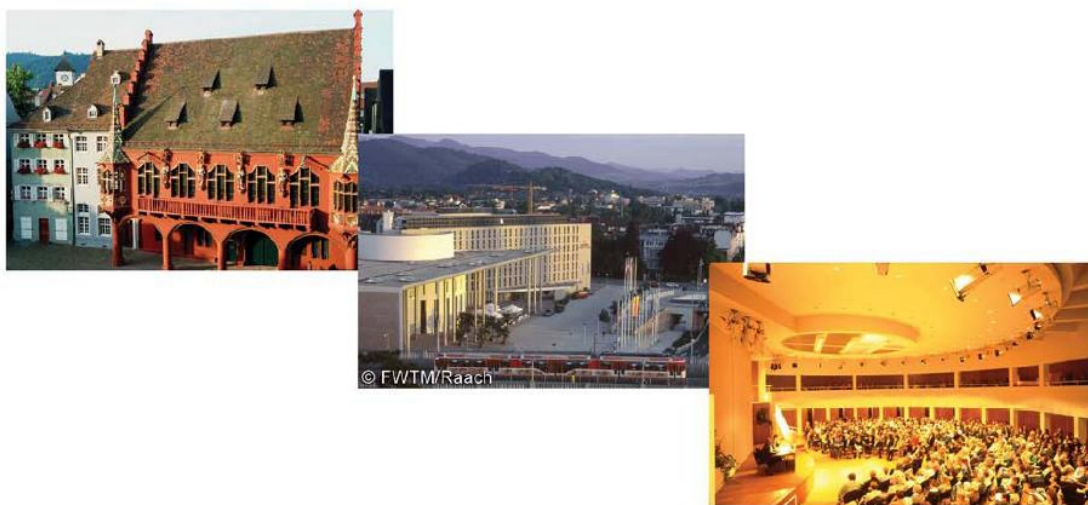


# 11<sup>th</sup> International Seminar on Elastomers



Freiburg, Germany, September, 23 - 27, 2007

## Scientific Program



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## Monday, September 24, 2007

8.30	T. Nishi, Tokyo Institute of Technology <i>"New results on structure and properties of elastomers obtained by polymer nanotechnology"</i>	
9.05	C. Wrana, Lanxess Deutschland GmbH <i>"Evaluation of the molecular mass distribution of elastomers from dynamic-mechanical data - Potential and limitations"</i>	
9.40	J.L. Leblanc, Université P. & M. Curie <i>"Extrinsic vs. Intrinsic Non-Linear Viscoelastic behavior of uncured rubber materials"</i>	
10.15 - 10.45	<b>Coffee Break</b>	
	<b>Session A</b>	<b>Session B</b>
	<b>Thermoplastic Elastomers</b>	<b>Mixing, Extrusion, Calendaring</b>
10.45	M. van Duin, DSM Elastomers <i>"Novel EPDM products for peroxide cure applications"</i>	F. Bacchelli, Centro Ricerche Elastomeri - Polimeri Europa <i>"Rheological implications of the reduction in viscosity of SBR copolymers during mixing"</i>
11.05	H. Nakahama, Mitsui Chemicals Inc. <i>"Olefinic TPVs having excellent rubber elasticity for automotive seals"</i>	H. Köppen, Institut für Kunststoffverarbeitung Aachen <i>"Continuous compounding of silica compounds in a twin-screw extruder"</i>
11.25	H. Hasegawa, Kyoto University <i>"Complex phases in diblock copolymer systems"</i>	J. Frydel, DIK <i>"Influence of Maximum NIP Pressure on the Occurrence of Gas Entrapments During Calendaring of Rubber Sheets"</i>
	<b>Surface Treatment</b>	<b>Barrier Properties</b>
11.45	W. Dierkes, University of Twente <i>"Compatibilization of immiscible elastomer-filler combinations by plasma polymerization"</i>	S. Bistac, Team Interfaces sous Contraintes, UHA <i>"Sliding Friction of Model Elastomers: The Complex Role of Interface"</i>
12.05	V. Roucoules, ICSI - Université de Haute-Alsace <i>"Thin polymer plasma acting as a coupling agent in metal/elastomer joints"</i>	S. Varghese, Rubber Research Institute of India <i>"Effect of Clay Type on the mechanical and barrier properties of NR-Nanocomposites"</i>
12.30 - 13.30	<b>Lunch</b>	
	<b>Functional Polymers</b>	<b>FEM-Simulations</b>
13.30	S. Asai, Tokyo Institute of Technology <i>"The effect of CO<sub>2</sub> Treatment on the structure and properties of Poly(L-lactide)"</i>	K. Akutagawa, Bridgestone <i>"Mesoscopic Mechanical Analysis of filled elastomer with 3D-Finite Element analysis"</i>
13.50	K. Endo, Osaka City University <i>"Polymerization of cyclic disulfides and formation of network structure containing polycatenane"</i>	J. Gómez, Instituto Tecnológico de Aragón <i>"F.E. Simulation of the hysteretic behavior of an industrial rubber under rotation loads"</i>
14.10	J.F. Pilard, Université Le Mans <i>"Polyisoprene as a useful substrate dedicated to new polymers development; from Natural Rubber to biologically active coatings"</i>	A. Lion, Universität der Bundeswehr <i>"Experimental investigation and constitutive modeling of high damping rubber"</i>
14.30	M. Furukawa, Nagasaki University <i>"Properties of polycarbonate (PC) glycols with different alkyl chains and polyurethanes incorporating PC glycols"</i>	U. Nackenhorst, Universität Hannover <i>"Finite Element simulation of tires - Challenges for the constitutive modeling of rubber"</i>
14.50	S. Thiele, Dow Olefinverbund GmbH <i>"Novel functionalized SBR for silica containing tires"</i>	T. Schardt, Freudenberg Forschungsdienste KG <i>"Chemiluminescence Method in the Development of Rubbers - Ageing Resistance of Elastomeric Materials"</i>
15.10-15.40	<b>Coffee Break</b>	

to be continued...

**Monday, September 24, 2007 (2)**

	<b>Session A</b>	<b>Session B</b>
	<b>Natural Rubber</b>	<b>Ageing</b>
15.40	S. Poompradub, Chulalongkorn University <i>"Synthesis of silica in natural rubber solution via sol-gel reaction"</i>	H. Magg, Lanxess Deutschland GmbH <i>"Aerobic and anaerobic ageing of heat resistant elastomer materials based on Ethylene-Acrylonitrile Copolymers and Ethylene-Vinylacetate-Copolymers"</i>
16.00	S. Toki, State University of New York <i>"Strain induced crystallization and tensile strength in carbon black filled natural rubber compounds by synchrotron X-ray studies"</i>	D. M. Bielinski <i>"Application of microindentation to study ageing of rubber"</i>
	<b>Natural Rubber</b>	<b>Fatigue and Lifetime</b>
16.20	M. Martins, Embrapa Instrumentação Agropecuária <i>"Elemental analysis and protein quantification of raw NR of brazilian IAC Series 400 Clones"</i>	Th. Früh, Rhein Chemie Rheinau GmbH <i>"Improvement of dynamic fatigue resistance of elastomeric parts by very fine dispersable chemicals"</i>
16.40	N. Hinchiranan, Chulalongkorn University <i>"Combination of hydrogenation and isomerization of NR using palladium catalyst"</i>	J. Hanley, Dublin Institute of Technology <i>"The effect of oil swelling on the fatigue life of elastomers subjected to multiaxial fatigue using bubble inflation"</i>
17.00	J. Samran-Ruamcharoen, Prince of Songkla University <i>"Bentonite as a reinforcing and compatibilizing filler for NR and polysterene blends"</i>	M. Santoso, DIK <i>"The Impact of Chain Oxidation on Stress Relaxation of Elastomers and Lifetime Prediction"</i>

**Tuesday, September 25, 2007**

8.30	P. Phinyocheep, Mahidol University, Thailand <i>"Toughening of Polyethyleneterephthalate using Natural Rubber and Natural Rubber grafted Maleic Anhydrid"</i>
9.05	R. Hjelm, Los Alamos National Laboratories <i>"The Complex Domain Structure and Composition of a Thermoplastic, Polyurethane"</i>
9.40	D. Goeritz, Universität Regensburg <i>"Temperature Dependence of Dynamic Mechanical Properties of filled Elastomers"</i>
10.15 - 10.45	<b>Coffee Break</b>
	<b>New Fillers and Reinforcement</b>
10.45	J. Stehr, Lehmann & Voss & Co. KG <i>"Investigation of the effects of Poly(<math>\alpha</math>-olefin) - plasticizers on Elastomer Properties"</i>
11.05	P. Lugez, MLPC International <i>"Alternative to the OTOS curing agent in NR compounds"</i>
11.25	D. D. Navaja, MAPUA Institute of Technology <i>"Hybrid Formation and Properties of Rubber-Silicate Nanocomposites"</i>
11.45	E. Peregi, Ciba Specialty Chemicals <i>"Novel Coupling Agent for Silica Filled Rubber Compounds with Improved Processibility"</i>
12.05	J. Fritzsche, DIK <i>"Effects of reinforcing fillers on relaxation processes in nanocomposites"</i>
12.25	J. Fröhlich, Degussa GmbH <i>"Influence of soft carbon blacks on electrical properties, microwave absorption and surface quality of filled rubber compounds"</i>
12.45	<b>Lunch</b>
14.00	<b>Excursion to Black Forest (facultative)</b> Trip through the Black Forest visiting places like Schauinsland, Feldberg, Todtnau, Schonach, Schluchsee, Titisee, Bärenthal, Höllental.

### Wednesday, September 26, 2007

8.30	R. Engehausen, Lanxess Deutschland GmbH <i>"Research in the synthetic rubber industry, a quality producers perspective"</i>
9.05	K. Ito, University of Tokyo <i>"Novel Cross-linking concept of polymer network: Slide-ring materials"</i>
9.40	I. Hudec, Slovak University of Technology <i>"Surface Treatment of Reinforcing Materials by plasma"</i>
10.15 - 10.45	<b>Coffee Break</b>
	<b>Dynamic Properties</b>
10.45	J.L. Valentin, Martin-Luther-Universität Halle Wittenberg <i>"Variation of Natural Rubber Network Structure with the vulcanization system; a study by 1H-multiple-quantum-NMR"</i>
11.05	C. Russi G. Furtado, Universidade do Estado do Rio de Janeiro <i>"Evaluation of the viscoelastic behavior of SBR and NR gum elastomers with closed cavity harmonic torsional rheometers"</i>
11.25	M. Wilhelm, Universität Karlsruhe <i>"Combination of NMR relaxometry and mechanical testing during vulcanization"</i>
11.45	C. Oprisoni, DIK <i>"High Frequency Investigation of Elastomer Properties Using Ultrasonic Spectrometry"</i>
12.05	G. J. Schneider, Forschungszentrum Jülich <i>"Dependence of the mechanical properties on the morphology of fillers"</i>
12.30 - 13.30	<b>Lunch</b>
	<b>Interfacial Phenomena in Elastomers</b>
13.30	A. Vidal, Institut de Chimie des Surfaces et Interfaces, UHA <i>"Structural Study of PDMS bimodal network by SANS. The origin of auto reinforcement"</i>
13.50	B. Haidar, Institut de Chimie des Surfaces et Interfaces, UHA <i>"Elastomer chain conformations on sphere, tube and lamellar nano particles; Form factor effects"</i>
14.10	S. Kawahara, Nagaoka University of Technology <i>"Viscoelastic Properties of Natural Rubber with Nano-matrix Structure"</i>
14.30	W. Kuhn, IIC Innovative Imaging Corp. KG <i>"Characterization of Elastomer Networks by NMR Parameters"</i>
14.50	M. Jacobi, Universidade Federal do Rio Grande do Sul (UFRGS) <i>"Functionalization as an Alternative Possibility to new Materials"</i>
15.10 - 15.40	<b>Coffee Break</b>
	<b>Different Aspects of Rubber</b>
15.40	S. Prakanrat, Mahidol University Thailand <i>"Surface grafting of polystyrene on Natural Rubber as studying by Raman Spectroscopy"</i>
16.00	K. Suchiva, Mahidol University Thailand <i>"Effect of moisture content on modifying efficiency of surface-modifying agents in silica-filled natural rubber"</i>
16.20	<b>Poster Presentations</b> (Short oral presentation of all posters, about 2 - 3 minutes per poster)
18.00	<b>Poster Session</b>

**Thursday, September 27, 2007**

8.30	A. Halasa, Goodyear Tire & Rubber Co. <i>"Trans-polybutadiene and trans-styrene/butadiene elastomers - A potential partial replacement for natural rubber"</i>
9.05	C. Recker, Continental AG <i>"Tire Today - Commodity or High Tech"</i>
9.40	James L. White, University of Akron, Ohio <i>"The Influence of Particulate Fillers on the Rheological and Processing Characteristics of Elastomers and Factors in their Mixing"</i>
10.15 - 10.45	<b>Coffee Break</b>
	<b>Elastomer Composites</b>
10.45	P. Alexy, Slovak University of Technology <i>"Application of lignins in rubber blends"</i>
11.05	G. Thielen, Goodyear Technical Center Luxembourg <i>"Hydroxy and Nitrile functionalized emulsion SBR's in silica compounds"</i>
11.25	M. Ito, Tokyo University of Science <i>"Phase control of rubber blends by silica"</i>
11.45	S. Borros, Universitat Ramon Llull, Barcelona <i>"Reaction stage modeling (RSM) study on the DPDS effect in monosulfidic and disulfidic crosslinks under microwave heating"</i>
12.05	O. Patarapaiboolchai, Prince of Songkla University <i>"Effect of promoters on natural rubber to metal bonding"</i>
12.25	K. Brandt, DIK <i>"Preparation and Properties of new Cellulose-Elastomer-Nanocomposites"</i>
12.45	<b>Closing lecture</b> <i>W. Braubach, Lanxess Deutschland GmbH</i>
13.30	<b>End of the seminar</b>