

# Wednesday - October 26, 2016

	Session A Room E, AIM Bldg. 3F	Session B Room F, AIM Bldg. 3F	Session C Room G, AIM Bldg. 3F
	<b>G2: Natural Rubber and Related Materials</b>	<b>S1: Novel Elastomeric Materials</b>	<b>G9: Simulation</b>
8:30	<p><b>Chair: Yoshimasa Yamamoto</b></p> <p><b>A-1 [INVITED] (8:30-9:05)</b> Study on Hierarchical Structure of Natural Rubber Seiichi Kawahara Nagaoka University of Technology, Japan</p> <p><b>A-2 (9:05-9:25)</b> Better Understanding of Natural Rubber Consistency Benoit Le Rossignol HUTCHINSON Research Center, France</p> <p><b>A-3 (9:25-9:45)</b> Effect of Protein Cross-Linking by Maillard Reaction on Natural Rubber Properties Chaveewan Kongkaew MTEC, National Science and Technology Development Agency, Thailand</p> <p><b>A-4 (9:45-10:05)</b> Extraction of Rubbery Material from Plant Produced Emulsion by use of Ionic Liquids Yoshiaki Takahashi IMCE, Kyushu University, Japan</p>	<p><b>Chair: Toshihiro Tadaki</b></p> <p><b>B-1 [INVITED] (8:30-9:05)</b> Supramolecular Cross-Linkers Endowing Rubber Polymers with Toughness Toshikazu Takata Tokyo Institute of Technology, Japan</p> <p><b>B-2 (9:05-9:25)</b> Study on Influence of Novel Functionalized SSBR on Rubber Compound Properties Natalia Meissner Synthos S.A. Poland</p> <p><b>B-3 (9:25-9:45)</b> Towards the Use of Highly Dispersible Silica with High Surface Area for the Truck Tire Tread to Offer New Compromise in Term of Rolling Resistance and Wear Resistance : Impact of the Silica / Silane Reactivity with the Vulcanization Package Laurent Guy Solvay Silica, France</p> <p><b>B-4 (9:45-10:05)</b> Study on Functionalization of Solution-SBR by Oligosiloxanes Having Glycidylpropyl Side Groups Bartłomiej Janowski Synthos S.A., Poland</p>	<p><b>Chair: Manfred Klueppel</b></p> <p><b>C-1 [INVITED] (8:30-9:05)</b> Coarse-grained simulation study of rubber materials including the interfacial effect of fillers Hiroshi Morita National Institute of Advanced Industrial Science and Technology, Japan</p> <p><b>C-2 (9:05-9:25)</b> A Multiscale Molecular Simulation of Hydrogenated Natural Rubber Visit Vao-soongern Suranaree University of Technology, Thailand</p> <p><b>C-3 (9:25-9:45)</b> Mechanisms of Mechanical Behavior of Filled Rubber by Coarse-Grained Molecular Dynamics Simulations Takashi Kojima The Yokohama Rubber Co., Ltd., Japan</p> <p><b>C-4 (9:45-10:05)</b> A New Microstructure Based Model for the Response of Filler Reinforced Elastomers Including Temperature and Rate Dependence Jan Plagge German Institute of Rubber Technology, Germany</p>
10:30	<p><b>Chair: Seiichi Kawahara</b></p> <p><b>A-5 [INVITED] (10:30-11:05)</b> From Low Cost Rubbers to High Value Materials : an Alternative to Standard Processes Jean-François Pilard Université du Maine, France</p> <p><b>A-6 (11:05-11:25)</b> Properties of Functionalized Natural Rubber Filled with Precipitated Silica Pranee Nuinu Mahidol University, Thailand</p> <p><b>A-7 (11:25-11:45)</b> Improvement of Low Strain Properties of Short Pineapple Leaf Fiber-Reinforced Natural Rubber (NR) by Reducing Matrix Molecular Weight Kanokwan Yantaboot Mahidol University, Thailand</p> <p><b>A-8 (11:45-12:05)</b> Structural Clarification of Hevea Rubber by the Selective and Informative Analysis Techniques Lucskanaporn Tarachwin Sumitomo Rubber (Thailand) Co., Ltd., Thailand</p>	<p><b>Chair: Nanying Ning</b></p> <p><b>B-5 (10:30-10:50)</b> New Dynamically Vulcanized Alloys (Exxcore™ DVAs) Based on Low Air Permeability Specialty Polymers for Tire Inner Liners Maria D. Ellul ExxonMobil Chemical Co., USA</p> <p><b>B-6 (10:50-11:10)</b> High Performance Hydrogenated Acrylonitrile Butadiene Elastomers Shiho Mosaki Zeon Corporation, Research &amp; Development Center, Japan</p> <p><b>B-7 (11:10-11:30)</b> Abstract Levapren PXL, a New Series of Improved Processing EVM Grades Martin Hoch ARLANXEO High Performance Elastomers, 150 Hubin Rd, Shanghai 200021, China</p> <p><b>B-8 (11:30-11:50)</b> Natural Rubber/Nitrile Butadiene Rubber/Hindered Phenol Composites with High Damping Properties Xuying Zhao Beijing University of Chemical Technology, China</p> <p><b>B-9 (11:50-12:10)</b> Simulation and Analysis on the Interface Properties of Smart Silicone Elastomer Composites Reinforced with NITI Shape Memory Alloy Xu Li Wuhan University of Technology, China</p>	<p><b>Chair: Hiroshi Morita</b></p> <p><b>C-5 (10:30-10:50)</b> Extension and Application of MORPH to Viscous Effects Via Prony Series Approach Nils Hendrik Kröger German Institute of Rubber Technology, Germany</p> <p><b>C-6 (10:50-11:10)</b> Hysteresis and Adhesion Friction of Elastomers on Rough Surfaces Manfred Klueppel German Institute of Rubber Technology, Germany</p> <p><b>C-7 (11:10-11:30)</b> Numerical Simulation of Pantographing During the Moulding of Rubber Tire Benoit Debbaut ANSYS Belgium s.a., Belgium</p> <p><b>C-8 (11:30-11:50)</b> Transient Temperature Prediction in Rubber Components Due to Nonlinear Viscoelasticity with Finite Element Analysis Fanzhu Li Beijing University of Chemical Technology, China</p> <p><b>C-9 (11:50-12:10)</b> A Prediction of the Damping Properties of Hindered Phenol/Rubber Composites through Molecular Dynamics Simulation Luo Yanlong Beijing University of Chemical Technology, China</p>
13:20	<p><b>Chair: Pranee Phinyocheap</b></p> <p><b>A-9 [INVITED] (13:20-13:55)</b> Colloidal Properties of Purified NR Latex Amir Hashim Md Yatim Rubber Research Institute of Malaysia, Malaysia</p> <p><b>A-10 [INVITED] (13:55-14:30)</b> Recent Development of Electron Beam Vulcanized Natural Rubber Latex Krisda Suchiva Mahidol University, Thailand</p> <p><b>A-11 (14:30-14:50)</b> Morphology and Properties of Natural Rubber with Naturally Occurring Nanomatrix Structure Kenichiro Kosugi Nagaoka University of Technology, Japan</p> <p><b>A-12 (14:50-15:10)</b> A New Concept in Natural Rubber Mastication, with Some Practical Examples Majid Aman-Alikhani Kerman Tire &amp; Rubber Co. Iran</p>	<p><b>Chair: Shinichi Itsuno</b></p> <p><b>B-10 (13:20-13:40)</b> Dynamic Covalent Elastomers with Mechanochromic Properties Hideyuki Otsuka Tokyo Institute of Technology, Japan</p> <p><b>B-11 (13:40-14:00)</b> Some New Techniques to Improve the Electromechanical Performance of Graphene/Dielectric Elastomers Composites Nanying Ning Beijing University of Chemical Technology, China</p> <p><b>B-12 (14:00-14:20)</b> Large Increase in Actuated Strain of SBS Dielectric Elastomer by Grafting Dipoles using Thiol-ene Click Chemistry Haibin Sun Beijing University of Chemical Technology, China</p> <p><b>B-13 (14:20-14:40)</b> Tough Elastomer Synthesized with Rotaxane Cross-Linker Jun Sawada Tokyo Institute of Technology, Japan</p>	<p><b>Chair: Jacques W.M. Noordermeer</b></p> <p><b>C-10 (13:20-13:40)</b> Evaluation of Computer Aided Rubber Compound Development Hans-Joachim Graf H-JG Consulting, Germany</p> <p><b>C-11 (13:40-14:00)</b> Evaluation of Distributive Mixing in Internal Mixer with Tangential Rotors by Numerical Flow Simulation Kosuke Higashi Kobe Steel, Ltd., Japan</p> <p><b>C-12 (14:00-14:20)</b> A Novel Concept for Elastomeric Polymer Nanocomposites with Super-Low Hysteresis Loss for Fuel-Saving Automobile Tires Jun Liu Key Laboratory of Beijing City on Preparation and Processing of Novel Polymer Materials, China/Beijing Engineering Research Center of Advanced Elastomers, China</p> <p><b>C-13 (14:20-14:40)</b> Tuning the Structure and Mechanical Property of Polymer Nanocomposites by Employing Nanoparticles as Giant Cross-Linkers Zijian Zheng Key Laboratory of Beijing City on Preparation and Processing of Novel Polymer Materials, China/Beijing Engineering Research Center of Advanced Elastomers, China</p> <p><b>C-14 (14:40-15:00)</b> Optimization of Rubber Parts with the Help of Virtual Molding Timo Gebauer SIGMA Engineering GmbH, Germany</p>
		<b>S2: Gel and Related Soft Materials</b>	<b>G10: Technology of Tire</b>
15:50	<p><b>Chair: Amir Hashim Md Yatim</b></p> <p><b>A-13 [INVITED] (15:50-16:25)</b> Multi-step Chemical Modification of Natural Rubber for Versatile Applications Pranee Phinyocheap Mahidol University, Thailand</p> <p><b>A-14 (16:25-16:45)</b> Characterization and Mechanical Property of Brominated Natural Rubber Nuorn Choothong Nagaoka University of Technology, Japan</p> <p><b>A-15 (16:45-17:05)</b> Synthesis and Characterization of Fluorinated Natural Rubber Hamzah Md Rasid School of Chemical Sciences and Food Technology, Malaysia/Universiti Teknologi MARA, Malaysia</p> <p><b>A-16 (17:05-17:25)</b> Bromination of Natural Rubber by Electrolysis in Water Process in the Presence of Carbon Dioxide Yoshimasa Yamamoto National Institute of Technology, Tokyo College, Japan</p> <p><b>A-17 (17:25-17:45)</b> Natural Rubber Biosynthetic Machinery on Rubber Particles of Hevea brasiliensis Haruhiko Yamaguchi Sumitomo Rubber Industries, Ltd., Japan</p>	<p><b>Chair: Hideyuki Otsuka</b></p> <p><b>B-14 (15:50-16:10)</b> Mechanically Robust and Conductive Hydrogel having Shape Memory Behavior Kumkum Ahmed Yamagata University, Japan</p> <p><b>B-15 (16:10-16:30)</b> Gold Nanoparticles Probe Diffusion in Polymer Solution and Gels Nobuyuki Watanabe The University of Tokyo, Japan</p> <p><b>B-16 (16:30-16:50)</b> Stimuli-Responsive Hydrogels Consisting of Cylindrical Inorganic Polymer Kazuhiro Shikina Tokyo University of Agriculture and Technology, Japan</p> <p><b>B-17 [INVITED] (16:50-17:25)</b> Toughening of Soft Materials with Sacrificial Bonds Jian Ping Gong Hokkaido University, Japan</p>	<p><b>Chair: Jacques W.M. Noordermeer</b></p> <p><b>C-15 (15:00-15:20)</b> Multi-Scale Simulation of Filled Rubber Composite with Coarse-Grained Molecular Dynamics and Large Scale FEM Analyses Hiroshi Kadowaki Bridgestone Corporation, Japan</p> <p><b>Chair: Sizhu Wu</b></p> <p><b>C-16 [INVITED] (15:50-16:25)</b> How Silane Coupling Agents Influence the Dynamic Performance of SBR/Silica Tire Tread Compounds Jacques W.M. Noordermeer University of Twente, the Netherlands</p> <p><b>C-17 (16:25-16:45)</b> Liquid Rubber Utility in Tire Formulation Satoshi Motoda Kuraray Co. Ltd., Japan</p> <p><b>C-18 (16:45-17:05)</b> Processing of Green Tire Tread Compounds with High Performance Silane SI 3638 Kenji Matsuzawa Evonik Japan Co., Ltd., Japan</p> <p><b>C-19 (17:05-17:25)</b> Investigation of the Silane-Polymer Reaction in a Model System Masaki Sato University of Twente, the Netherlands/The Yokohama Rubber Co., Ltd., Japan</p>

# Wednesday - October 26, 2016

<b>Session D</b> Room 311-313, AIM Bldg. 3F	<b>Session E</b> Room 314-315, AIM Bldg. 3F	<b>Session F</b> Room S1, Exhibition Hall (West Japan General Exhibition Center Annex)
<b>G4: Filler and Additives</b>		<b>G7: Structure, Property and Characterization</b>
<b>Chair: Shuichi Akasaka</b> D-1 [INVITED] (8:30-9:05) Recent Advances in Rubber Reinforcing using Carbon Nanomaterials Changwoon Nah Chonbuk National University, Korea	<b>Chair: Ming Tian</b> E-1 [INVITED] (8:30-9:05) Scattering studies on hierarchical structures in rubber-filler systems Mikihito Takenaka Kyoto University, Japan/RIKEN Harima Institute Research, Japan	8:30
D-2 (9:05-9:25) A Study on Rheological and Tribological Properties of NBR/Bentonite Composites Compatibilized with Silane Coupling Agents Ji Hwan Oh Korea University of Technology and Education, Korea	E-2 (9:05-9:25) Thermal Oxidation Aging Effect on Sealing Performance of Silicone Rubber Jian Wu Harbin Institute of Technology, China	
D-3 (9:25-9:45) Measuring the Effects of Filler Variations on Compound Viscoelastic Properties as Measured by the Capillary Rheometer and the RPA John S. Dick Alpha Technologies, USA	E-3 (9:25-9:45) Study on Aging Process of Rubber Material for Seal -A Novel Evaluation by Means of Chemiluminescence under Deformation- Yuichi Aoyagi Freudenberg New Technologies SE & Co., Germany	
D-4 (9:45-10:05) Investigating the Effect of Silica Surface Modification on Rubber Vulcanisates Roland Ngeow Technology and Engineering Laboratory, Malaysia/Surfaces and Particle Engineering Group, Imperial College London, UK	E-4 (9:45-10:05) Characterization of Diffuso-Thermo-Mechanical Properties under CO2 Pressure on an O-Ring Eric Lainé Université de Poitiers, France	<b>S7: Innovative Technology and Goods in Rubber Industry / ISO-related Program</b> <b>Chair: Toshio Nishi</b> S1-1 [INVITED] (10:00-10:35) Recent Progress in Technology for Seismic Isolation Bearings Nobuo Murota Bridgestone Corporation, Japan
<b>Chair: Changwoon Nah</b> D-5 (10:30-10:50) Highly Dispersible Silica for Improved Tire Performance Larry R. Evans Oriental Silicas Corporation, Taiwan	<b>Chair: Juan Lopez Valentin</b> E-5 (10:30-10:50) Nanofillers Impact on RGD Resistance of Elastomer Compounds Fanny Destaing French Technical Center of Mechanical Industries, France	S1-2 (10:35-10:55) Continuous Extrusion of TREAD profiles using CoEx $\alpha$ plus1 and CoEx $\alpha$ plus1-p Mathias Zabel TROESTER GmbH & Co. KG, Germany
D-6 (10:50-11:10) Silica Nanoparticles from Waste Brine of Geothermal Power Plant as Viable Reinforcing Filler in Rubber Compounds Miguel Lorenzo Yorlo University of the Philippines Diliman, Philippines	E-6 (10:50-11:10) Quantification of PAHs in Tires by GC/MS and NMR Joseph Pan Southwest Research Institute, USA	S1-3 (10:55-11:15) Withdrawn
D-7 (11:10-11:30) Understanding Main Governing Factors for Mechanical Properties of Short Aramid-Fibers Reinforced Elastomers Nadia Vleugels University of Twente, the Netherlands	E-7 (11:10-11:30) Sequence Characterization and Quantification of Styrene-Butadiene Rubber by Ozonolysis-Comprehensive Multidimensional Liquid Chromatography Mass Spectrometry Yuko Sekine The Yokohama Rubber Co., Ltd., Japan	<b>Chair: Toshikazu Takata</b> S1-4 (11:15-11:35) High Electromechanical Response by General Purpose Nitrile Rubber Jyrki Vuorinen Tampere University of Technology, Finland
D-8 (11:30-11:50) Reinforcing Rubber Compounds with Oil Extraction Residue Containing Carbon Black, Silica, and Zinc Oxide from Used Rubber Tires Maria Janice D. Manuzon University of the Philippines, Philippines	E-8 (11:30-11:50) Controlling of NBR Surface Chemical Functional Properties During the Curing Process Jing Sang Iwate University, Japan	S1-5 [INVITED] (11:35-12:10) Performance Elastomers for Advanced Applications Shoel Tsuji Polymer Research Laboratories, JSR Corporation, Japan
D-9 (11:50-12:10) Friction and Wear Properties of Silica-Filled Rubber of Low Temperature Kohel Morita Kanazawa University, Japan	E-9 (11:50-12:10) Application of PALS in Rubber Chemistry, Technology and Engineering Dariusz M. Bieliński Lodz University of Technology, Poland	
<b>Chair: Junping Zheng</b> D-10 (13:20-13:40) Systematic Addition of Coconut-Derived Fillers to Approach Reinforcing Effect of Carbon Black in Rubber Compounds Kristal Aubrey S. Bornillo University of the Philippines Diliman, Philippines	<b>Chair: Ken Nakajima</b> E-10 (13:20-13:40) Effect of Sulfur Bond Length on the Mechanical Properties of Polyisoprene Blend Brice Gabrielle Hutchinson Research Center, France	<b>Chair: Shunji Araki</b> S1-6 [INVITED] (13:20-13:55) An Analysis on Fracture Mechanism of Rubber by Large Scale Molecular Dynamics Simulation: Collaborative Use of K-Computer, Spring-8 and J-PARC Masataka Oikawa Sumitomo Rubber Industries, Ltd., Japan
D-11 (13:40-14:00) Improvement of Elastomeric Materials for Tire Tread Compounds Pilar Bernal-Ortega Institute of Polymer Science and Technology, CSIC, Spain	E-11 (13:40-14:00) New Insights into the Structure-Property Relationships in Rubber Compounds by using Advanced NMR Experiments J.L. Valentin Institute of Polymer Science and Technology, CSIC, Spain	S1-7 [KEYNOTE] (13:55-14:35) History and Activity of ISO/TC45 Japan National Mirror Committee Shunji Araki The Japan Rubber Manufacturers Association, SO/TC45 Japan National Mirror Committee, Japan
D-12 (14:00-14:20) A Study on Grafting Chitosan onto Bamboo Charcoal Sulfonated Carbon-Based Solid Acid by Sulfonation Reaction to Reinforce Styrene Butadiene Rubber (SBR) Latex Li Xiang Xu Korea University of Technology and Education, Korea	E-12 [INVITED] (14:00-14:35) Aging of NBR and HNBR-Materials -Chemistry and Characterization U. Giese German Institute of Rubber Technology, Germany	
D-13 (14:20-14:40) Study on Strain-Induced Crystallization of Natural Rubber Nanocomposite Filled with Homogeneously Dispersed In Situ Silica Takumi Ohashi Kyoto Institute of Technology, Japan	E-13 (14:35-14:55) The Study of Heterogeneous Structure of Acrylonitrile-Butadiene Random Copolymer (NBR) Yoshiki Nagano Kyoto University, Japan/RIKEN Harima Branch, Japan	S1-8 [KEYNOTE] (14:35-15:15) Roles of ISO/TC 45 towards Innovative and Sustainable Rubber Industry Zairossani Mohd Nor Malaysian Rubber Board, Malaysia
D-14 (14:40-15:00) Carbon Black Realizing High-Performance Tire Carbon Black with Unlimited Potential Yuki Kubota Tokai Carbon Co., Ltd., Japan	E-14 (14:55-15:15) An Effect of Chain Architecture of Isocyanate on Microphase-Separated Structure of Polyurethane Elastomer after Mechanical Deformation Shuhei Nozaki Kyushu University, Japan	
<b>Chair: Maria Ellul</b> D-15 (15:50-16:10) Reinforcement Efficiency of Nanosilica in NR Thin Films Wisut Kaewsakul Prince of Songkla University, Thailand	<b>Chair: Ulrich Giese</b> E-15 (15:50-16:10) Effect of Secondary Hydroxyl Groups of Ester-Polyol on a Network Structure and Mechanical Properties of Polyurethane Elastomers Ken Kojio Kyushu University, Japan	<b>Chair: Masami Aoki</b> S1-9 [KEYNOTE] (15:50-16:30) Standardization on the Determination Methods of Biobased Contents for Rubber Products Akira Saito The Japan Rubber Manufacturers Association, Japan
D-16 (16:10-16:30) Filler-Polymer Interactions and Rheological Properties in Graphene Nano-Fillers Reinforced Rubber Composites Siti Salina Sarkawi Malaysian Rubber Board, Technology Centre, Malaysia	E-16 (16:10-16:30) Development of System to Visualize Internal 3-D Fluctuation of Soft & Wet Materials with Scanning Microscopic Light Scattering Yosuke Watanabe Yamagata University, Japan	
D-17 (16:30-16:50) A Novel Multi-Functional Additive for the Critical Rubber Applications Majid Aman-Alikhani Kerman Tire & Rubber Co. Iran	E-17 (16:30-16:50) Interface-Induced Peculiar Aggregation States of Polyisoprene with Inorganic Material Manabu Inutsuka Kyushu University, Japan	S1-10 [KEYNOTE] (16:30-17:10) International Standardization of Seismic-Protection Elastomeric Isolators from Japan Toshio Nishi Tokyo Institute of Technology, Japan
D-18 (16:50-17:10) Stress Transfer Improvement of Natural Rubber/Pineapple Leaf Fiber Composites by Surface Modification of Fiber Karine Mougin Institut de Science des Matériaux de Mulhouse, France	E-18 (16:50-17:10) Preparation and Properties of Graphene/Natural Rubber Nanocomposites Qinghong Fang Shenyang University of Chemical Technology, China	
D-19 (17:10-17:30) Effect of Covalent and Non-Covalent Modifications of Carbon Nanotubes on Thermal Stability and Mechanical Properties of Silicone Rubber Junping Zheng Tianjin University, China		15:50
D-20 (17:30-17:50) Application of Potassium Titanate Whisker in Silicone Rubbers Handong Qian Otsuka Materials Science and Technology (Shanghai) Co., Ltd., China		<div style="border: 1px solid black; padding: 5px;"> <p><b>Poster Session P-1 ~ P-80</b>  <b>Room D 17:30-19:30</b>  <b>AIM Building 3F</b></p> <p><b>Obligation Time</b>                      Odd Number: 17:45-18:30                      Even Number: 18:30-19:15</p> </div>