

Session Topics:	Characterisation and testing of materials & products	Material Developments	Sustainability	Modelling	Smart Materials	Elastomer Product Innovations	Material Processing
	Chairs: Jorge Lacayo Pineda, Ulrich Giese, Toshio Tada, Erick Sharp	Chairs: Kannika Sahakaro, Anke Blume, Ramakrishnan S	Chairs: Martyn Bennett, Ulrich Giese	Chairs: Keizo Akutagawa, Toshio Tada	Chairs: Leif Kari, Khai Nguyen	Chairs: Abilash Nair, Izaak Watson	Chairs: Abilash Nair, Lewis Tunnicliffe, Izaak Watson

11/5/2023								
11/5/2023	John McIntyre Conference Centre					South Hall Complex		
	Pentland East	Pentland West	Prestonfield	St Trinneans	South Hall	Kirkland		
08:15 - 09:00						Morning Coffee		
09:00 - 09:25	Chair: Ulrich Giese	<b>Stefan Frosch</b>  <i>Sulfur Migration In Recycled Ground Rubber Containing Compounds And Its Impact On Dynamic-Mechanical Properties (95)</i>	Chair: Keizo Akutagawa	<b>Akihiro Matsuda</b>  <i>Voxel-Based Finite Element Analysis of Polymer Foam with Micro-CT data (106)</i>	Chair: Anke Blume	<b>Lewis Tunnicliffe</b>  <i>The Influence of Carbon Black on Electrical Properties of Rubber and Compound Development Approaches for High Resistivity Applications (116)</i>		
09:25 - 09:50		<b>Maurizio Galimberti</b>  <i>A BiobasedJanus Molecule As Universal Coupling Agent In Rubber Compounds (111)</i>		<b>Ben Murphy</b>  <i>Study of elastomer blend dynamics for improved tire performance (85)</i>		<b>Juan Itriago</b>  <i>Coupled vulcanization and cellularization modeling for rubber foam injection molding (126)</i>		<b>Eric Euchler</b>  <i>Mechanical characterization of imidazole-modified elastomers with self-healing capabilities (117)</i>
09:50 - 10:15		<b>Subhradeep Mandal</b>  <i>Transformation of epoxidized natural rubber into ionomer with imidazole as a sustainable material with self-healing functionality (114)</i>		<b>Evangelos Koliolios</b>  <i>Chemical Characterisation of Smear Wear: A key to understanding tyre tread wear performance (89)</i>		<b>Jonathan Hodges</b>  <i>Flexible Dielectric Elastomers For Wave Energy Generation - A Cross-Sector R&amp;D Opportunity (40)</i>		<b>Fabian Grunert</b>  <i>Investigation of the post-hardening effect of silica filled NR compounds (127)</i>
10:15 - 10:50						Refreshments & Networking		
10:50 - 11:15	Chair: Martyn Bennett	<b>Silvia Guerra</b>  <i>Eco-Tyre With A Low Environmental Impact (124)</i>	Chair: Izaak Watson	<b>Andreas Kaiser</b>  <i>Improving Elastomer Compounds for Hydrogen Applications (69)</i>	Chair: Anke Blume	<b>Michael Warskulat</b>  <i>Beyond N330: Alternative Rubber Carbon Blacks to Comply with Regulations, to Enhance Performance or to Move towards Sustainability (132)</i>		
11:15 - 11:40		<b>Vincenzina Barbera</b>  <i>Biobased Janus Molecules For The Universal Functionalization of sp2 Carbon Allotropes, Silica And Boron Nitride, Fillers of Elastomeric Composites (136)</i>		<b>Ilya Yakovlev</b>  <i>Cavity formation during deformation of silica-filled rubber compounds observed by Ultra Small-Angle X-Ray Scattering (92)</i>		<b>Ondrej Farkas</b>  <i>Frequency Domain Viscoelasticity - On The Experimental And Numerical Investigation Of Elastomeric Vibration Isolators Under Dynamic Loading (75)</i>		<b>Ján Kruželák</b>  <i>Physical-mechanical properties and EMI absorption shielding performance of rubber composites (28)</i>
11:40 - 12:05		<b>Larissa Gschwind</b>  <i>Investigation of Aging Behavior of Recycled EPDM Rubber Waste (140)</i>		<b>Aaron Graham</b>  <i>On the use of the Virtual Fields Method for material characterisation (97)</i>		<b>Debabrata Ganguly</b>  <i>Cement-Carbon Black Dual Filler Based Hnbr Composite For Low Cost, Light Weight, Flexible, And Efficient Radiation Shielding Materials (105)</i>		<b>Prashant Saxena</b>  <i>Modelling extreme deformation and resulting instabilities in thin electro-active and magneto-active elastomer membranes and shells (36)</i>
12:05 - 12:30			Chair: Abilash Nair	<b>Hikaru Hashimoto</b>  <i>Characterization On The Crosslink Reaction Of Fkm Rubber By Using Nmr And Tga (123)</i>	Chair: Leif Kari	<b>Wei Tan</b>  <i>Inverse design of shape-morphing structures based on functionally graded elastomer composites (57)</i>	Lunch & Networking	
12:30 - 13:35								
13:35 - 14:00	Chair: James Busfield	<b>James Innes</b>  <i>The Devulcanization and Revulcanization Of Waste Tyre Rubber (144)</i>	<b>Eathan Plaschka</b>  <i>The Influence of Temperature on Friction and Wear Behaviour of Tyre Tread Compounds (98)</i>					
14:00 - 14:25		<b>Chris Norris</b>  <i>Demonstrating the Performance Potential of rCB in Rubber Formulations (146)</i>	<b>Anmol Aggarwal</b>  <i>Investigation Of Different Interactions In Silica-Filled SSBR Compounds Contributing To The Cure Torque (99)</i>	<b>Leo Nijhof</b>  <i>Crosslinking Peroxides for Silicone Rubbers (21)</i>	<b>Sara Naderizadeh</b>  <i>Piezoresistive Elastomer Composites Used for Pressure Sensing (81)</i>			
14:25 - 14:50		<b>Poster Session</b>	<b>Takahiro Anzai</b>  <i>Visualization Of Nanoscale Mechanical Properties Of Fatigue Rubber By AFM (112)</i>	<b>Patrick Frenzel</b>  <i>Experimental Analysis Of The Residence Time Distribution In A Single Screw Rubber Extruder Using A Digital Image Processing Method (35)</i>	<b>Santanu Chattopadhyay</b>  <i>Smart specialty elastomer composites using ceramic waste with triple percolation characteristics (104)</i>			
14:50 - 15:15	<b>Richard Moon</b>  <i>Investigation into the Impact Carbon Black Grades have on the Permeation Resistance of Butyl Rubbers (115)</i>		<b>Ameya Karmarkar</b>  <i>Investigation Into The Application Of Additive Manufacturing Technology For Chassis And Powertrain Tuning Bushes (43)</i>	<b>Jishnu Nirmala Suresh</b>  <i>Developing liquid rubber's electromechanical actuation capabilities for soft robotic applications. (118)</i>				
15:15 - 16:00						Refreshments & Networking		
16:00 - 16:25	Chair: James Busfield	<b>Sustainability Panel Discussion</b>	Chair: Toshio Tada	<b>William Amoako Kyei Manu</b>  <i>The Effect Of Carbon Black Morphology On The Fatigue Crack Growth Behavior Of Rubber Compounds (125)</i>	Chair: Khai Nguyen	<b>Carmela Mangone</b>  <i>Enabling interfacial adhesion between conductive rubber and piezoelectric polymer for energy harvesting applications (130)</i>	Shell Scheme Breakdown	
16:25 - 16:50				<b>Natalia Cano Murillo</b>  <i>Effect Of High-Pressure Ahydrogen Environment On The Physical And Mechanical Properties Of Different Kinds Of Carbon Black Filled Elastomers (142)</i>		<b>Kento Watanabe</b>  <i>The Effect Of Zinc Oxide On The Structure And Mechanical Properties Of Carbon Black Filled Rubber (60)</i>		
16:50 - 17:15	Close of Conference							
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