

8th Fall Rubber Colloquium



Novotel Hannover, November, 26th - 28th 2008

Preliminary Scientific Program

Wednesday, November 26, 2008

11.00	Opening ceremony: W. Hirche , Niedersächsisches Ministerium für Wirtschaft, Arbeit und Verkehr	
11.40	Plenary lecture: T. Nishi , Tohoku University WPI <i>Nanomechanical mapping analysis of elastomer based alloys</i>	
12.30	Lunch	
	Session A Vulcanisation/Crosslinking <i>Chairman: H. Geisler</i>	Session B New Materials <i>Chairman: M. Gerspacher</i>
13.30	M. van Duin , DSM Research, MD Geleen <i>Mechanism of peroxide cure of EPDM rubber</i>	L. Guy , Rhodia, Collange-au-Mont d'Or <i>New insights in the dynamic properties of precipitated silica filled rubber using a new high surface silica</i>
14.00	B. Vega-Sanchez , Universitat Ramon Llull, Barcelona <i>The role of activator in microwaves assisted vulcanization: from model compound to natural rubber</i>	J. W. M. Noodermeer , University of Twente, Enschede <i>Blending, curing and reinforcement of NR/BR/EPDM compounds for tire sidewall applications</i>
14.30	J. Lopez Valentin , Martin-Luther Universität Halle-Wittenberg/CSIC Madrid <i>Uncertainties in the determination of crosslink density by equilibrium swelling experiments in natural rubber</i>	A. Blume , Evonik, Köln <i>Operando Infrared study of the reaction of Triethoxypropylsilane with Silica</i>
15.00	M. Ito , Tokyo University of Science <i>Changes in the crosslinking structure of vulcanizates during tensile deformation</i>	A. Spittel , Compounds AG, Pfäffikon <i>Increasing requirements for rubber compounds in contact with drinking water</i>
15.30	Coffee break	
	Nanocomposites <i>Chairman: R. H. Schuster</i>	New Materials <i>Chairman: J. L. Leblanc</i>
16.00	L. Bokobza , ESPCI, Paris <i>Multiwall carbon nanotube elastomeric composites</i>	H. Dikland , DSM Research, MD Geleen <i>Unique performance benefits of high-VNB EPDM products for peroxide cure applications</i>
16.30	S. Ilisch , Martin-Luther-Universität Halle-Wittenberg <i>Morphologieentwicklung im Mischprozess von Nanofüllstoff haltigen Kautschukcompounds</i>	D. Krüger , Allod Werkstoff GmbH & Co. KG, Burgbernheim <i>TPE-S mit Haftung auf Glas ohne Verwendung von Haftvermittlern</i>
17.00	X. Yang , DIK, Hannover <i>Transport process of volatile organic substances through elastomer micro- and nano- composites</i>	M. Adler , Freudenberg Forschungsdienste KG, Weinheim <i>Neue temperatur- und hydrolysebeständige Werkstoffe für die Abdichtung von Brennstoffzellen</i>
17.30	B. Haidar , ICSI-CNRS, Mulhouse <i>Clay-based lamellate particles as filler for elastomers: A multidisciplinary approach</i>	R. Engehausen , Lanxess, Leverkusen <i>Kundenzufriedenheit-Besondere Anforderungen in der Kautschukindustrie</i>
18.00	Poster Session	

Thursday, November 27, 2008

	Session A New Materials <i>Chairman: R. Hjelm</i>	Session B Elastomer Physics <i>Chairman: T. Alshuth</i>
09.00	G. Thielen , Goodyear, Colmar-Berg <i>Semicrystalline synthetic rubbers in compounds</i>	C. Wrana , Lanxess, Leverkusen <i>Characterization of filler-filler and filler-polymer interactions from stress-strain measurements</i>
09.30	K. Endo , Osaka-City University <i>Synthesis and properties of cyclic disulfide polymers containing polycatenane structure</i>	H. Baaser , Freudenberg Forschungsdienste KG, Weinheim <i>Micro level of polymer-filler-Interaction</i>
10.00	K. Kremer , Zeon Europe GmbH, Düsseldorf <i>New Improved compression set HNBR</i>	J. Meier , Henniges Automotive, Rehbürg-Loccum <i>Zur Beschreibung der Spannungserweichung in Elastomeren</i>
10.30	Coffee break	
11.00	V. Börger , Schill+Seilacher "Struktol" Aktiengesellschaft, Hamburg <i>How to improve silica compounds containing different silane types by certain processing additives</i>	M. Soddemann , Lanxess, Leverkusen <i>How to improve your HNBR rubber compound in low temperature behaviour by using Dynamic Mechanical Analysis (DMA)</i>
11.30	D. Bellusova , DIK, Hannover <i>Magnetoactive butadiene rubber composites</i>	R. Stoczek , TU Chemnitz <i>Analysis of dynamic crack propagation in filled rubbers by simultaneous tensile- and pure shear mode testing</i>
12.00	Lunch	
13.30	Poster Session	
	Simulation and Modelling <i>Chairman: J. Ihlemann</i>	Characterization <i>Chairman: U. Giese</i>
14.30	J. Peters , TU Hamburg-Harburg <i>Modelling of the viscoelastic material behaviour of Elastomers based on irreversible thermodynamics</i>	S.Toki , Stony Brook University, New York <i>Multi-scaled micro-structures in natural rubber by Synchrotron X-ray scattering and optical microscopy</i>
15.00	A. Lion , Universität der Bundeswehr, Neubiberg <i>Temperature-, preload- and amplitude-dependent phenomena of filler-reinforced elastomers: experimental investigations and constitutive modelling</i>	F. Sieker , GE Sensing & Inspection Technologies GmbH, Wunstorf <i>Computed Tomography for analysis of rubber components</i>
15.30	K. Akutagawa , Bridgestone Corporation, Tokyo <i>Constitutive equation for rubber elasticity with the change in internal energy and entropy III</i>	K. Kojo , Nagasaki University <i>Direct observation of the microphase-separated structure of polyurethane elastomers at various temperatures</i>
16.00	Coffee break	
	Reinforcement <i>Chairman: L. Bokobza</i>	Processing <i>Chairman: E. Haberstroh</i>
16.30	M. Gerspacher , Lye <i>From relevant filler characterization to relevant rubber compound predictive testing</i>	M.-F. Vallat , ICSI-CNRS, Mulhouse <i>Plasma polymerisation on PDMS substrates: Influence of molecular weight and Silica filler</i>
17.00	J. Fritzsche , DIK, Hannover <i>Filler networking and reinforcement of carbon black filled styrene-butadiene rubber</i>	M. Thornagel , SIGMA Engineering GmbH, Aachen <i>Kautschuk-Spritzgießen simulieren - mehr als nur ein Füllbild</i>
17.30	D. Göritz , Universität Regensburg <i>Carbon Black and Silica: Similarities and Differences</i>	J. Frydel , DIK, Hannover <i>New aspects of thick rubber sheets calendering</i>
19.00	Social Event	

Friday, November 28, 2008

Session A Compounding <i>Chairman: M. Soddemann</i>		Session B Elastomer Physics <i>Chairman: J. Meier</i>	
9.00	<u>R. Hjelm</u> , National Laboratory, Los Alamos <i>The mechanism of plasticizer-induced softening in polyurethans</i>	<u>J. Kroll</u> , Lanxess, Leverkusen <i>An analytical method for the determination of the high-frequency behaviour of elastomers</i>	
9.30	<u>O. Klockmann</u> , Evonik Degussa GmbH, Köln <i>Advanced silica / silane mixing – converting accelerators into process aids</i>	<u>T. Brüger</u> , Vibracoustic GmbH & Co. KG, Hamburg <i>A new way for lifetime estimations of filled natural rubber blends</i>	
10.00	<u>W. Dierkes</u> , University of Twente, Enschede <i>Reinforcement studies - Effect of thiophene-plasma coating of silica on the performance in EPDM, SBR and NBR</i>	<u>C. Oprisoni</u> , DIK, Hannover <i>High frequency dynamics of copolymers</i>	
10.30	<u>A. Schröder</u> , Rhein Chemie Rheinau GmbH <i>Safer replacements for toxicologic problematic substances in rubber compounds</i>	<u>H. Kahraman</u> , LFK RWTH Aachen <i>Robuste Approximation von hyperelastischen Materialmodellen zur numerischen Simulation von unterschiedlichen Beanspruchungshöhen und -zuständen</i>	
11.00	Coffee break		
Reinforcement and Compounding <i>Chairman: O. Klockmann</i>		Vulcanisation/Crosslinking <i>Chairman: H. Geisler</i>	
11.30	<u>G. Nijman</u> , Vredestein Banden B. V., Enschede <i>Engineering performance and material viscoelastic analyses along a compounding line for silica based compounds</i> <i>Part1: Mixing line performance analysis</i>	<u>S. Kawahara</u> , Nagaoka University of Technology <i>Crosslinking junctions of vulcanized natural rubber analyzed by solid-, solution- and latex-state NMR spectroscopy</i>	
12.00	<u>J. L. Leblanc</u> , University Pierre et Marie Curie, Vitry sur Seine <i>Engineering performance and material viscoelastic analysis along a compounding line for silica based compounds</i> <i>Part2: Non-linear viscoelastic analysis</i>	<u>M. Hess</u> , DIK, Hannover <i>An approach to recycle rubber using the mechanic-chemical method of devulcanization</i>	
12.30	Lunch		
Friction <i>Chairman: M. Klüppel</i>		Simulation and Modelling <i>Chairman: H. Baaser</i>	
14.00	<u>M. Kröger</u> , TU Freiberg <i>Dynamic rubber contacts with adhesion</i>	<u>J. Ihlemann</u> , TU Chemnitz / DIK, Hannover <i>Erholungseffekte unter zyklischer Belastung bei technischen Gummiwerkstoffen.</i>	
14.30	<u>D. Manas</u> , Tomas Bata University, Zlin <i>New investigation in wear of rubber components</i>	<u>F. Bacchelli</u> , Polimeri Europa, Ravenna <i>Modeling of time-dependent extensional rheology of filled 1,4-cis-polybutadiene</i>	
15.00	<u>N. Rennar</u> , FH Würzburg-Schweinfurt <i>Experimental studies on wet skid resistance and wear properties of filled elastomers</i>	<u>A. Schobel</u> , IKV RWTH Aachen <i>Berücksichtigung von multiaxialen Beanspruchungszuständen in der FEM zur genaueren Strukturanalyse von Elastomerbauteilen</i>	
15.30	Closing remarks : R. H. Schuster		