

## Veröffentlichungen

*Publications*

- Almajid, A. A.; Friedrich, K.; Burkhart, T.; Noll, A.; Gyurova, L.: Poly-Para-Phenylene-Copolymers (PPPs) Part 3: Scratch and Wear Resistance. *PLASTICS, RUBBER AND COMPOSITES* 43, 4 (2014), S. 138-144
- Andra, H.; Gurka, M.; Kabel, M.; Nissle, S.; Redenbach, C.; Schladitz, K.; Wirjadi, O.: Geometric and Mechanical Modeling of Fiber-Reinforced Composites. In: Dominique Bernard, Jean-Yves Buffière, Tresa Pollock, Henning Friis Poulsen, Anthony Rollett und Michael Uchic (Eds.): *Proceedings of the 2nd International Congress on 3D Materials Science (3DMS)*, Annecy, Frankreich, 29. Juni - 2. Juli 2014, John Wiley & Sons, S. 35-40
- Backe, S.; Balle, F.; Breuer, U. P.; Hannemann, B.; Schmeer, S.: Multifunktionale Metall-C-Faser-Kunststoff-Verbunde (MCFK): Konzepte und Potentiale. 5. Sitzung DGM-Fachausschuss „Hybride Werkstoffe und Strukturen“, Attendorn, 23. Oktober 2014
- Bayerl, T.; Duhovic, M.; Mitschang, P.; Bhattacharyya, D.: The heating of polymer composites by electromagnetic induction – A review. *Composites Part A* 57 A (2014), S. 27-40
- Becker, D.; Mitschang, P.: Influence of Preforming Technology on the Impregnation Behavior of Textiles. *FPCM 12*, Enschede, Niederlande, 14.-16. Juli 2014
- Becker, D.; Mitschang, P.: LCM with transverse impregnation – a step towards mass production of high-performance composites. *International METI-Shikoku Forum*, Shikoku, Japan, 19. November 2014
- Becker, D.; Mitschang, P.: Präzise Charakterisierung von Verstärkungstextilien. *Kunststoffe* 4/2014, S. 61-64
- Becker, D.; Mitschang, P.: Precision Characterization of Reinforcement Fabrics. *Kunststoffe International* 4/2014, S. 38-41
- Bittmann, B.; Bouza, R.; Barral, L.; Bellas, R.: Stabilität und thermische Degradation von Poly(Hydroxybutyrate-co-Hydroxyvalerate) (PHBV)/ Poly(Butylene Adipate-co-Terephthalate) (PBAT)/ Montmorillonite Nanoverbundwerkstoffen. *naro.tech*, Erfurt, 16.-17. September 2014
- Bittmann, B.; Bouza, R.; Bellas, R.; Barral, L.: Biodegradierbare thermoplastische Nanocomposites. CCEV AG „Composites mit Verstärkungsfasern aus nachwachsenden Rohstoffen“, *Biocomposites & Biopolymers – High Performance?*, Kaiserslautern, 1. April 2014
- Bittmann, B.; Bouza, R.; Barral, L.; Castro-Lopez, M.; Dopico-Garcia, S.: Morphology and Thermal Behavior of Poly(3-hydroxybutyrate-co-3-hydroxyvalerate)/ Poly(butylene adipate-co-terephthalate)/ Clay Nanocomposites. *Polymer Composites*; online veröffentlicht am 26. Juni 2014, DOI: 10.1002/pc.23115
- Bobertag, M.; Mitschang, P.; Becker, D.; Glück, J.: Schnelle Permeabilitätsbestimmung von Textilien in QS und F&E – Von der Idee zur Anwendung. 8. Aachen-Dresden Textile Conference, Dresden, 27.-28. November 2014
- Breuer, U.: Efficient CFRP Airframe Manufacturing Technology – Yesterday, Today and Tomorrow. 23. Leobener Kunststoff-Kolloquium Hocheffiziente Verbundwerkstoffe, Montanuniversität Leoben, Österreich, 13.-14. November 2014, Schriftenreihe Kunststofftechnik Leoben, Band 04, S. 1-5
- Bücken, M.; Magin, M.: Testing of the strength of an alternative manufacturing method for bolted joints used in a GFRP-rotor of an axial-flux electric motor for serial production in automotive applications. *ECCM-16 - 16th European Conference on Composite Materials*, Sevilla, Spanien, 22.-26. Juni 2014
- Bücken, M.: Einführung in die mechanischen Eigenschaften von Faser-Kunststoff-Verbunden. Informationsveranstaltung Handwerkskammer der Pfalz: Verbundwerkstoffe – (k)ein Thema für Handwerksbetriebe, Kaiserslautern, 30. September 2014
- Chang, L.; Friedrich, K.; Ye, L.: Study on the Transfer Film Layer in Sliding Contact between Polymer Composites and Steel Disks Using Nanoindentation. *J. TRIBOLOGY* 136 (2014) 021602-1 – 021602-12, doi:10.1115/1.4026174
- Christmann, M.; Medina, L.; Mitschang, P.: Multi-material parts for the commercial vehicle industry – A challenge for the joining technology. 3rd Commercial Vehicle Technology Symposium, Kaiserslautern, 11.-13. März 2014
- Christmann, M.; Medina, L.; Mitschang, P.: Structural Parts for the Commercial Vehicle Industry in Multi-Material-Design. *Materials in Car Body Manufacturing 2014*, Bad Nauheim, 13.-14. Mai 2014
- Duhovic, M.; L'Eplattenier, P.; Caldichoury, I.; Mitschang, P.; Maier, M.: Advanced 3D Finite Element Simulation of Thermoplastic Carbon Fiber Composite Induction Welding. *ECCM-16 - 16th European Conference on Composite Materials*, Sevilla, Spanien, 22.-26. Juni 2014

- Duhovic, M.; Hümbert, M.; Mitschang, P.; Maier, M.; L'Eplattenier, P.; Caldichoury, I.: Further Advances in Simulating the Processing of Composite Materials by Electromagnetic Induction. Proceedings, 13th International LS-DYNA® Users Conference, Detroit, Michigan, USA, 8.-10. Juni 2014, Electromagnetic
- Duhovic, M.: Erweiterte 3D-Simulation des Induktionsschweißens von kohlenstofffaserverstärkten Verbundwerkstoffen (CFK). Carbon Composites Magazin, 2/2013, S. 61-62
- Duhovic, M.; Mitschang, P.; Maier, M.; Caldichoury, I.; L'Eplattenier, P.: Advances in Simulating the Processing of Composite Materials by Electromagnetic Induction. DynaMore Infoday, Stuttgart, 17. März 2014
- Dzalto, J.; Medina, L.; Mitschang, P.: Comparison of Different Joining Methods for Natural Fiber Reinforced Thermoplastic Polymers. V International Seminar „Biopolymers and Sustainable Composites“, Valencia, Spanien, 6.-7. März 2014
- Dzalto, J.; Medina, L.; Mitschang, P.: Natural fibers gently heated. Kunststoffe International 10/2014, S. 110-113
- Dzalto, J.; Medina, L.; Mitschang, P.: Naturfasern sanft erwärmt. Kunststoffe 10/2014, S. 194-198
- Dzalto, J.; Medina, L.; Mitschang, P.: Prozessoptimierung beim Einsatz von Naturfaser-Organoblechen. Lightweight Design 3/2014, S. 50-56
- Dzalto, J.; Medina, L.; Mitschang, P.: Use of Aligned Natural Fibers and Bio-Polymers for Structural Applications in the Building Industry. naro.tech – 10th International Symposium, Erfurt, 16.-17. September 2014
- Dzalto, J.; Medina, L.; Mitschang, P.: Volumetric Interaction and Material Characterization of Flax/Furan Bio-Composites. International Journal of Applied Science and Technology Vol. 7 No. 1 (2014), S. 11-21
- Gennaro, R.; Maffezzoli, A.; Greco, A.; Christmann, M.; Mitschang, P.: Experimental measurement of transversal micro and macro permeability during compression molding of PP/glass composites. Polymer Composites Vol. 35 No. 1, S. 105-132
- Grieser, T.; Mitschang, P.: Herstellung und Analyse von CNT-dotierten glas- und kohlenstofffaserverstärkten Verbundwerkstoffen unter Verwendung verschiedener Harzinjektionsverfahren. Inno.CNT Jahreskongress, Karlsruhe, 17.-19. Februar 2014
- Grieser, T.; Mitschang, P.: Kontinuierliches Profil-Preforming für Versteifungsstrukturen. Lightweight-Design 4/2014, S. 24-29
- Hildebrandt, K.; Mack, J.; Becker, D.; Mitschang, P.; Medina, L.: Potenziale neuer Matrixpolymere für die FKV-Bauteilfertigung. Lightweight Design 2/2014, S. 14-21
- Hübler, M.: Entwicklung und Fertigung von aktiven Faserkunststoffstrukturen mit integrierten Formgedächtnislegierungen. Thementag „Funktionsintegration in der Praxis“ der Arbeitsgruppen „Smart Structures“ und „Multi-Material-Design“ des CCEV, Leipzig, 14. Oktober 2014
- Hübler, M.; Gurka, M.; Breuer, U.: From attached shape memory alloy wires to integrated active elements, a small step? – Impact of local effects on direct integration in fiber reinforced plastics. Journal of Composite Materials, published online, 2. September 2014, DOI: 10.1177/0021998314550494
- Hübler, M.; Nissle, S.; Gurka, M.; Breuer, U.: An active hybrid structure - Fiber reinforced polymers and shape memory alloys. Proceedings, Euro Hybrid Materials and Structures 2014, Stade, 10.-11. April 2014
- Hübler, M.; Nissle, S.; Gurka, M.; Breuer, U.: Load-Conforming Design and Manufacturing of Active Hybrid Fiber Reinforced Polymer Structure with Integrated Shape Memory Alloy Wires for Actuation Purposes. Proceedings, ACTUATOR 2014, 14th International Conference on New Actuators, Bremen, 23.-25. Juni 2014
- Hümbert, M.; Mitschang, P.: Characterization and modification of the temperature distribution during continuous induction welding. 16th European Conference on Composite Materials, Sevilla, Spanien, 22.-26. Juni 2014
- Hümbert, M.; Duhovic, M.; Mitschang, P.: Characterization and Simulation of Thermoplastic Composite Induction Welding. International Journal of Applied Science and Technology, Vol. 7, No. 4, October - December 2014, S. 1-12
- Jung, G.; Mitschang, P.; Cheolhyun, P.: New GMT material suitable for various polymers and high GF content. 16th European Conference on Composite Materials, Sevilla, Spanien, 22.-26. Juni 2014
- Jung, G.; Mitschang, P.; Cheolhyun, P.: New semi-finished materials for producing structural components. AVK-Tagung, Düsseldorf, 6.-7. Oktober 2014

## Veröffentlichungen

*Publications*

- Karger-Kocsis, J.; Grishchuk, S.; Sorochynska, L.; Rong, M.Z.: Curing, Gelling, Thermomechanical and Thermal Decomposition Behaviors of Anhydride-Cured Epoxy (DGEBA)/Epoxidized Soybean Oil Compositions. *Polymer Eng. Sci.* 54(4) (2014) S. 747-755
- Krooß, T.; Gurka, M.; Van der Schueren, L.; Tabassum, M.; Lenz, C.; Fenske, S.: Development of Microfibrillar Reinforced Thermoplastic Composites Out of Yarns and Woven Fabrics. *Material Science Engineering Conference*, Darmstadt, 23. September 2014
- Lahmar, A.; Pfeiffer, N.; Habouti, S.; Es-Souni, M.: Microstructure and property control in TiO<sub>2</sub>-Pt nanocomposite thin films. *Ceramics International* 41 (2015), S. 443-449, published online 1. September 2014
- Mack, J.; Holschuh, R.; Mitschang, P.: Qualitätsanalyse bei Bändchenhalbzeugen. *Lightweight Design* 5/2014, S.48-53
- Mack, J.; Mitschang, P.: Prepreg lay-up technology for manufacturing of lattice structure fuselage sections. 16th *European Conference on Composite Materials*, Sevilla, Spanien, 22.-26. Juni 2014
- Magin, M.; Helfrich, B.; Pfaff, T.: FKV-Metall-Verbindungen - Leistungssteigerung und Hochleistungsanwendungen. *Thementag „Innovative Verbindungstechnik im Multi-Material-Design“*, Veranstaltung des CCEv, Leipzig, 21. März 2014
- Magin, M.; Motsch, N.; Schmidt, H.; Heß, H.: Strukturelles Vernähen von Faser-Kunststoff-Verbunden - Methodenentwicklung zur Prüfung und Auslegung von Strukturbauteilen. *Technologietag Kunststoffe auf dem Prüfstand - Testen und Simulieren*, Schladming, Österreich, 27.-28. Februar 2014
- Magin, M.: Finite element based analysis of fatigue induced damage in fiber reinforced composites. *Workshop "Composite Fatigue (CompFat)" - Procedures, Tackling UD-Laminates through Textile Composites*. Veranstaltung des CCEv, Handwerkskammer Augsburg, 6. Februar 2014
- Magin, M.: Recent Developments of Mechanical and Fatigue Analyses of Fiber-Reinforced Structures for Aerospace Applications. In R. P. Bajpai et al. (eds.), *Innovative Design, Analysis and Development Practices in Aerospace and Automotive Engineering*, Lecture Notes in Mechanical Engineering. Berlin, Heidelberg, New Delhi: Springer, 2014, ISBN 978-81-322-1870-8
- Magin, M.: Finite-element based fatigue life prediction for thin-walled fiber-reinforced structural components. *First International Conference on Mechanics of Composite Materials*, Stony Brook University, Stony Brook, New York, USA, 9.-12. Juni 2014
- Maurer, D.; Mitschang, P.: Laser-powered thermoplastic tape placement process. *SAMPE Europe SETEC 2014*, Tampere, Finnland, 10.-11. September 2014
- Medina, L.; Dzalto, J.: Prozessoptimierung beim Einsatz von Naturfaser-Organoblechen in der Automobilindustrie. 1. *Fachtagung Naturfaserverstärkte Kunststoffe – Anwendungen, Innovationen & Trends*, Kaiserslautern, 4. November 2014
- Medina, L.; Mitschang, P.; Breuer, U.: Future of Thermoplastic Composites. *SAE International 2014 Design, Manufacturing and Economics of Composites*, Madrid, Spanien, 10.-12. Juni 2014
- Meng, Q.; Wang, C.H.; Saber, N.; Kuan, H.-C.; Dai, J.; Friedrich, K.; Ma, J.: Nanosilica-Toughened Polymer Adhesives. *MATERIALS AND DESIGN* 61 (2014), S. 75-86
- Miaris, A.; Mitschang, P.; Schledjewski, R.: Development and Modeling of Novel Roving Impregnation Process Inside Closed Sinusoidal Cavity. *SAMPE Journal* Vol. 50 No. 4, S.34-44, Juli/August 2014
- Mitschang, P.: Aktuelle Entwicklung im Bereich Verarbeitung endlosfaserverstärkter Thermoplaste. *Swiss-Plastics 2014 – Innovationsforum*, Luzern, Schweiz, 20.-21. Januar 2014
- Mitschang, P.; Duhovic, M.; Arnold, M.; Hildebrandt, K.; Maurer, D.; Stadtfeld, H.; Stöven, T.; Weyrauch, F.; Latrille, M.; Louis, M.; Neitzel, M.; Beresheim, G.: Grundlagen der Verarbeitungsprozesse. In: *Handbuch Verbundwerkstoffe*, Neitzel, M.; Mitschang, P.; Breuer, U. (ed). 2014, S. 201-275
- Motsch, N.; Magin, M.: Influence of structural stitching on out-of-plane mechanical properties of carbon fiber reinforced polymer composites. *First International Conference on Mechanics of Composite Materials*, Stony Brook University, Stony Brook, New York, USA, 9.-12. Juni 2014
- Neitzel, M.; Mitschang, P.; Breuer, U.: *Handbuch Verbundwerkstoffe*, 2. aktualisierte und erweiterte Ausgabe. Carl Hanser Verlag, 2014, ISBN: 978-3446-436961

- Nissle, S.; Hübler, M.; Gurka, M.: Challenges of Manufacturing Active SMA-FRP-Composites and Self-Sensing as an Opportunity. Material Science Engineering (MSE) 2014, Darmstadt, 23.-25. September 2014
- Nissle, S.; Hübler, M.; Gurka, M.; Schmeer, S.; Voll, N.: Integration of shape memory alloy wires in fiber reinforced polymers for endless crash absorber structures. Proceedings, ASME Conference on Smart Materials, Adaptive Structures and Intelligent Systems SMASIS 2014, Newport, Rhode Island, USA, 8.-10. September 2014
- Pfeiffer, N.; Soroachynska, L.; Wetzel, B.; Friedrich, K.; Tanimoto, T.: Challenges in the Industrial Production of Bulk Composites with CNTs as Fillers. International METI Conference, Takamatsu, Japan, 18.-19. November 2014
- Pfeiffer, N.; Wetzel, B.; Tanimoto, T.: A New Vibration Damping Composite Created by Combined Dispersed Piezo-Ceramic Particles and CNT Additives. Shonan Institute of Technology, Fujisawa, Japan, 26. November 2014
- Rasheva Z.; Soroachynska, L.; Grishchuk, S.; Friedrich K.: Poly(amide-imide) coatings: effect of the solvent type and polymerization conditions on the curing kinetics and thermal, viscoelastic and tribological performance. Express Polymer Letters, September 2014
- Rasheva Z.; Soroachynska, L.; Grishchuk, S.; Friedrich, K.: Effect of the solvent type and polymerization conditions on the curing kinetics, thermal and viscoelastic performance of poly(amide-imide) resins. Express Polymer Letters, November 2014
- Schommer, D.; Duhovic, M.; Gortner, F.; Maier, M.: Advanced Simulation of Polymer Composite SMC Compression Molding Using Fluid-Structure Interaction in LS-DYNA®. Proceedings, 13th International LS-DYNA® Users Conference, Detroit, Michigan, USA, 8.-10. Juni 2014, Fluid Structure Interaction
- Wan, Y.; Liu, S.; Hümbert, M.; Duhovic, M.; Mitschang, P.: Advanced Measurement, Characterization and Simulation of Thermoplastic Composite Induction Welding. KMUTNB Int. J. Appl. Sci. Technol., published online Vol. 7, No. 4, 2014, DOI: 10.14416/j.ijast.2014.09.001
- Wang, H.; Chang, L.; Yang, X.; Yuan, L.; Ye, L.; Zhu, Y.; Harris, A. T.; Minett, A. I.; Trimby, P.; Friedrich, K.: Anisotropy in Tribological Performance of Long Aligned Carbon Nanotube/ Polymer Composites. CARBON 67 (2014), S. 38-47
- Wirjadi, O.; Godehardt, M.; Schladitz, K.; Wagner, B.; Rack, A.; Gurka, M.; Nissle, S.; Noll, A.: Characterization of multilayer structures of fiber reinforced polymer employing synchrotron and laboratory X-ray CT. International Journal of Materials Research (zuvor Zeitschrift für Metallkunde) 07/2014, 105(7), S. 645-654
- referierte Zeitschriften / peer-reviewed journals