

Publikationen

Publikationen: A. Witschnigg, S. Laske, M. Kracalik, M. Feuchter, G. Pinter, G. Maier, W. Märzinger, M. Haberkorn, G. R. Langecker, C. Holzer: In-line characterization of polypropylene nanocomposites using FT-NIR Polymer Engineering and Science, in review S. Laske, M. Kracalik, M. Gschweidl, M. Feuchter, G. Maier, G. Pinter, R. Thomann, W. Friesenbichler, G. R. Langecker: Estimation of reinforcement in compatibilized polypropylene nanocomposites by extensional rheology, Journal of Applied Polymer Science, 111 (2009) 5, 2253 – 2259 M. Kracalik, S. Laske, M. Gschweidl, W. Friesenbichler, G. R. Langecker: Advanced compounding: extrusion of polypropylene nanocomposites using the melt pump, Journal of Applied Polymer Science, 113 (2009) 3, 1422 – 1428 S. Laske, M. Kracalik, M. Feuchter, G. Pinter, G. Maier, W. Märzinger, M. Haberkorn, G. R. Langecker: FT-NIR as a determination method for reinforcement of polymer nanocomposites, Journal of Applied Polymer Science, in print M. Kracalik, S. Laske, M. Feuchter, G. Maier, G. Pinter, W. Friesenbichler, G. R. Langecker: Optimization of shear forces and residence time in polypropylene nanocomposites using advanced compounding (to be submitted) A facile synthesis route to zinc sulphide nanoparticles – G. Kremser, T. Rath, B. Kunert, R. Resel, I. Letofsky-Pabst, G. Trimmel, (submitted) Synthesis and Characterization of Copper Zinc Tin Sulfide – Nanoparticles - Thomas Rath, Wernfried Haas, Robert Saf, Birgit Kunert, Ferdinand Hofer, Roland Resel, Gregor Trimmel (submitted)

Wissenschaftliche Arbeiten: Bachelorarbeit: „Nanoparticle Reinforced Epoxy Resins“ – State of the Art – S. Stelzer (aus dem Teilprojekt SetScreen) Diplomarbeit: „Thermo-mechanical and fracture mechanical properties of nanoparticle reinforced epoxy resins“ – Simon Stadelmann (aus dem Teilprojekt SetScreen) „Synthesis and Characterisation of Polythiophenes and Poly(thiophene-alt-fluorene)s“ – Elisabeth Zieger, November 2009. (aus dem Teilprojekt OptelComp)

Dissertation: New Electroactive Ligands for the Surface Modification of Inorganic Nanoparticles and Oxidic Surfaces. – DI Gabriele Kremser, Oktober, 2009 (aus dem Teilprojekt OptelComp) Vorträge: S. Laske, M. Kracalik, M. Gschweidl, G. R. Langecker: Abhängigkeit des Exfolierungsgrades von Silikatschichten in einer Polymermatrix vom Compatibilizer - Nanoclay Mischverhältnis, Lecture at International Conference Polymermischungen 2007, Bad Lauchstädt, Germany, March 28 - 29, 2007 M. Kracalik, S. Laske, M. Gschweidl, M. Feuchter, G. Maier, G. Pinter, W. Friesenbichler, G. R. Langecker: Fast Determination of Reinforcement in Polymer Nanocomposites, Invited Lecture at International Conference NanoEurope 2007, St. Gallen, Switzerland, September 11-13, 2007 M. Kracalik, S. Laske, M. Feuchter, G. Maier, G. Pinter, W. Friesenbichler, G. R. Langecker: Optimization of Compatibilizer Admixture in Polypropylene-Organoclay Nanocomposites by Extensional Rheology, Lecture at International Conference ASPM 2008, Graz, Austria, March 26-28, 2008 M. Feuchter, G. Maier, G. Pinter, M. Kracalik, S. Laske: Quality Control of Polymer Nanocomposites Compounding using Small Angle X-ray Scattering, Lecture at International Conference ASPM 2008, Graz, Austria, March 26-28, 2008 S. Laske, M. Kracalik, M. Feuchter, G. Maier, G. Pinter, G. R. Langecker: Preparation of Polymer-Nanocomposite-Masterbatch using a Co-rotating Twin Screw Extruder in Combination with a Melt Pump, Lecture at International Conference PPS-24, Salerno, Italy, June 15-19, 2008 M. Feuchter, G. Maier, G. Pinter, M. Kracalik, S. Laske, G. R. Langecker: Small Angle X-ray Scattering as Method to Determine Mechanism of Dispersion in Polypropylene-Clay Nanocomposites, Lecture at International Conference Polymeric Materials '2008, Halle/Saale, Germany, September 24-26, 2008 M. Kracalik, S. Laske, M. Feuchte, G. Maier, G. Pinter, W. Friesenbichler, G. R. Langecker: Advanced Compounding - Einsatz einer Schmelzepumpe und In-Line NIR Messtechnik für die Aufbereitung von Polypropylen Nanocomposites. - in: Effizienz im Blickpunkt; Fakten - Technik - Konsequenzen, Invited Lecture, S. 1 – 21, Krefeld, Germany, September 11-12, 2008 W. Friesenbichler, M. Kracalik, S. Laske: Qualitätsgesicherte Aufbereitung von Polymer-Nanocomposites unter Verwendung von in-line NIR-Spektroskopie. - in: Extrusion - Rheologie und neue Technologien zur Steigerung der Produktivität – Fortbildungsseminar, Invited Lecture, S. 1 – 16, Celle-Hannover, Germany, November 10-11, 2008 M. Feuchter, G. A. Maier, G. Pinter, M. Kracalik, S. Laske, G. R. Langecker: Studies on the melting behavior of polypropylene nano-composites using X-ray diffraction and differential scanning calorimetry, ANTEC 2009 M. Kracalik, S. Laske, M. Feuchter, G. Maier, G. Pinter, G. R. Langecker, C. Holzer: Advanced characterization of polymer-clay nanocomposites: application of in-line near infrared spectroscopy and on-line extensional rheology, EuroNanoForum 2009, Prague, Czech Republic, June 2-5, 2009 M. Kracalik, S. Laske, M. Feuchter, G. Maier, G. Pinter, G. R. Langecker, C. Holzer: Assessment of material properties during compounding of polymer nanocomposites using in-line near infrared spectroscopy, International Conference APST 09, Linz, Austria, July 8-10, 2009 S. Laske, M. Kracalik, M. Feuchter, G. Maier, G. Pinter, G. R. Langecker, C. Holzer: Advanced Compounding of Polymer Nanocomposites using a Melt Pump, International Conference APST 09, Linz, Austria, July 8-10, 2009 S. Laske; M. Kracalik; M. Feuchter; G. Maier, W. Märzinger; M. Haberkorn; G. R. Langecker: FT-NIR as a quantitative determination method for polymer nanocomposites – in: PPS-24 Salerno, Italy, 2008 M. Kracalik, S. Laske, Langecker G. R.: Rheological Properties in Relation to Structure of Virgin and Recycled Polyethyleneterephthalate-Organoclay Nanocomposites – in: 12. Problemseminar Polymermischungen „Gefüllte und verstärkte Polymerblends“ – Nanoblends, Bad Lauchstädt March 2007 S. Laske, M. Kracalik, M. Feuchter, G. Maier, G. Pinter, G. R. Langecker: Preparation of Polymer-Nanocomposites-Masterbatch using a co-rotating twin screw extruder in combination with a melt pump, in: Salerno, Italy, June 15-19, 2008 S. Laske: PlaComp – Engineering scale Compounding and Inline characterization of Thermoplastic Matrix Nanocomposites – Optimization of Morphology and Structural Mechanical Properties, in: Nano Comp Workshop – Performance Optimization of Polymer NanoComposites, 2008 S. Laske: Preparation of Polymer-Nanocomposite-Masterbatch using a co-rotating twin screw extruder in combination with a melt pump, in: PPS-24 Salerno, Italy, June 15-19, 2008 S. Laske: Abhängigkeit des

Exfolierungsgrades von Silikatschichten in einer Polymermatrix vom Compatibilizer & Nanoclay Mischungsverhältnisses, in: Symposium Polymermischungen, 12. Problemseminar & "Gefüllte und verstärkte Polymerblends, Bad Laachstädt March 2007 G.Kremser, A. Pein, G. Trimmel, Hybrid nanocomposites for Optoelectronics & Nanocomposit-Workshop, Leoben, 18.3.2008. G. Trimmel, New Nanocomposite materials for Photovoltaic Application & Cooperation Nano 08, Leoben, Austria, 26.11.2008 A. Pein, F. Niedermair, K. Stubenrauch, C. Slugovc, G. Trimmel, Energy transfer from ZnO nanoparticles to a platinum dye mediated by a block copolymer & Nanomaterials. Playa del Carmen, Mexico: 07.12.2008 Novel Electroactive Thiophene Surfactants for the Modification of Semiconducting Nanoparticles and Inorganic Oxide Materials.: Nano and Giga Challenges in Electronics, Photonics and Renewable Energy. Hamilton, Ontario, 10.08.2009

Poster: S. Pichler, R. W. Lang, T. Pham, T. Schwarz, G. Pilz, K. Schnetzinger, G.R. Langecker, G. Trimmel. & "NanoComp-Performance Optimization of Nanocomposites” bei der NanoEurope07 Konferenz, St. Gallen, September 2007 E. Maier, G. Trimmel, T. Rath, A. Pein, G. Kremser, R. Saf, F. Stelzer, Electroactive organic materials and hybrid materials for photovoltaic applications. - International Symposium Towards Organic Photovoltaics. Linz, Austria 26.02.2008 A. Pein, R. Saf, G. Trimmel, Synthesis and Characterization of block copolymers containing poly(thiophene) and poly(norbornene) blocks & 1st Austrian Slovenian Polymer Meeting 2008, 26th-28th March 2008. A. Pein, G. Kremser, F. Niedermair, J. Wappel, C. Slugovc, G. Trimmel, Synthesis and Characterization of ZnO-Nanoparticles and their interaction with a platinum dye mediated by a block copolymer - Particles 2008. Orlando, USA, 10.05.2008 G. Kremser, A. Pein, I. Letofsky-Papst, B. Kunert, R. Resel, G. Trimmel, Characterization of ZnS Nanoparticles prepared by a fast and facile Synthesis Route. - Particles 2008. Orlando, Florida, 10.05.2008 S. Laske, M. Kracalik, M. Feuchter, G. Maier, G. Pinter, W. Märzinger, G. R. Langecker: FT-NIR as an Inline Qualitative Determination Method for Polymer Nanocomposites, Poster at International Conference PPS-24, Salerno, Italy, June 15-19, 2008 A. Pein, R. Saf, G. Trimmel, Synthesis and Characterization of comblike block & copolymers containing oligothiophenes in the side chain - Fpi8. Graz, Austria: 21.07.2008 G. Kremser, B. Kunert, R. Resel, G. Trimmel, Functionalized Quaterthiophenes for stabilizing inorganic nanoparticles. - Fpi8. Graz, Austria: 21.07.2008 Kracalik, M.; Laske, S.; Feuchter, M.; Maier, G.; Pinter, G.; Friesenbichler, W.; Langecker, G.: Advanced Compounding of Polymer Nanocomposites: Assembling a Melt Pump and In-line Near Infrared Spectroscopy into Extrusion Line. - Poster in: NanoEurope 2008. St. Gallen, Switzerland, September 16-17, 2008 Maier G.A.; Feuchter, M.; G.; Pinter, Kracalik, M.; Laske, S.; Langecker, G.: Determination of hierarchical strains in intercalated clay-polypropylene nanocomposites - Poster in: MRS-Fall Meeting 2008, 1-4 Dez. 2008, Boston (MA), USA Kremser, G.; Hauser, L.; Flesch, H.-G.; Resel, R.; Trimmel, G., Synthesis of Monofunctionalized Electroactive Molecules and their Application in Surface Modification - in: MRS Spring Meeting 2009. San Francisco, CA, USA; 13.04.2009. M. Feuchter, G.A. Maier, G. Pinter, M. Kracalik, S. Laske, G.R. Langecker: Studies on the melting behavior of polypropylene nanocomposites using X-ray diffraction and differential scanning calorimetry, ANTEC 2009 M. Kracalik, S. Laske, M. Feuchter, G. Maier, G. Pinter, G. R. Langecker, C. Holzer: Advanced characterization of polymer-clay nanocomposites: application of in-line near infrared spectroscopy and on-line extensional rheology, EuroNanoForum 2009, Prague, Czech Republic, June 2-5, 2009 M. Kracalik, S. Laske, M. Feuchter, G. Maier, G. Pinter, G. R. Langecker, C. Holzer: Assessment of material properties during compounding of polymer nanocomposites using in-line near infrared spectroscopy, International Conference APST 09, Linz, Austria, July 8-10, 2009 S. Laske, M. Kracalik, M. Feuchter, G. Maier, G. Pinter, G. R. Langecker, C. Holzer: Advanced Compounding of Polymer Nanocomposites using a Melt Pump, International Conference APST 09, Linz, Austria, July 8-10, 2009 Pein, A.; Niedermair, F.; Stubenrauch, K.; Slugovc, C.; Trimmel, G.; Energy Transfer from ZnO Nanoparticles to a Platinum Dye Mediated by the Presence of a Block-Copolymer - in: European Polymer Congress 2009 (EPF09). Graz, Austria; 12.07.2009 E. Ziegler, A. Pein, R. Saf, G. Trimmel, End group-functionalization of Poly(3-alkylthiophene)s - European Polymer Congress, EPF 2009, 12.-17.7.2009, Graz, Austria, 12.07.2009