponsorship packages - including tables at the banquet, networking receptions, advertising in the program book, signage at the event and more are available. Contact Teri Chouinard of Intuit Group at teri@intuitgroup.com.

For more info and to submit nominations, go to:

https://speautomotive.com/spe-automotive-div-innovation-awards/

2022 Sponsors

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The chemistry inside innovation

MAIN RECEPTION SPONSOR



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BODY INTERIOR
CHASSIS/HARDWARE

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SPECIALTY VEHICLES

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28TH ANNUAL SPE GOLF **OUTING**

PROCEEDS BENEFIT SPE STUDENT CHAPTERS

2023 SPONSORSHIP OPPORTUNITES

TYPE OF SPONSORSHIP	COST	BENEFITS INCLUDE
CONTEST HOLE	\$1000. USD	1 foursome, signage, flag & more
HOLE	\$750. USD	1 foursome & signage
BREAKFAST	\$1500. USD	2 foursomes & signage
LUNCH	\$2000. USD	2 foursomes, signage & 100 fliers printed & distributed at the event promoting sponsoring company or its products
DINNER	\$3000. USD	3 foursomes, signage, company message / logo on dinner table centerpieces, 100 fliers printed & distributed at the event promoting sponsoring company or its products

Please note that Team Captains are asked to bring donations for the Prize Table.

SPONSORSHIP CHAIR:

Teri Chouinard, Intuit Group +1.248.701.8003 teri@intuitgroup.com

https://speautomotive.com/spe-golf-outing/

SEPT 5

COST:

\$500. USD/Foursome \$125. USD/Player

PROGRAM:

8:30am: Sign-in & Continental Breakfast

10:00am:

Shotgun Start

Box Lunch at Turn

3:30pm:

Buffet Dinner

4:00pm:

Awards & Prizes



FIELDSTONE GOLF CLUB 1984 Taylor Road Auburn Hills, MI | 21



AUTO EPCON 2023 CONFERENCE MAY 2, 2023

Detroit Marriott - Troy Hotel, 200 Big Beaver Rd, Troy, MI 48084

KEYNOTE SPEAKERS

Ankil Shah, Toyota Motor North America
Joe Langley, S&P Global
Sandry Munro, Munro & Associates

CALL FOR STUDENT POSTERS

POSTER ABSTRACT SUBMISSION DEADLINE: APRIL 10, 2023 ACCEPTED STUDENT PRESENTERS NOTIFIED: APRIL 17, 2023

- > Students must bring their posters printed on the template provided.
- > For queries regarding the poster session, please email: Dr. Brian Knouff: knouffbj@ornl.gov
 - Dr. Mahmood Haq: haqmahmo@egr.msu.edu
- > For queries regarding travel assistance, please email: David Okonski: david.a.okonski@gm.com

SPONSORSHIP OPPORTUNITIES & CONFERENCE REGISTRATION

For sponsorship and registration information please use this link https://www.4spe.org/i4a/pages/index.cfm?pageid=8018



PLASTICS ARE GOOD FOR THE PLANET





Welcome to our new feature "Plastics are Good for the Planet" Dedicated to the benefits of plastics and their positive impact on environmental sustainability. We hope you enjoy our latest article from the American Chemistry Council website: https://www.americanchemistry.com/chemistry-in-america/chemistry-in-everyday-products/plastics

CHEMISTRY OF PLASTICS

Versatile plastics inspire countless innovations that help make life better, healthier and safer every day. Plastics are in products we use every day that help keep us safe. They are in bicycle helmets, child safety seats, and automotive airbags that protect us and the cell phones that connect us. Plastics also help keep the foods we eat and serve to our families safer and fresher than ever before.



Strong, lightweight plastics enable us to live better while contributing to sustainability in many ways—all of which stem from plastics' ability to help us do more with less.

Plastics help us protect the environment by reducing waste, lowering greenhouse gas emissions, and saving energy at home, at work, and on the road. Plastic packaging helps to dramatically extend the shelf life of fresh foods and beverages while allowing us to ship more product with less packaging material—reducing both food and packaging waste.

Plastic insulation, sealants, and other building products are making our homes significantly more energy efficient, while reducing costs for heating and cooling. And lightweight plastics in cars can dramatically increase miles per gallon, saving drivers money at the pump.

Plastics not only help doctors save lives, they protect our loved ones at home, on the road, on the job and at play. And these advanced materials are helping make health care more affordable.

\$8B+

In plastics recycling investments have been announced since 2017, mostly in advanced recycling technologies.

10%

Reduction in vehicle weight can result in a 6% - 8% increase in that vehicle's fuel economy, according to the Department of Energy.

AMERICA'S PLASTIC MAKERS®

Plastic is a resource too valuable to waste. *Making Sustainable Change* is a collaborative effort of America's Plastic Makers® and partners seeking to end plastic waste while lowering carbon emissions throughout the plastics lifecycle.

Explore PlasticMakers.org



EXPLORE CHEMISTRIES CRITICAL TO PLASTICS

POLYURETHANE

Included in everything from coatings, adhesives, sealants, to apparel, appliances, automotive, and flooring polyurethanes can easily be adapted to solve some of the most challenging problems.

Learn more



BPA

From protective food can linings to eyeglasses to bullet-resistant security shields used by police officers, polycarbonate plastic and epoxy resins create high-performance materials that have been used for decades.

Learn more



FACTS & HIGHLIGHTS

- Plastic materials and products play an important part in cutting-edge technologies used in the space program, in bulletproof vests and even prosthetic limbs.
- > The term "plastics" includes materials composed of various elements such as carbon, hydrogen, oxygen, nitrogen, chlorine, and sulfur.
- Using plastics can help reduce energy use and greenhouse gas emissions throughout the life of a product or package by allowing manufacturers and consumers to do more with less.
- > Plastics reduce vehicle weight can have a significant effect on fuel efficiency and emissions.

Learn more at: https://www.americanchemistry.com/chemistry-in-america/chemistry-in-everyday-products/plastics

CHEMISTRY OF AUTOMOTIVE

Lightweight, fuel efficient and safe automobiles are made possible by plastics and other products of chemistry.



Chemistry is used all over the cars we drive today, from the exterior paint, bumpers and headlights to interior seats, dashboard components, and the seatbelts and airbags that help protect passengers. Plastics can even be found in lithium polymer car barriers that power some hybrid and electric vehicles.

Plastics are used in a variety of innovative ways to help make cars safer and more fuel efficient. They're at the heart of solutions that make vehicles more lightweight, help increase fuel efficiency and reduce carbon emissions, help provide safety benefits like seatbelts and airbags and, plastics help to enable beautiful, sleek contouring and design.

What's more, as car makers work to meet sustainability goals and use recovered materials, a growing number of car parts are made using recycled plastics.

10%

Reduction in vehicle weight can result in a 6% - 8% increase in that vehicle's fuel economy, according to the Department of Energy.

\$400 BILLION

In circularity business opportunities for automotive companies and suppliers by 2030.

SAFETY

Plastics contribute to safety throughout automobiles:

- > Made from durable strands of polyester fiber, seat belts alone helped save nearly 15,000 lives in 2018, according to the National Highway Traffic Safety Administration (NHTSA).
- > Airbags, commonly made from highstrength nylon fabric, can reduce the risk of dying in a direct, frontal car crash by about 30 percent, according to NHTSA statistics.
- Child safety seats made possible by numerous advancements in polymer science help to protect our kids at every turn.

FUEL EFFICIENCY

Weight reduction in automotive design is a key driver in boosting fuel efficiency, reducing emissions and lowering costs for motorists. Many plastic components can weigh 50 percent less than similar components made from other materials. Modern innovations mean today's plastics make up 50 percent of a vehicle's volume, but only about 10 percent of its weight.

STYLE & INNOVATION

Plastics deliver engineering and styling qualities for modern automobiles. In exterior applications, from bumper to bumper, plastics are not only light weight, they give designers the freedom to create innovative concepts that in many instances would otherwise be impractical or virtually impossible. Plastics also resist dents, dings, stone chips and corrosion. They allow cost-saving part consolidation and facilitate modular assembly practices for reduced production costs.

EXPLORE CHEMISTRIES CRITICAL TO AUTOMOTIVE

HIGH PHTHALATES

Interiors, vinyl seat covers and interior trim in cars use high phthalates because of their effectiveness in making these products more resistant to degradation.

Learn more



POLYCARBONATE PLASTIC

Impact-resistant, polycarbonate-blend bumpers help protect passengers in collisions.

Learn more



POLYURETHANES

In addition to the foam that makes car seats comfortable, bumpers, interior "headline" ceiling sections, the car body, spedoors and windows all use polyurethanes

Learn more



SILICONES

Silicones help protect electronic components from extreme heat, moisture, salt, corrosion, contamination and movement.

Learn more



FACTS & HIGHLIGHTS

- > The National Highway Traffic Safety Administration estimates that today's seat belts made with industrial strength plastics can reduce auto fatalities by as much as 45 percent and serious injury by 50 percent, compared to not being buckled in.
- > A study conducted by the Department of Energy found that reducing a vehicle's weight by 10 percent with the help of plastic components could increase its fuel economy by 5-7 percent.
- > Lightweight materials such as plastics and plastic composites can help reduce the weight of autos so they can meet the Corporate Average Fuel Economy (CAFE) standard of 49 miles per gallon by 2026.

ABOUT AMERICAN CHEMISTRY COUNCIL

The American Chemistry Council (ACC) represents more than 190 companies engaged in the business of chemistry—an innovative, economic growth engine that is helping to solve the biggest challenges facing our country and the world. Our members are the leading companies engaged in all aspects of the business of chemistry, from the largest corporations to the smallest, and everything in between. They are the people and companies creating the groundbreaking products that are improving the world all around us by making it healthier, safer, more sustainable and more productive.

Our mission is to deliver long-term business value through exceptional advocacy and improved member performance. This includes best-in class member engagement, political advocacy, communications and scientific research. We are committed to fostering progress in our economy, environment and society.

We believe that if America is to remain a country that innovates and competes globally, it must do so with a thriving American chemical industry. Protecting that unique role and promoting our industry's interests drives everything we do.

Our member-driven philosophy makes ACC the leading, collective voice of the business of chemistry, driving a progrowth, common sense and science-based public policy agenda that brings forth innovation, creates jobs and economic expansion and enhances public and environmental health and safety.





INITIATIVES & PROGRAMS

Every year, the chemistry industry invests tens of millions of dollars to ensure that the products making modern living possible are safe for you, our communities and the environment. In addition to research initiatives, ACC programs focus on anticipating and preventing accidents, as well as educating the public about how to use our products safely.

Chemistry makes it possible to satisfy a growing world population. Our products protect our food supply, air and water, ensure safe living conditions and provide access to efficient and affordable energy sources and lifesaving medical treatments in communities around the globe.

To enable these ongoing innovations, we advocate for public policies that support the creation of groundbreaking products to improve lives, protect our environment and enhance the economic vitality of communities.

https://www.americanchemistry.com/about-acc

SPE AUTO DIV. NEWSLETTER "AUTOMOTIVE PLASTICS NEWS" SPONSORSHIP:

- \$3,000 for a Full Page, \$2,000 for a Half Page,
 \$1,000 for a Quarter Page In 4 issues!
- Logo included on the Front Cover of the Newsletter
- Logo/Link posted to SPE Auto Div. Newsletter Website Page
- Newsletters are emailed to SPE Automotive Division Membership (1,000 approx.) and posted to the SPE Automotive Div. Newsletter page permanently
- Sponsor Logos are also included in the Email cove letter for greater exposure and value!

For more info contact teri@intuitgroup.com, 248.701.8003

THANK YOU TO OUR NEWSLETTER SPONSORS

















SECRETARY'S REPORT

VIRTUAL BOARD MEETING MINUTES, FEBRUARY 20, 2023 BY STEVE VANLOOZEN, SPE AUTOMOTIVE DIVISION





ATTENDEES:

Sassan Tarahomi
Norm Kakarla
Jitesh Desai
Jeff Helms
Suresh Shah
Suzanne Cole
Akshay Trivedi
Alper Kizitlas
Drew Geda

Eve Vitale
Fred Deans
Leonardo Simon
Keith Siopes
Armando Sardanopoli
Paula Kruger
Teri Choinard
Rob Phillip
Dave Helmer

Rodrigo Orozco
Ewa Lewbert
Steve VanLoozen
Neil Fuenmayor
Jeremy Lee
JP Wiese
Dhanendra Nagwanshi
Martin Popella
Dean Stevenson
Arash Kiani
Tom Pickett
Brian Grosser
Al Chan
Jeff Mayville
Chuck Jarrett
Umesh Ghandi
Mark Lapain
Keith Youm

Arash Kiani Dr. Christoph Kuhn
Tom Pickett Sanjay Patel
Brian Grosser Bill Cunha
Al Chan Albert Chan
Jeff Mayville Martin Popella
Chuck Jarrett Richard Umemoto

- Meeting initiated by Sassan.
- · December meeting minutes approved with revision to notes on ANTEC conference.
- Bill Cunha and Richard Umemoto introduced as new board members. Richard will manage Auto Divisions digital presence
 as new webmaster.
- Jitesh covered closing of 2022 fiscal year financials. The divisions revenue for 2022 was -\$19,156.63. Confirmed \$100k support for SPE Foundation in 2023. Total education budget for 2023, \$125,250. Jitesh proposed purchasing \$200K 11 month CD raising additional \$9,166.67 for the division. This proposal as well as the 2023 budget approved by the board.
- ANTEC 2023 fixed for March 27-30 in Denver, CO. 96 individual technical talks scheduled across 4 major themes.
 Dr. Alper Kiziltas will moderate the Automotive and Sustainable Transportation session. Jeff Helms will attend the Councilor meeting held during ANTEC as well.
- ACCE update provided by Teri. 25 early bird sponsors contributing \$128K toward conference. 2 student racing teams will attend this years event and a race in the parking lot of the event is being explored.
- Second annual SPE EAV conference scheduled April 16-19, 2023. 5 keynote speakers, 66 technical presentations, and 29 sponsors confirmed.
- Dr. Helms shared early details on 2023 IAG. Conference theme is "Plastics: Charging into the Automotive Revolution". First round judging set for September 21-22 with Blue Ribbon Judging on September 29.
- Eve Vitale provided education update highlighting the 12 students from the 100 in Keith Young's Ecotek Lab currently in the SPE Mentorship Program. Keith explained the value and need for more mentors encouraging as many from the Board as possible to consider supporting with their time and knowledge.
- Automotive Division Membership has reached 1340 with 40 new members added so far in 2023 along with the 290 new members added in 2022.
- Paula shared newsletter update stressing need for additional sponsors. A separate meeting to be held to consider increasing price of sponsorship. Article submissions are due the first week of March for the Spring newsletter.
- Next meeting: April 10, 2023 5:30-7:30 PM.



EDUCATION REPORT

BY EVE VITALE, SPE FOUNDATION CHIEF EXECUTIVE

THE SPE AUTOMOTIVE DIVISION PARTNERS WITH THE SPE FOUNDATION THROUGH FUNDING AND **VOLUNTEERISM - CHANGING LIVES TOGETHER**

Under the leadership of Chair, Dr. Sassan Tarahomi and Educational Lead, Chuck Jarrett, the SPE Automotive Division Board of Directors recently voted to support the work of the SPE Foundation with a pledge of \$100,000 in 2023. The monies will be received quarterly and support the work of the Foundation mostly in Metro Detroit including SPE After-School STEM Clubs, PlastiVan visits, the SPE Automotive Junior Researchers Mentoring program, 3D printer grants for Detroit students, PlastiVan Educator professional development, local teacher training in polymer science education, support for the SPE Girl Scout Polymer Science patch, and more. This is the first in a series of articles highlighting the impact of this generous support.

The work of the SPE Foundation continues to focus on providing quality educational programs and opportunities to inspire young people to envision future careers in plastics/polymer-related industries. In our efforts to target untapped markets for workforce development, the Foundation and its partners are building strong programs in Detroit and Dallas. This includes our SPE Junior Researcher and Mentoring Program and our SPE After-School STEM Clubs.

How did the SPE Junior Researcher Program get started?

This competitive program is a collaboration between the SPE Foundation and Ecotek Science at Work! Lab in Detroit and awards \$500 research stipends to students in 8th through 12th grade who are doing applied research or investigation in polymer science or plastics engineering at the lab. Our SPE Junior Researcher program grew from two to twelve students in 2022 with the help of our sponsors - Arkema, the SPE Automotive Division, and BASF.

Why is this important to students? What do they learn?

This program is designed to prepare students with high STEM aspirations for success as undergraduate researchers and interns in the plastics industry. Each research stipend requires that students learn to manage their own project, including budgeting, reports, and partnerships. They may use their stipend for books, software, equipment, supplies, or travel. They must also present their work in poster format at an SPE conference, a local, regional, or national science fair, or other relevant conference.

How did we get more sponsors in 2022?

In 2022, student researchers from Ecotek Lab presented their relevant work at the SPE Automotive's Plastics in Electric & Autonomous Vehicle conference. Their presence and impressive posters created a buzz among attendees and exhibitors. Susan Jackson, BASF Head of Communications - Performance Materials, on why they sponsored four (4) students. "BASF is passionate about chemistry and science education. The opportunity to work with the SPE Foundation and set up the BASF Jr. Researchers program was something we could not pass up. These students are future scientists and innovators, and we are excited to see what they do next." The SPE Automotive Division also jumped on board by sponsoring six more students.



How did this lead to the SPE Mentoring Program?

Student presenters had an outstanding show at the conference, but the engineers wanted to teach them more about materials and engineering design. So, under the direction of Chuck Jarrett, the Auto Division's educational chair, the mentoring program was developed. The program includes group learning and individualized mentoring specific to the project and mentor's expertise. Phil Hemenway

put together a four-week curriculum covering a broad base of topics including basics of polymeric materials, design rules of thumb, processing methods and guidelines, material selection, mold flow analysis, structural analysis, and prototyping parts – all delivered by industry professionals.

When asked to comment on the generous level of commitment by Automotive Division volunteers and the funding being provided, Dr. Sassan Tarahomi, Division Chair remarked, "It is a great pleasure for the SPE Automotive Division to be part of educating the next generation. Ecotek Lab and the SPE Foundation are providing us with this superb opportunity to be directly involved in educating middle and high school students where we can have the biggest impact in changing their future. You have our 100% support; continue spreading the word."

What outcomes are we seeing and expecting for the SPE Junior Researchers?

Students in the program become confident that the plastics industry is a viable career path. This is accomplished through the welcoming nature of industry professionals at conferences and plant tours, and the caring relationships being developed through mentoring and networking opportunities. "You can't be what you can't see," said Allison Collins, mentor and materials engineer at Ford. "Students get to see real life engineers and scientists from their local area, illuminating a career possibility."

Each student's hard work, based on plastics-related projects and experiences, is helping earn scholarships, paving the way for a college career with less debt and anxiety. As part of the requirements for the award, students are learning hard and soft presentation skills.

And the benefits go both ways. Mentor Raymond Kalisz, Eissmann Group Automotive, commented on why he's committing so much time and effort to the program. "For me it's about legacy. I've had a great journey and learned so much. The opportunity to share some of this knowledge with the next generation is a chance I couldn't pass up and mentoring is so much fun. It's the best feeling when I see the sparkle of "I got it!" – when they figure things out."

It is our hope and expectation that these students are our future leaders, both in industry and in the Society of Plastics Engineers. Together we are making a difference.



Our Workforce Pipeline - Plastics in EAV 2022



SPE Automotive Junior Researchers Receive Award



High School Poster Presenter at Plastics in EAV 2022

SPE JUNIOR RESEARCHER MENTORS

LaRon Brown, Ford Motor Company
Allison Collins, Ford Motor Company
Andrew Geda, Hyundai
Phil Hemenway, Hemenway and Associates Engineering
Chuck Jarrett, The Materials Group
Raymond Kalisz, Eissmann Group Automotive
Amy Stephen, The Materials Group
Sassan Tarahomi, Alterra Holdings
Akshay Trivedi, GM



The Automotive Division also sponsors our flagship PlastiVan® program, so hundreds of students get a classroom experience that includes lively demonstrations and hands-on activities, designed to excite students about the opportunities in science and engineering in the plastics industry. Students are educated about the chemistry, history, processing, manufacturing, and sustainability of plastics and how the science and real-world applications relate to their everyday lives.

Positive Plastics Education is an important step in changing the "plastics" narrative to reflect the science and innovative culture of our industry. The SPE Foundation relies on partners like the SPE Automotive Division to get our job done. If you or your company would like to support our efforts, please email Eve Vitale at foundation@4spe.org.

The SPE Foundation and its partners utilize Positive Plastics Education in three areas of influence and impact. For Emerging Workforce, it awards scholarships and grants. To Create Opportunities for Historically Under-represented Populations in the plastics industry, including students of color, women, and students of lower socio-economic backgrounds, the Foundation collaborates with community partners to deliver multi-touch STEM education, engage students in after-school SPE STEM clubs, and collaborates with the Girl Scouts to engage girls in polymer science STEM activities. The PlastiVan® and PlastiVideo® programs engage students in the discussions and science-based evidence surrounding the Sustainability of Plastics and exposes students to the many career pathways available to them in the plastics industry.





Sponsored in part by



PlastiVan® has shifted gears to PlastiVideo™!

If you'd like to sponsor a visit or bring virtual plastics education to your community contact us.

Julie Proctor, PlastiVan Program Coordinator jproctor@4spe.org

www.plastivideo.org



TESTIMONIAL WITH ECOTEK LAB



MY EXPERIENCE AS JUNIOR RESEARCHER WITH AUTOMOTIVE DIVISION ANGEL GRIFFITH, 10TH GRADE, ECOTEK LAB

My name is **Angel Griffith**, I am in the 10th grade and I attend University Prep Science and Math High School in the City of Detroit. I have been a researcher in Ecotek Lab for two years. I received a \$500 research grant from the SPE Foundation to expand my learning in materials science. I never experienced or had the opportunity to receive a grant to do science investigation before, so I didn't know what was required of me when I got one. When I received the grant, **Mr. Keith Young**, Founder and CEO of Ecotek Lab, along with **Ms. Eve Vitale**, Chief Executive at the SPE Foundation, told me what was expected of me as creating and monitoring a project budget: developing a research plan; working with mentors in the automotive

such as creating and monitoring a project budget; developing a research plan; working with mentors in the automotive industry; and presenting my research at a professional conference.

My project was focused on developing innovative ideas around sustainable materials for the interior of electric vehicles. I have been able to investigate and test different materials that can be installed in EVs to make the car more sustainable and recyclable. Before doing this project I barely knew anything about how the interiors of EV were made or what specific materials were used in them and this opportunity allowed me to learn a lot. There are a lot of things to consider and investigate when dealing with sustainable material engineering. After researching my topic thoroughly I narrowed my research down to sustainable vegan leather for seating. While working in the lab and meeting with my SPE mentors- Ms. Amy Stephen, Ms. Allison Collins, Mr. Chuck Jarrett and Mr. Evan Morton-I was able to do a deep dive into material properties and examine different types of vegan leathers. I found three vegan leathers that seemed to be the most accurate and promising. My next step after picking three of the best materials, was to order samples and do performance testing ranging from moisture absorption testing to flexibility testing. The purpose of this work was to determine which vegan leather material met the requirements for my project.

I very am grateful to everyone who helped and supported me through this experience, that includes the mentors that guided me, my family, friends, teachers, and of course Ecotek and Mr. Young. I was introduced to Mr. Young through one of my teachers at University Prep Science and Math High school on a field trip, and since then I have had great opportunities such as attending STEM conferences, going to automotive award galas in engineering, and working in Ecotek Lab; visiting the labs at Ford Motor Company and meeting other students in the City of Detroit that are passionate about science and math. This project has helped me build my confidence in working on complex topics in science in a group setting. It has also provided me with access to more real world opportunities in STEM.

I have had great learning experiences leading up to this point. My exposure to SPE and the electric vehicle technology has been awesome. These experiences are teaching me not only academics but also teaching me that hard work pays off. These experiences are preparing me for a future that's worth the work. Anyone reading that is doing hard work, remember it's going to be worth it! I would like to thank the SPE Foundation, Ecotek Lab, and the SPE Automotive Division for this life changing experience.







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ABSTRACTS DUE: APRIL 17, 2023 • PRESENTATIONS DUE: JULY 17, 2023

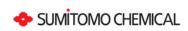
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