



# CONFERENCE PROGRAM

Structure-Composition-Property  
Relationship in Rubber Based Materials

## RUBBERCON

10-11 MAY, 2018

*InterContinental Istanbul*

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# MAY 10, 2018 - THURSDAY



**08:30-10:00** – Registration & Welcome

**10:00-10:30** – Opening Ceremony

**10:30-11:10** – Invited Lecture

*Prof. Anil K. Bhowmick*

Indian Institute of Technology, Kharagpur Rubber Technology Centre, India

“Sustainable Materials in the Rubber Industry”

**11:10-11:50** – Invited Lecture

*Dr. Ali Ansarifar*

Department of Materials, Loughborough University, UK

“A new rational for the sulphur vulcanisation of rubber”

**11:50-12:10** – Coffee Break

## HALL-A

### SESSION I-A

**12:10-12:30** - Short-Fiber Reinforced EPDM Composites; Structure Property Optimization Study

*M.Özgür Seydibeyoğlu, Alican Kaşıkçı, Gökçe Bakiler*

Izmir Katip Çelebi University, Engineering Faculty, Materials Science and Engineering Çiğli, İzmir, TR

**12:30-12:50** - Study on Advanced Pretreatment Technology of Ultrafine Short Fibers

*Weidong Wu, Nan Tang, Zhenwei Zhao, Xuesong Zhang*

Beijing University of Chemical Technology, 15 Beisanhuandonglu Street, Beijing 100029, China

**12:50-13:10** - EPDM based rubber- aluminum metal interface improvement using cold plasma treatment

*Fatma Mihiçi, Uğursoy Olgun, Ekrem Altuncu, Ali Erkin Kutlu*

Standard Profil Automotive Industry and Inc., Quality Dept., Düzce, 81620, TR

## HALL-B

### SESSION I-B

**12:10-12:30** - New Ultra-High Molecular Weight NORDEL TM EPDM Enabled by Advanced Molecular Catalyst

*Varun Thakur, Sharon Wu, Tao Han, Colin Li Pi Shan*

Dow Europe GmbH, Horgen, Switzerland

**12:30-12:50** - Influence of Type and Concentration of Waste Rubber Powder on the Properties of Off-road Tyre Rubber Compounds

*Zdeněk Hrdlička, Yağmur Kuzu, Jiří Břejcha, Antonín Kuta, Bağdagül Karaağaç*

University of Chemistry and Technology, Prague, Faculty of Chemical Technology, Dpt. of Polymers, Prague, CZ

**12:50-13:10** - Waste Magnesium Oxide as Cure Activator for Polychloroprene Rubber

*Halit L. Hoşgün, Selda Öztürk, Ezgi Erbek Çömez*

Bursa Technical University, Faculty of Natural Sciences and Engineering, Department of Chemical Engineering, Bursa, TR

**13:10-14:20** – Lunch

**MAY 10, 2018 - THURSDAY**



**HALL-A**

**SESSION II-A**

**14:20-14:40** - Keltan® 13561C DE: A New, Very High Molecular Weight EPDM  
Joyce Kersjes, Niels van der Aar, Montse Alvarez Grima, Gosé van Zandvoort  
Arlanxeo Netherlands BV, Global M&S/TSAD, 6167 RD, Geleen, The Netherlands

**14:40-15:00** - High performing new curing rubber composition for hydraulic hose inner tube

Dipak Singh, Juergen Schmidt

Eaton India Innovation Center, Eaton Germany GmbH

**15:00-15:20** – Synthesis and Application of Dual-Curable Tung Oil Based Adhesive Formulations for Cord/Rubber Composites

Zehra Yildiz, Mustafa H. Ugur, Atilla Gungor, H. Aysen Onen, Y. Muge Sahin, Y. Kerem Ersöz  
Marmara University, Faculty of Technology, Department of Textile Engineering, Goztepe, Istanbul, TR

**15:20-15:40** - Effect of ZnO anchored silica filler on the adhesion strength of textile conveyor belts

Deniz Akın Şahbaz, Çağlayan Açıkgöz, Erol Göksu

Afyon Kocatepe University, Engineering Faculty, Department of Chemical Engineering, 03200, Afyonkarahisar, TR

**HALL-B**

**SESSION II-B**

**14:20-14:40** – Sonochemical Assisted Synthesis of ZnO as an Activator in EPDM Rubber

Halit L. Hoşgün, Selda Öztürk, Ezgi Erbek Çömez

Bursa Technical University, Faculty of Natural Sciences and Engineering, Department of Chemical Engineering, Bursa, TR

**14:40-15:00** – Oil and Flame Resistant Rubber Compounds for Cable Industry

Umay Tuana Sarıbatır, Veli Deniz, Bağdagül Karaağaç

DRC Kauçuk San. Tic. A.Ş., Sakarya, TR

**15:00-15:20** - Halogen free and fire-resistant rubber composition for hose production

Recep Muço, Müslüm Eren, Volkan Karayazı, Özgür Çalışkan, Tekin Çoşkun, Ali Aktaş

Eaton Polimer Kauçuk San.Paz.A.S , Tekirdağ , TR

**15:20-15:40** - Kinetics of EPDM crosslinking with different peroxides

Gökçe Dağdeviren, Begüm Alanalp, Nurcan Sivri, Ali Durmuş

Istanbul University, Engineering Faculty, Dept. of Chemical Engineering, 34320, Avcılar, Istanbul, TR

**15:40-16:00 - Coffee Break**

**16:00-18:00 – Poster Session**

**19:00-23:00 – Gala Dinner**

**08:30-09:30** – Registration

**09:30-10:10** – Invited Lecture

*Prof. Liqun Zhang*

Beijing University of Chemical Technology, People's Republic of China  
"The Next Generation Super Elastomer for Tires Explored by Molecular Dynamics Simulation and Experiments"

**10:10-10:30** - Coffee Break

**HALL-A**

**SESSION III-A**

**10:30-10:50** - Plasticizing polar tyre tread compounds and non-polar EPDM automotive compounds with a novel low aromatic plasticizer

*Kamyar Alavi, Mika Lahtinen, Patrik Salomonsson, Emma Öberg*

Nynas AB, SE-149 41 Nynäshamn, Sweden

**10:50-11:10** - Silica Reinforced Deproteinized Natural Rubber Compound for Tyre Application

*Siti Salina SARKAWI*

Malaysian Rubber Board, Technology and Engineering Division, RRIM Research Station, 47000 Sg Buloh, Selangor, MALAYSIA

**11:10-11:30** – Development of Microdense Carrier Compound for Weatherstrips

*Yusuf Güner, Sevgi Yıldız, Ozkan Engin, Ceren Ulger, Erdem Aydın, Ali Erkin Kutlu*

Standard Profil Automotive A.S., R&D Center, 81620, Düzce, TR

**HALL-B**

**SESSION III-B**

**10:30-10:50** - How Silicone Compound's Properties Are Affected by Adding Heat Stability Additive?

*Hande Eyvazoğlu*

Başoğlu Kablo ve Profil San. Ve Tic. A.Ş., Bolu, TR

**10:50-11:10** - Simulation of Silicone Sponge Gaskets Process Conditions by Rubber Process Analyzer

*Ebru Erefe, Murat Şen*

Başoğlu Kablo ve Profil San. Ve Tic. A.Ş., Bolu, TR

**11:10-11:30** – Viscoelastic and self-healing properties of silica filled ionically modified bromobutyl rubber

*Aladdin Sallt Amit Das, Jana Schaber, Ulrich Scheler, Eshwaran S. Bhagavatheswaran,*

*Klaus W. Stöckelhuber, Gert Heinrich, Brigitte Voit, Frank Böhme*

Leibniz-Institut für Polymerforschung Dresden, Hohe Straße 6, D-01062 Dresden, Germany

**11:30-11:50** - Coffee Break

**HALL-A**

**SESSION IV-A**

**11:50-12:10** – Characterisation of graphene nanoplatelet reinforced NBR

*J.Robert Innes, Robert J. Young, Ian Kinloch*

University of Manchester, Faculty of Science and Engineering, School of Materials, National Graphene Institute, Manchester, UK

**12:10-12:30** - OM-POSS as an adhesion promoter for aramid cord/natural rubber system

*Nazlı Yazıcı, Samet Dursun, Tugay Yarıcı, Burak Kılıç, Güralp Özkoç, Mehmet Kodal, Bağdagül Karaağaç*

Kocaeli University, Faculty of Engineering, Department of Chemical Engineering, Kocaeli, TR

**MAY 11, 2018 - FRIDAY**



**HALL-B**

**SESSION IV-B**

**11:50-12:10** – The comparison of triglycidyl Isobutyl-POSS and 1,4-phenylene diisocyanate as compatibilizers in PLA/TPU Blends

*Nilay Tüccar Kılıç, Buse Nur Can, Mehmet Kodal, Güralp Özkoç*

Kocaeli University, Faculty of Engineering, Department of Chemical Engineering, Izmit, Kocaeli, TR

**12:10-12:30** – Thermoplastic elastomers based on PLA blended with chloroacetated natural rubber

*Ploenpit Boochathum, Tiprapa Kitrabeab, Piyada Areerug*

King Mongkut's University of Technology Thonburi, Faculty of Science, Department of Chemistry, Tungkrui, Bangkok 10140, Thailand

**12:30-12:50** - Influence of the isocyanate modification of coconut fiber in terms of mechanical and physical performance of polyurethane elastomer/coconut fiber eco-composites

*Firat Hacıoğlu, Alinda Öykü Akar, Ümit Tayfun, Mehmet Doğan*

Middle East Technical University, Department of Polymer Science and Technology, Ankara, TR

**12:50-14:40 – Lunch**

**HALL-A**

**SESSION V-A**

**14:40-15:00** – The influence of fine waste tyre particles as filler in elastomer matrix, on strength, tear, abrasion and interface morphology

*Dayang Habibah A.I.H, Frank Abraham, John Summerscales and Paul Brown*

School of Engineering, University of Plymouth, Plymouth PL4 8AA, United Kingdom

**15:00-15:20** - The Effect of Ionizing Radiation on the Temperature Scanning Stress Relaxation Properties of NBR Elastomers Reinforced by Lignin

*Davut Aksüt, Bağdagül Karaağaç, Murat Şen*

Hacettepe University, Faculty of Science, Department of Chemistry, Polymer Chemistry Division, 06800, Beytepe, Ankara, TR

**HALL-B**

**SESSION V-B**

**14:40-15:00** – The influence of butadiene rubber on thermomechanical and fatigue properties of natural rubber/styrene rubber blends

*Okan Gençoğlu, Engin Burgaz, Mert Göksüzoğlu*

Ondokuz Mayıs University, Faculty of Engineering, Dept. of Material Science Engineering, Samsun TR

**15:20-15:20** - Correlation and Regression Analysis of Elastomeric Rubber Foam Production Process

*Yılmaz Özkan, Fatma Baysu*

Sakarya University, Institute of Science, Department of Total Quality Management, Sakarya, TR

**15:20-16:00 – Closing**

**P1-** Effect of Different K-Values in Polyvinyl Chloride (PVC) on NBR / PVC Blend

**Aylin Karakurt**

Eskişehir Anadolu University, Faculty of Science, Department of Chemistry, Eskişehir, TR

**P2-** Mechanical and Rheological Properties of NR/POSS Compounds: 'Comparison of OV-POSS and OM-POSS'

**Samet Dursun, Nazlı Yazıcı Burak Kılıç, Tuğay Yarıcı, Bağdagül Karaağaç, Mehmet Kodal, Güralp Özkoç**

Kocaeli University, Dept. of Polymer Science and Technology, İzmit, Kocaeli, TR

**P3-** Crosslink density measurement of Gum and Filled EPDM Vulcanizates by Various Analytical Methods

**Erdem Aydın, Ceren Ülger, Yusuf Güner, Sevgi Yıldız, Ali Erkin Kutlu, Ömer Andaç**

Standard Profil Automotive A.S., R&D Center, 81620, Düzce, TR

**P4-** Predicting The Optimum Process Conditions of Rubber Extrusion by Using Design of Experiment

**Ceren Ülger, Erdem Aydın, Sevgi Yıldız, Yusuf Güner, Ali Erkin Kutlu**

Standard Profil Automotive A.S., R&D Center, 81620, Düzce, TR

**P5-** Effect of anti-oxidant and cure system on the heat resistance of ACM rubber

**Sıdıka Sertkol Kavuş, Zehra Dönmez, Tuna Aydın, Mumin Tutar**

Unver Grup Otomotiv Sanayi ve Ticaret A.Ş., TR

**P6-** The effect of ionic liquids on the properties of carbon nanotube filled NR/BR blends

**Esin Çeltik Ak, Mert Göksüzoğlu, Hüsnü Çep, Engin Burgaz, Müberra Andaç**

Ondokuz Mayıs University, Faculty of Science and Art, Department of Chemistry, Kurupelit, 55139, Samsun, TR

**P7-** Analyses of Vulcanization Parameters' (T,t) Impact on Crosslink Density and Aging Performance of Natural Rubber (NR)

**Ahu Kor Dayıoğlu, Seda Balaban, Elif Burcu Yalçınkaya, Ece Ünür**

Bursa Technical University, Graduate School of Natural and Applied Sciences, Advanced Technologies-Materials Science and Engineering Program, Yıldırım, Bursa, TR

**P8-** Effects of polyhedral oligomeric silsesquioxane (POSS) on the mechanical and thermal properties of NR/BR blends

**Merve Ercan Kalkan, Güralp Özkoç**

Kocaeli University, Faculty of Engineering, Department of Chemical Engineering, İzmit, Kocaeli, TR

**P9-** Comparison of different TGA methods on the compositional analysis of rubber vulcanizates

**Merve Ercan Kalkan, Nursel Karakaya, Güralp Özkoç**

Kocaeli University, Faculty of Engineering, Department of Chemical Engineering, İzmit, Kocaeli, TR

**P10-** Artificial Leather Automotive Upholstery Determination of Defects on the Surface

**F.Üğür Özçağatay, A.Melek Köstem**

TÜBİTAK-BURSA Test and Analysis Laboratory, Bursa, TR

**P11-** Co-Agent Induced Vulcanization of Epoxidized Natural Rubber

**Sena Ezgi Selçuk, Bağdagül Karaağaç**

Kocaeli University, Engineering Faculty, Department of Chemical Engineering, 41380, Umuttepe, Kocaeli, TR

**P12-** Monitoring curing and time-dependent properties of EPDM rubbers by dynamic mechanical analysis

**Gökçe Dağdeviren, Nurcan Sivri, Begum Alanalp, Ali Durmuş**

Istanbul University, Engineering Faculty, Dept. of Chemical Engineering, 34320, Avcılar, Istanbul, TR

**P13-** Thermal, viscoelastic and shape memory properties of semi-crystalline elastomer blends

***Merve Dođu, Ali Durmuş, Nevra Ercan***

Istanbul University, Engineering Faculty, Dept. of Chemical Engineering, 34320, Avcılar, Istanbul, TR

**P14-** Rheological and mechanical properties of blend type thermoplastic elastomer (TPE) compounds

***M. Begüm Alanalp, Ali Durmuş, İsmail Aydın***

Istanbul University, Engineering Faculty, Dept. of Chemical Engineering, 34320, Avcılar, Istanbul, TR

**P15-** Ultra High Molecular Weight EPDM with Enhanced Crosslink Structure

***Betül Koçyiğit, Bağdagül Karaağaç***

Kocaeli University, Engineering Faculty, Department of Chemical Engineering, 41380, Umuttepe, Kocaeli, TR

**P16-** The Effect of Ionizing Radiation on The Mechanical Properties of NBR

***Davut Aksüt, Bağdagül Karaağaç, Murat Şen***

Hacettepe University, Faculty of Science, Department of Chemistry, Polymer Chemistry Division, 06800, Beytepe, Ankara, TR

**P17-** Effect of Single Walled Carbon Nanotube (SWCNT) on The Electrical and Mechanical Properties of Vinyl-Methyl-Polysiloxane (VMQ) Elastomeric Nanocomposites

***Arta Babapour, Melike Onay, Merve Alkur, Murat Şen***

Hacettepe University, Faculty of Science, Department of Chemistry, Polymer Chemistry Division, 06800, Beytepe, Ankara, TR

**P18-** Effect of Co-Agent Type and Ratio on the Cure Kinetics of Vinyl-Methyl-Polysiloxane (VMQ) Elastomers

***Elif Kaymazlar, Murat Şen***

Ondokuz Mayıs University, Faculty of Science and Letters, Dept. of Chemistry, Atakum, Samsun, TR

**P19-** Effects of Peroxide Type on the Stress Relaxation Behavior of Vinyl-Methyl-Polysiloxane (VMQ) Elastomers

***Muharrem Parlak, Murat Şen***

Hacettepe University, Faculty of Science, Department of Chemistry, Polymer Chemistry Division, 06800, Beytepe, Ankara, TR

**P20-** Investigation of thermal aging of styrene butadiene rubber/ethylene propylene diene monomer blends

***Zeynep Songur, Nurseli Uyanık, Sedef Özcan***

Istanbul Technical University, Graduate School of Science Engineering and Technology, Polymer Science and Technology, Maslak, Istanbul, TR

**P21-** Versatile Evaluation of Liquid Rubber Containing NBR Compounds

***Kamran Farzullazade, Bağdagül Karaağaç***

Kocaeli University, Engineering Faculty, Department of Chemical Engineering, 41380, Kocaeli, TR

**P22-** Anti-Aging Performance of Henna in NBR Based Vulcanizates

***Onur Kantarcı, Bağdagül Karaağaç***

Kocaeli University, Engineering Faculty, Department of Chemical Engineering, 41380, Kocaeli, TR

**P23-** Developing formulation for high damping seismic isolation with increased damping and aging performance. Part1. Characterization of currently used formulation

***Farzad A. Nobari Azar, Murat Şen***

Özdekan Rubber Inc, R&D Department, 06374, Yenimahalle, Ankara, TR



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