

Poster Aachen-Dresden-Denkendorf International Textile Conference 2016

P1	<p><u>Ine De Vilder</u>¹, Isabel De Schrijver², Jan Hoogewys² ¹Centexbel, Textile Functionalisation & Surface Modification, Ghent (Belgium) ²Centexbel-VKC, Flemish Plastics Centre, Courtrai (Belgium)</p> <p>FreeFoaming: The quest for alternative blowing agents</p>
P2	<p><u>Pieter Heyse</u>¹, Frederik Goethals¹, Myriam Vanneste¹, Anna Grosse², Marian Hierhammer², Petra Franitza² ¹Centexbel, Zwijnaarde (Belgium) ²Sächsisches Textilforschungsinstitut e.V. (STFI), Chemnitz (Germany)</p> <p>Securing what matters: Objectively evaluate high strength textiles exposed to wear, UV and soiling - End of life sensors, test methods and ways to improve lifetime</p>
P3	<p><u>Mauricio Cavicchioli</u>, José Mariano da Costa Terra Azul -Technology of Polymers from Natural Products, Sítio Boa Vista, Americana - SP (Brazil)</p> <p>Development of a waterborne polyurethane containing castor oil and its application as hydrophobic coating for polyester fabric</p>
P4	<p><u>Xiaoli Shi</u>¹, Qinyu Pang¹, Xinsheng Zhu^{1,2,3}, Zhijuan Pan^{1,2,3} ¹Faculty of Textile and Clothing Engineering, Soochow University, Suzhou (China) ²Nantong Research Institute of Textile and Silk for Industrial Technology, Nantong (China) ³National Engineering Laboratory for Modern Silk (Suzhou), Suzhou (China)</p> <p>Photo-grafting of industrial polypropylene filament fabric with acrylic acid</p>
P5	<p><u>Peter Tamas</u>¹, Marianna Halasz², Peter Bakonyi², Attila Bojtos¹, Ellen Wendt³, Sybille Krzywinski³ ¹Budapest University of Technology and Economics, Department of Mechatronics, Optics and Engineering Informatics, Budapest (Hungary) ²Budapest University of Technology and Economics, Department of Polymer Engineering, Budapest (Hungary) ³Institute of Textile Machinery and High Performance Material Technology (ITM), TU Dresden (Germany)</p> <p>Correlation between shearing behaviour and surface deformation</p>
P6	<p><u>Blanka Tomková</u>, Jana Novotná, Miroslava Pechočiaková Department of Material Engineering, Technical University Liberec (Czech Republic)</p> <p>Carbon nanoparticles densified C/P composites - changes in electrical and thermal properties</p>
P7	<p><u>Hafsa Jamshaid</u>^{1,2}, Rajesh Misra¹, Jiri Militky¹ ¹Technical University of Liberec (Czech Republic) ²National Textile University, Faisalabad (Pakistan)</p> <p>Comparative evaluation of hybrid composites</p>
P8	<p><u>Abdul Jabbar</u>, Jiří Militký Department of Material Engineering, Technical University of Liberec (Czech Republic)</p> <p>Investigation of the creep and dynamic mechanical properties of jute/green epoxy composites incorporated with chemically treated pulverized nano/micro jute fibers</p>
P9	<p><u>Lubos Hes</u>, Pavla Tesinova Technical University of Liberec, Faculty of Textile Engineering (Czech Republic)</p> <p>Why skin model testers of thermal comfort of fabrics sometimes display negative values of thermal resistance?</p>
P10	<p><u>Dawid Stawski</u>¹, Dorota Zielińska^{1,2} ¹Lodz University of Technology, Department of Material and Commodity Sciences and Textile Metrology, Łódź (Poland) ²The Institute of Security Technologies "MORATEX", Łódź (Poland)</p> <p>Antibacterial properties of poly(n,n-dimethylaminoethyl methacrylate) nonwovens</p>
P11	<p><u>Małgorzata Okrasa</u>, Katarzyna Majchrzycka, Agnieszka Brochocka Department of Personal Protective Equipment, Central Institute for Labour Protection – National Research Institute, Łódź (Poland)</p> <p>Electret filtering nonwovens with enhanced protective and comfort properties for human protection in heavy working conditions</p>

P12	<p><u>Katarzyna Maichrzyccka</u>¹, Małgorzata Okrasa¹, Bogumił Brycki², Justyna Skóra³, Beata Gutarowska³</p> <p>¹Department of Personal Protective Equipment, Central Institute for Labour Protection – National Research Institute, Łódź (Poland)</p> <p>²Laboratory of Microbiocides Chemistry, Faculty of Chemistry, Adam Mickiewicz University, Poznań (Poland)</p> <p>³Institute of Fermentation Technology and Microbiology, Lodz University of Technology, Łódź (Poland)</p> <p>Bioactive porous structures with time-dependent activity for the modification of high-efficiency filtering melt-blown nonwovens</p>
P13	<p><u>Grażyna Redlich</u>, Ewa Obersztyn, Krzysztof Czerwiński, Elżbieta Witczak</p> <p>Institute of Security Technologies „MORATEX”, Łódź (Poland)</p> <p>The security helmet as an result of good practice at the MORATEX institute for the police HQ: idea – research – new product implementation</p>
P14	<p><u>Parag Bhavsar</u>^{1, 2, 3}, Stelian S. Maier¹</p> <p>¹University “Gheorghe Asachi” of Iasi – Faculty of Textiles, Leather and Industrial Management, S, Iasi (Romania)</p> <p>²Politecnico di Torino, DISAT – Department of Applied Science and Technology, Torino (Italy)</p> <p>³Soochow University – School of Textile and Clothing Engineering, Suzhou (China)</p> <p>Keratin hydrolyzate as a foaming auxiliary for textile dyeing process.</p>
P15	<p>Andrey Ponomarev, <u>Aleksander Rassokhin</u></p> <p>Peters the Great Polytechnic University, St. Petersburg (Russia)</p> <p>Hybrid wood-polymer composites in civil engineering</p>
P16	<p><u>Igor Elmanovich</u>^{1, 2, 3}, Mikhail Kondratenko^{1, 2}, Vadim Zefirov¹, Dmitry Kolomytkin², Marat Gallyamov^{1, 3}</p> <p>¹M.V. Lomonosov Moscow State University, Department of Physics (Russia)</p> <p>²SC-TEK LLC, Moscow (Russia)</p> <p>³A.N. Nesmeyanov Institute of Organoelement Compounds of Russian Academy of Science (Russia)</p> <p>Crosslinked water repellent coatings from supercritical carbon dioxide</p>
P17	<p><u>Hossein Raiabinejad</u>¹, Marina Zoccola², Alessia Patrucco², Alessio Montarsolo², Rosalinda Caringella², Martina Simionati², Giorgio Rovero¹, Claudio Tonin²</p> <p>¹Politecnico di Torino, DISAT – Department of Applied Science and Technology, Torino (Italy)</p> <p>²National Research Council, Institute for Macromolecular Studies, Biella (Italy)</p> <p>Keratin extraction and production of keratoses/polyvinyl alcohol blend films</p>
P18	<p><u>Naveeta Kumari</u>¹, Hafeezullah Memon²</p> <p>¹Department of Applied Science and Technology, Politecnico di Torino (Italy)</p> <p>²Key Laboratory of Advanced Materials and Textiles, Ministry of China, Zhejiang Sci-Tech University, Hangzhou, Zhejiang (China)</p> <p>Study of multifunctional nanocoated cold plasma treated polyester cotton blended curtains</p>
P19	<p><u>Åvsin Dural-Erem</u>¹, Per Wessman², Vincent Nierstrasz¹</p> <p>¹Textile Materials Technology, Department of Textile Technology, Faculty of Textiles Engineering and Business, University of Borås (Sweden)</p> <p>²Sp Sveriges Tekniska Forskningsinstitut AB, Stockholm (Sweden)</p> <p>Functionalization of nonwoven wipes with probiotics</p>
P20	<p><u>Sina Seipel</u>, Junchun Yu, Vincent Nierstrasz</p> <p>Textile Materials Technology, Department of Textile Technology, Faculty of Textiles, Engineering and Business, University of Borås (Sweden)</p> <p>Production of a UV-curable and UV-sensing smart textile using digital inkjet printing</p>
P21	<p><u>Melkie Tadesse</u>, Vincent Nierstrasz</p> <p>Textile Materials Technology, Department of Textile Technology, The Swedish School of Textiles, Faculty of Textiles, Engineering, and Business, University of Borås (Sweden)</p> <p>Effects of process parameters on electrical properties of PEDOT: PSS coated polyester fabrics</p>
P22	<p>Pajaera Patanathabutr</p> <p>Department of Material Science and Engineering, Faculty of Engineering and Industrial Technology, Silpakorn University, Nakhonpathom (Thailand)</p> <p>Improvement of mechanical properties and colorfastness of natural dyed aluminium silicate/PLA composites</p>

P23	<p><u>Teerani Chuawittavawut</u>¹, Chanchai Thongpin¹, Natthinee Lopattananon² ¹Department of Materials Science and Engineering, Faculty of Engineering and Industrial Technology, Silpakorn University, Snamchandra Palace Campus, Nakhonpathom (Thailand) ²Department of Technology Rubber and Polymer, Prince of Songkla University, Songkla (Thailand)</p> <p>The effect of heat treatment on thermal and mechanical properties of polylactic acid reinforce with palm based fibers</p>
P24	<p><u>Triwat Talbumrung</u>¹, Chanchai Thongpin¹, Natthinee Lopattananon² ¹Department of Materials Science and Engineering, Faculty of Engineering and Industrial Technology, Silpakorn University, Snamchandra Palace Campus, Nakhonpathom (Thailand) ²Department of Technology Rubber and Polymer, Prince of Songkla University, Songkla (Thailand)</p> <p>Effect of compatibilization on in-situ microfibrillation LDPE reinforced PLA</p>
P25	<p><u>Chanchai Thongpin</u>, Theeraphat Suphanil, Sudsiri Hemsri Department of Materials and Engineering, Faculty of Engineering and Industrial Technology, Sanam Chandra Palace Campus, Nakhonpathom (Thailand)</p> <p>Bio-composite of hybrid natural fibers fabric reinforced PLA</p>
P26	<p>Tabinda Riaz University of the Punjab, Lahore (Pakistan)</p> <p>Contouring the drape of cotton grieg fabric by varying yarn fineness for upholstery, bed and table linens</p>
P27	<p>Yasuo Gotoh Faculty of Textile Science and Technology, SHINSHU UNIVERSITY, Nagano (Japan)</p> <p>Introduction of Faculty of Textile Science and Technology, Shinshu University - From Japan's only one to world number one -</p>
P28	<p>Hyun Ah Kim¹, Hye Rin Gu², <u>Seung Jin Kim</u>² ¹Korea Research Institute for Fashion Industry, Deagu (Korea) ²Dept. of Textile Eng., Yeungnam Univ., Gyeongsan (Korea)</p> <p>Physical properties of eco-friendly Kenaf fiber imbedded nonwoven for automotive pillar trim</p>
P29	<p><u>Tatiana Spahiu</u>¹, Nils Grimmelsmann², Andrea Ehrmann², Erald Piperi³, Ermira Shehi¹ ¹Faculty of Mechanical Engineering, Textile and Fashion Department in Polytechnic University of Tirana (Albania) ²Bielefeld University of Applied Sciences, Faculty of Engineering and Mathematics, Bielefeld (Germany) ³Faculty of Mechanical Engineering, Department of Production and Management in Polytechnic University of Tirana (Albania)</p> <p>3D printing as a new technology for apparel designing and manufacturing</p>
P30	<p><u>Iren Juhász Junger</u>¹, Sarah-Vanessa Homburg¹, Nils Grimmelsmann¹, Thomas Grethe², Anne Schwarz-Pfeiffer², Johannes Fiedler¹, Andreas Herrmann¹, Tomasz Blachowicz³, Andrea Ehrmann¹ ¹Bielefeld University of Applied Sciences, Faculty of Engineering Sciences and Mathematics, Bielefeld (Germany) ²Niederrhein University of Applied Sciences, Research Institute for Textile and Clothing (FTB), Mönchengladbach (Germany) ³Silesian University of Technology, Institute of Physics – Center for Science and Education, Gliwice (Poland)</p> <p>Investigations of textile materials for utilization in dye sensitized solar cells</p>
P31	<p><u>Marie Carolin Bier</u>, Sophia Kohn, Antonia Stierand, Nils Grimmelsmann, Sarah Vanessa Homburg, Andrea Ehrmann Bielefeld University of Applied Sciences, Faculty of Engineering and Mathematics, Working Group of Textile Technologies, Bielefeld (Germany)</p> <p>Investigation of the casein fibre production in an eco-friendly way</p>
P32	<p><u>Lars Torben Kramer</u>, Susanna Fafenrot, Andrea Ehrmann Bielefeld University of Applied Sciences, Faculty of Engineering and Mathematics, Working Group of Textile Technologies, Bielefeld (Germany)</p> <p>Construction of an inexpensive drapeometer</p>
P33	<p><u>Khaliunaa Davaadori</u>, Khorolsuren Tuvshinbayar, Andrea Ehrmann Bielefeld University of Applied Sciences, Faculty of Engineering and Mathematics, Bielefeld (Germany)</p> <p>Recycling of cashmere yarn and possible alternative fibers</p>

P34	<p><u>Timo Grothe</u>, Johannes Brikmann, Andrea Ehrmann Bielefeld University of Applied Sciences, Faculty of Engineering and Mathematics, Bielefeld (Germany)</p> <p>PEO as spinnable polymer and spinning-agent for non-spinnable materials</p>
P35	<p><u>Boris Mahltig</u>, Haoqian Miao Hochschule Niederrhein, Fachbereich Textil- und Bekleidungstechnik, Mönchengladbach (Germany)</p> <p>Microwave supported production process for photoactive textile</p>
P36	<p><u>Esther Rohleder</u>, Christine Steinem, Maike Rabe Hochschule Niederrhein, Mönchengladbach (Germany)</p> <p>Enzymatic treatment of wool</p>
P37	<p><u>Lilia Sabantina</u>¹, Andrea Ehrmann², Karin Finsterbusch¹ ¹Niederrhein University of Applied Sciences, Mönchengladbach (Germany) ²Bielefeld University of Applied Sciences, Bielefeld (Germany)</p> <p>Development of lightweight construction material in composite fiber sandwich structure with integrated dilatant fluid</p>
P38	<p><u>Joanna Neuß</u>¹, Mirja Lutz¹, Nils Grimmelsmann², Michael Korger¹, Andrea Ehrmann² ¹Niederrhein University of Applied Sciences, Research Institute for Textile and Clothing (FTB), Mönchengladbach (Germany) ²Bielefeld University of Applied Sciences, Faculty of Engineering Sciences and Mathematics, Bielefeld (Germany)</p> <p>Interaction between 3D deformation of textile fabrics and imprinted lamellae</p>
P39	<p><u>Eleonora Gsell</u>¹, Frank Heimlich¹, Andrea Ehrmann², Marcus O. Weber¹ ¹Niederrhein University of Applied Sciences, Research Institute for Textile and Clothing (FTB), Mönchengladbach (Germany) ²Bielefeld University of Applied Sciences, Faculty of Engineering Sciences and Mathematics, Bielefeld (Germany)</p> <p>Influence of stitches, tucks and floats, cover factor and stitch density on dry, wet and washing relaxation</p>
P40	<p><u>Fikret Terzioğlu</u>¹, Esther Rohleder¹, Maike Rabe¹, Michael Schläpfer², Bernd Strehmel², Rainer Hurtz³ ¹FTB, Hochschule Niederrhein – University of Applied Sciences, Mönchengladbach (Germany) ²ILOC, Hochschule Niederrhein – University of Applied Sciences, Krefeld (Germany) ³NOVA Textil-Beschichtung GmbH, Greifath (Germany)</p> <p>Radiation curable textile coatings by UV induced polymerisation</p>
P41	<p><u>Rico John</u>¹, Katja Trommler¹, Katja Schreiter¹, Carolin Siegel², André Wagenführ², Stefan Spange¹ ¹Technische Universität Chemnitz, Department of Polymer Chemistry, Chemnitz (Germany) ²Technische Universität Dresden, Department of Wood and Fiber Materials Technology, Dresden (Germany)</p> <p>Maleic anhydride mediated adhesion in natural fiber composites</p>
P42	<p><u>David Holschemacher</u>, Christoph Müller Institute of Materials Handling, Conveying and Plastics Engineering, TU Chemnitz (Germany)</p> <p>End connections for high-strength fibre ropes</p>
P43	<p><u>Franziska Ebert</u>¹, Nadine Reimann¹, Thomas Seider² ¹Institute of Materials Handling, Conveying and Plastics Engineering, Chemnitz (Germany) ²Fraunhofer Institute for Electronic Nano Systems ENAS, Chemnitz (Germany)</p> <p>Integration of humidity sensors into fibre-reinforced thermoplastic composites</p>
P44	<p>Jörg Schlüter¹, <u>Sybille Krzywinski</u>², Maik Gude³, Dirk Feltn⁴ ¹Aristo-Graphic Systeme GmbH & Co. KG, Hamburg (Germany) ²TU Dresden, Institute of Textile Machinery and High Performance Material Technology (ITM), Dresden (Germany) ³TU Dresden, Institute of Lightweight Engineering and Polymer Technology (ILK), Dresden, (Germany) ⁴Hightex Verstärkungsstrukturen GmbH Dresden, Klipphausen (Germany)</p> <p>Selective powder binder application for preforming</p>
P45	<p><u>Biörn Reinhard</u>, Sven Torstrick German Aerospace Center (DLR), Center for Lightweight-Production-Technology, Stade (Germany)</p> <p>Automated net-shape preforming of aircraft frames</p>

P46	<p><u>Johannes Schwingel</u>¹, Peter Middendorf¹, Stefan Carosella¹, Stephan Baz², Jochen Wellekötter³ ¹Institute of Aircraft Design, University of Stuttgart (Germany) ²Institute of Textile Technology and Process Engineering Denkendorf (Germany) ³Institute of Plastic Technology, University of Stuttgart (Germany)</p> <p>Resource and energy efficient manufacturing of automotive lightweight parts made of recycled material</p>
P47	<p><u>Anne Mittmann</u>, Mario Naumann, Lothar Kroll Fraunhofer Institute for Machine Tools and Forming Technology (IWU), Chemnitz (Germany)</p> <p>Process for preforming continuous fibre-reinforced thermoplastic semi-finished products for large-scale production in the automotive industry</p>
P48	<p><u>Markus Hillerbrand</u>¹, Andreas Nocke² ¹Rieter Ingolstadt GmbH, Ingolstadt (Germany) ²Institute of textile Machinery and High Performance Material Technology, TU Dresden (Germany)</p> <p>Modelling, simulation-based optimization and validation of drive systems for drafting units</p>
P49	<p><u>David Hund</u>¹, Kilian Schmidt^{1,2}, Siegfried Ripperger^{1,2}, Sergiy Antonyuk¹, Dilbar Aibibu³, Chokri Cherif³ ¹University of Kaiserslautern, Chair of Particle Process Engineering, Kaiserslautern (Germany) ²IT for Engineering (it4e) GmbH, Kaiserslautern (Germany) ³Institute of Textile Machinery and High Performance Material Technology (ITM), TU Dresden (Germany)</p> <p>Simulation of particle application for the improvement of the protective effect of barrier fabrics by means of direct numerical simulation</p>
P50	<p><u>Madina Shamsuveva</u>, Jana Reinsch, <u>Mareen Warncke</u> Fraunhofer Institute for Wood Research Wilhelm-Klauditz-Institut WKI, Braunschweig (Germany) Fraunhofer Application Center HOFZET, Hannover (Germany)</p> <p>Entanglement of innovative research on products and manufacture of 3D-variable bio-hybrid-construction elements with maximum biogeneous content – “ProBio”</p>
P51	<p><u>Karsten Leucker</u>, Dirk W. Schubert Institute of Polymer Materials, Friedrich-Alexander-University Erlangen-Nürnberg, (Germany)</p> <p>Development of a model for the mechanical behaviour of polypropylene nonwovens for different test directions and strain rates</p>
P52	<p>Giso Pfütze, <u>Biörn Schulz</u>, Bernd Morgenstern, Michael Stoll Forschungsinstitut für Leder und Kunststoffbahnen (FILK), Freiberg (Germany)</p> <p>PLA extrusion-coated PLA fabrics for the application as ecologically and economically sustainable advertising banners</p>
P53	<p><u>Lisa Müller</u>, Axel S. Herrmann Faserinstitut Bremen e.V. (FIBRE), Bremen (Germany)</p> <p>Efficient solution for the automated and continuous manufacturing of CFRP-stiffening profiles using a resin film pultrusion process</p>
P54	<p><u>Stefanie Zauzig</u>¹, Ude Dirk Hangen², Asta Richter³ ¹Physical Electronics GmbH, Ismaning (Germany) ²Hysitron, Inc., Aachen (Germany) ³Technische Hochschule Wildau (Germany)</p> <p>Mechanical properties of a PM2000 ODS alloy tested at temperatures up to 700 °C</p>
P55	<p><u>Bahoz Abbas</u>¹, Lars Appel², Matthias Rozanski¹, Sabina Jeschke¹, Thomas Gries² ¹Institute Cluster IMA/ZLW & IfU of RWTH Aachen University, Aachen (Germany) ²Institut für Textiltechnik (ITA) of RWTH Aachen University, Aachen (Germany)</p> <p>Self-optimization-based tow spreading control</p>
P56	<p><u>Stephanie Rietz</u>¹, Linda Schwarz¹, Hardy Müller¹, Reinhardt Voigt², Ralf Gülland² ¹Westfälische Hochschule Zwickau, Institut für Textil- und Ledertechnik (Germany) ²WTA-Vogtland GmbH, Plauen (Germany)</p> <p>Development of laminated filtration sheets for submerged membrane modules for waste water treatment</p>

P57	<p><u>Susanne Schmidt</u>¹, Hardy Müller¹, Stephanie Rietz¹, Alexander Kunert³, Markus Rühr² ¹Westfälische Hochschule Zwickau, Institut für Textil- und Ledertechnik (Germany) ²Rühr GmbH, Schauenstein (Germany) ³ICM e.V., Chemnitz (Germany)</p> <p>Development of panels with functional textile components for solar thermal collectors and sunlight control at the facade of buildings</p>
P58	<p><u>Renate Fourné</u>¹, Magnus Kruse², Musa Akdere², Thomas Gries², Stefan Jockenhövel² ¹Fourné Maschinenbau GmbH, Alfter-Impekoven (Germany) ²Institut für Textiltechnik (ITA) der RWTH Aachen University, Aachen (Germany)</p> <p>Development of a wet-spinning coextrusion spinning line</p>
P59	<p><u>Christian Vieth</u>¹, Karolina Jaksik², Robert Brüll², Gunnar Seide^{2,3}, Thomas Gries² ¹PHP Fibers GmbH, Obernburg (Germany) ²Institute for Textile Technology of RWTH Aachen University, Aachen (Germany) ³Aachen-Maastricht Institute for Biobased Materials, Geleen (Netherlands)</p> <p>Melt-spinning of polyamide 6/ferrite-compounds: spinning behaviour and mechanical properties as a function of the ferrite surface-modification</p>
P60	<p><u>Andreas Nonn</u>¹, Erik Schmidt¹, Matthias Ulrich², Thomas Gries³ ¹BMW Group, Landshut (Germany) ²BMW Group, München (Germany) ³Institut für Textiltechnik (ITA) der RWTH Aachen University, Aachen (Germany)</p> <p>Non-destructive testing of flat carbon fiber semi-finished products</p>
P61	<p><u>Robert Brüll</u>¹, Musa Akdere¹, Gunnar Seide^{1,2}, Thomas Gries¹ ¹Institut für Textiltechnik der RWTH Aachen University, Aachen (Germany) ²Maastricht Univ., Maastricht Sci Programme, Maastricht (Netherlands)</p> <p>Carbon fibre manufacturing and yarn structures for the usage in thermoplastic composite</p>
P62	<p><u>Florian Egger</u>^{1,4}, Hanna Dornebusch², Miguel Pishnamaz³, Christian Hopmann², Hans-Christoph Pape³, Thomas Gries¹, Stefan Jockenhövel⁴ ¹Institut für Textiltechnik der RWTH Aachen University, Aachen (Germany) ²Institut für Kunststoffverarbeitung an der RWTH Aachen (Germany) ³Klinik für Unfall- und Wiederherstellungschirurgie, Uniklinik RWTH Aachen (Germany) ⁴Biohybrid & Medical Textiles at the Institut für Textiltechnik, RWTH Aachen University, and the Institute of Applied Medical Engineering, Helmholtz-Institut, Aachen (Germany)</p> <p>Mechanical evaluation of a braided composite structure used as a textile reinforced artificial anterior cruciate ligament</p>
P63	<p><u>Arash Rezaev</u>¹, Jan Bitter², Dirk Hanuschik³, Christian Götz³ ¹Institute for Textile Technology (ITA) of RWTH Aachen University, Aachen (Germany) ²Cybernetic-Cluster IMA/ZLW & IfURWTH Aachen University, Aachen (Germany) ³TFI - Institut für Bodensysteme an der RWTH Aachen e.V., Aachen (Germany)</p> <p>Regel tuft: development of a control system for yarn feeding in a tufting machine to reduce the configuration times</p>
P64	<p><u>Jonas Hunkemöller</u>, Gunnar Seide, Thomas Gries Institut für Textiltechnik der RWTH Aachen University, Aachen (Germany)</p> <p>Combining measurement technologies and numerical simulation for an assisted melt spinning process design</p>
P65	<p><u>Christopher Lenz</u>, Thomas Gries Institut für Textiltechnik der RWTH Aachen University, Aachen (Germany)</p> <p>Adapted design guideline for FRP parts considering locally reinforced fabrics</p>
P66	<p><u>Mario Löhner</u>¹, Marco Saggiomo¹, Nenja Ziesen², Jacqueline Lemm¹, Yves-Simon Gloy¹ ¹Institut für Textiltechnik (ITA) der RWTH Aachen University Aachen (Germany) ²Institute of Sociology (IfS) at RWTH Aachen University Aachen (Germany)</p> <p>SozioTex: Sociotechnical systems in the textile industry - Assistance systems for industrial textile work environment</p>

P67	<p><u>Pavan Kumar Manvi</u>, Gunnar Seide, Thomas Gries Institut für Textiltechnik der RWTH Aachen University, Aachen (Germany)</p> <p>Plants to products: Starch, a low cost and biodegradable raw material in textile process chain</p>
P68	<p><u>Marco Saggiomo</u>, Yves-Simon Gloy, Thomas Gries Institut für Textiltechnik der RWTH Aachen University, Aachen (Germany)</p> <p>Vision-based support for the automated removal of faulty weft threads in air-jet weaving machines</p>
P69	<p><u>Sven Schöfer</u>¹, Christoph Mack², Aaron Basler² ¹Institut für Textiltechnik der RWTH Aachen University, Aachen (Germany) ²Fraunhofer-Institute for Chemical Technology ICT, Pfinztal (Germany)</p> <p>Production of textile preforms using particle foam technology</p>
P70	<p><u>Nora Besler</u>¹, Viktoria Schrank¹, Richard Riedlinger², Yves-Simon Gloy¹, Thomas Gries¹ ¹Institut für Textiltechnik der RWTH Aachen University, Aachen (Germany) ²Beck GmbH, Albstadt (Germany)</p> <p>Heat setting mechanisms at ITA</p>
P71	<p><u>Tobias Maschler</u>¹, Helmar Abele², Thomas Stegmaier², Meike Tilebein¹, Götz T. Gresser ¹DITF-MR, Denkendorf (Germany) ²ITV, Denkendorf (Germany)</p> <p>Characterisation and prognosis of the capillary rise of fluids in textile structures</p>
P72	<p><u>Erna Muks</u>^{1,2}, Erik Frank¹, Elisabeth Giebel¹, Michael R. Buchmeiser^{1,2} ¹Institute of Textile Chemistry and Chemical Fibers, Denkendorf (Germany) ²Institute of Polymer Chemistry, University of Stuttgart (Germany)</p> <p>Cost-effective and sustainable polyethylene-based carbon fibers</p>
P73	<p><u>Manuel M. Clauss</u>¹, Erik Frank¹, Michael R. Buchmeiser^{1,2} ¹Institute of Textile Chemistry and Chemical Fibers, Denkendorf (Germany) ²Institute of Polymer Chemistry, University of Stuttgart (Germany)</p> <p>High mechanical strength lignin-based carbon fibers via melt spinning</p>
P74	<p><u>Manuel M. Clauss</u>¹, Dianne L. Weldin², Erik Frank¹, Elisabeth Giebel¹, Michael R. Buchmeiser^{1,2} ¹Institute of Textile Chemistry and Chemical Fibers, Denkendorf (Germany) ²Institute of Polymer Chemistry, University of Stuttgart (Germany)</p> <p>Size-exclusion chromatography and dynamic light scattering studies for the accurate characterization of lignin used as carbon fiber precursor</p>
P75	<p><u>Jörg Unold</u>¹, Georgios Mourgas¹, Stefan Naumann², Michael R. Buchmeiser^{1,2} ¹Institute of Textile Chemistry and Chemical Fibers, Denkendorf (Germany) ²Institute of Polymer Chemistry, University of Stuttgart (Germany)</p> <p>FAST-Matrix</p>
P76	<p><u>Jörg Unold</u>¹, Georgios Mourgas¹, Elisabeth Giebel¹, Rainer Gutmann¹, Sabine Gneiting¹, Michael R. Buchmeiser^{1,2} ¹Institute of Textile Chemistry and Chemical Fibers, Denkendorf (Germany) ²Institute of Polymer Chemistry, University of Stuttgart (Germany)</p> <p>Flame retardant polyamides</p>
P77	<p><u>Johanna M. Spörl</u>¹, Antje Ota¹, Thomas Arnold², Anne Feuer², Rudolf Weber², Thomas Graf², Frank Hermanutz¹, Michael R. Buchmeiser^{1,3} ¹Institute of Textile Chemistry and Chemical Fibers (ITCF), Denkendorf (Germany) ²Institute of Laser Technologies (IFSW), University of Stuttgart (Germany) ³Institute of Polymer Chemistry, University of Stuttgart (Germany)</p> <p>LASTRON – laser drilled spinnerets tailor-made for dry-wet spinning for the manufacture of cellulosic supermicro fibers</p>
P78	<p><u>Johanna M. Spörl</u>¹, Antje Ota¹, Frank Hermanutz¹, Simon Küppers², Götz T. Gresser², Michael R. Buchmeiser^{1,3} ¹Institute of Textile Chemistry and Chemical Fibers (ITCF), Denkendorf (Germany) ²Institute of Textile Technology and Process Engineering (ITV), Denkendorf (Germany) ³Institute of Polymer Chemistry, University of Stuttgart (Germany)</p> <p>PURCELL – a sustainable composite material of pure cellulose: a new, recyclable and biodegradable material from renewable, domestic resources as a substitute for GFRP</p>

P79	<p><u>Stephanie Pfeifer</u>¹, German Mauricio Gago Jimenez^{1,2}, Bernd Clauß¹, Michael R. Buchmeiser^{1,2}</p> <p>¹Institute of Textile Chemistry and Chemical Fibers, Denkendorf (Germany) ²Institute of Polymer Chemistry, University Stuttgart (Germany)</p> <p>Structure-property relationships in the development of zirconia toughened alumina fibers for ceramic matrix composites</p>
P80	<p><u>Thomas Bahners</u>¹, Siegfried Opiolka², Ahmed Bankodad², Lutz Prager³, Jochen S. Gutmann^{1,4}</p> <p>¹Deutsches Textilforschungszentrum Nord-West gGmbH, Krefeld (Germany) ²Institut für Energie- und Umwelttechnik e.V., Duisburg (Germany) ³Leibniz-Institut für Oberflächenmodifizierung e.V., Leipzig (Germany) ⁴Universität Duisburg-Essen, Physikalische Chemie and CENIDE, Essen (Germany)</p> <p>Light guiding and emitting textile structures with TiO₂ coating for innovative full-flow filters for photocatalytic air purification</p>
P81	<p><u>Markus Oberthür</u>¹, Harald Fink¹, Jochen S. Gutmann^{1,2}</p> <p>¹Deutsches Textilforschungszentrum Nord-West gGmbH, Krefeld (Germany) ²Fachbereich Chemie und CENIDE, Universität Duisburg-Essen, Essen (Germany)</p> <p>The effect of UV absorbers on the stability of aramides</p>
P82	<p><u>Markus Oberthür</u>¹, Lisa Koch^{1,2}, Wolfgang Janes³, Andreas Schrader^{3,4}, Jutta Quadflieg³, Jana Hesse⁵, Cornelia Wiegand⁵, Uta-Christiane Hipler⁵, Jochen S. Gutmann^{1,2}</p> <p>¹Deutsches Textilforschungszentrum Nord-West gGmbH, Krefeld (Germany) ²Fachbereich Chemie und CENIDE, Universität Duisburg-Essen, Essen (Germany) ³Wissenschaftliches Institut der Forschungsgemeinschaft für die Kosmetische Industrie, Holzminden (Germany) ⁴Institute Dr. Schrader, Holzminden (Germany) ⁵Klinik für Hautkrankheiten, Universitätsklinikum Jena (Germany)</p> <p>Polyelectrolyte multilayers on textile substrates as a reservoir for pharmaceutical and cosmetic substances</p>
P83	<p><u>Thomas Straube</u>^{1,2,3}, Thomas Mayer-Gall^{1,2,3}, Torsten Textor⁴, Jochen S. Gutmann^{1,2,3}</p> <p>¹University of Duisburg-Essen, Institute of Physical Chemistry, Essen (Germany) ²Center for Nanointegration Duisburg-Essen (CENIDE), Essen (Germany) ³Deutsches Textilforschungszentrum Nord-West gGmbH, Krefeld (Germany) ⁴Reutlingen University, Textile and Design, Reutlingen (Germany)</p> <p>TCO-based nanoparticle coatings for heat-shielding applications in textile architecture</p>
P84	<p><u>Dennis Berg</u>, Karola Schäfer, Martin Möller DWI – Leibniz-Institute for Interactive Materials e.V. and Institute for Technical and Macromolecular Chemistry (ITMC), RWTH Aachen University, Aachen (Germany)</p> <p>Development of a new masterbatch containing chain extenders for poly(ethylene terephthalate)</p>
P85	<p>Veit Houben, <u>Karin Peter</u>, Martin Möller ¹DWI-Leibniz-Institut für Interaktive Materialien, Aachen (Germany)</p> <p>Textile coatings with switchable wetting properties: A combination of soil-repellency and easy soil-release</p>
P86	<p><u>Juliana Kurniadi</u>¹, Subrata Chattopadhyay², Jens Köhler¹, Andrea Körner¹, Helmut Keul¹, Martin Möller¹</p> <p>¹DWI – Leibniz Institute for Interactive Materials e.V., Aachen (Germany) ²Ghent University, Ghent (Belgium)</p> <p>Formaldehyde-free crosslinking agents for crease-resistant finishing of cellulosic fibers</p>
P87	<p><u>Lina Weber</u>¹, Felix Jakob¹, Ulrich Schwaneberg^{1,2}</p> <p>¹DWI – Leibniz Institute for Interactive Materials, Aachen (Germany) ²Institute of Biotechnology, RWTH Aachen University (Germany)</p> <p>Anchor peptides: Antimicrobial decoration of textiles</p>
P88	<p><u>Michael Swaton-Höckels</u>, Karin Peter, Martin Möller DWI - Leibniz-Institut für Interaktive Materialien e.V., Aachen (Germany)</p> <p>Hydrophilization of a nonpolar PP fiber surface by migration of a hydrophobic additive and its conversion to a hydrophilic one</p>
P89	<p><u>Jens Köhler</u>, Andreas Walther, Martin Möller DWI – Leibniz-Institut für Interaktive Materialien e.V., Aachen (Germany)</p> <p>Supramolecular crosslinked hydrogels as coatings for aramide textiles</p>

P90	<p><u>Dirk Hanuschik</u>, Jens-Christian Winkler TFI, Aachen (Germany)</p> <p>Fibre composites - New opportunities for the special-purpose engineering</p>
P91	<p>Xiaomin Zhao¹, <u>Dan Xiao</u>², Udo Wagenknecht², Gert Heinrich², De-Yi Wang^{1, 2} ¹IMDEA Materials Institute, Madrid (Spain) ²Leibniz Institute of Polymer Research Dresden (Germany)</p> <p>Novel eco-friendly flame-retardant coating to cotton textile</p>
P92	<p><u>Christina Scheffler</u>, Matthias Krüger, Janett Hiller, Theresa Förster, Lars Bittrich, Axel Spickenheuer Leibniz-Institut für Polymerforschung Dresden e.V., Dresden (Germany)</p> <p>Glass fiber/PBT SpinCom yarns for innovative lightweight structures</p>
P93	<p><u>Theresa Förster</u>, Janett Hiller, Christina Scheffler Leibniz-Institut für Polymerforschung Dresden e.V., Dresden (Germany)</p> <p>PU-based coatings with improved flame retardency for carbon fibers in textile reinforced concrete</p>
P94	<p><u>Lars Bittrich</u>, Martin Passauer, Axel Spickenheuer, Kai Uhlig, Christina Scheffler Leibniz-Institut für Polymerforschung Dresden e.V., Dresden (Germany)</p> <p>Investigation of the placement accuracy of the Tailored Fiber Placement technology</p>
P95	<p><u>Enrico Wölfel</u>, Christina Scheffler Leibniz-Institut für Polymerforschung Dresden e.V., Dresden (Germany)</p> <p>Carbon fiber surfaces and adhesion in thermoplastics and resins</p>
P96	<p><u>Marcel Hofmann</u>, Dirk Wenzel Sächsisches Textilforschungsinstitut e.V., Chemnitz (Germany)</p> <p>CF100 - Removal of extraneous fibres from recycled carbon fibre material by use of laser technique</p>
P97	<p><u>Leontin Grafmüller</u>¹, Jana Siegmund², <u>Kathrin Pietsch</u>² ¹HHL Leipzig Graduate School of Management - CLIC, Leipzig (Germany) ²Institute of Textile Machinery and High Performance Material Technology (ITM), TU Dresden (Germany)</p> <p>Key technologies and core competencies for transformation of traditional textile value-added structures into sustainable customer-oriented value addition networks based on Mass Customization strategies</p>
P98	<p><u>Dustin Ahrendt</u>¹, Sybille Krzywinski¹, Felix Schmitt², Jens Krzywinski² ¹Institut für Textilmaschinen und Textile Hochleistungswerkstofftechnik (ITM), Professur für Konfektionstechnik, TU Dresden (Germany) ²Institut für Maschinenelemente und Maschinenkonstruktion, Juniorprofessur für Technisches Design, TU Dresden (Germany)</p> <p>Combination of additive manufacturing and joining processes for novel customized orthopaedic devices</p>
P99	<p><u>Iris Kruppke</u>, Rolf-Dieter Hund, Chokri Cherif Institute of Textile Machinery and High Performance Material Technology (ITM), TU Dresden (Germany)</p> <p>Surface modification and functionalisation of carbon fibres</p>
P100	<p><u>Martin Hengsternann</u>, Anwar Abdkader, Chokri Cherif Institute of Textile Machinery and High Performance Material Technology (ITM), TU Dresden (Germany)</p> <p>Spinning of secondary and recycled carbon fibers for load-bearing carbon fiber reinforced plastics (CFRP)</p>
P101	<p><u>Moniruddoza Ashir</u>, Andreas Nocke, Chokri Cherif Institute of Textile Machinery and High Performance Material Technology (ITM), TU Dresden (Germany)</p> <p>Adaptive hinged fiber reinforced plastics</p>
P102	<p><u>Johannes Wendler</u>, Dilibaier Aibibu, Andreas Nocke, Chokri Cherif Institute of Textile Machinery and High Performance Material Technology (ITM), TU Dresden (Germany)</p> <p>Textile sensor networks for wound monitoring</p>
P103	<p><u>Georg Bardl</u>, Andreas Nocke, Chokri Cherif Institute of Textile Machinery and High Performance Material Technology (ITM), TU Dresden (Germany)</p> <p>Quality assurance for the CFRP production chain with eddy current testing</p>

P104_1	<p><u>Eric Häntzsche</u>, Toty Onggar, Matthias Bartusch, Andreas Nocke, Rolf-Dieter Hund, Chokri Cherif Institute of Textile Machinery and High Performance Material Technology (ITM), TU Dresden (Germany)</p> <p>Multifunctional sensor yarns for in situ sensing of multiple damage behaviour in FRP</p>
P104_2	<p><u>Reimar Unger</u>, Philipp Schegner, Uwe Hanke, Andreas Nocke, Chokri Cherif Institute of Textile Machinery and High Performance Material Technology (ITM), TU Dresden (Germany)</p> <p>Mechanical and sensoric issues on high strain rate for testing of high-performance fibers</p>
P105	<p><u>Thomas Gereke</u>, Samander Ali Malik, Matthias Hübner, Oliver Döbrich, Chokri Cherif Institute of Textile Machinery and High Performance Material Technology (ITM), TU Dresden (Germany)</p> <p>Finite element modeling of textile and composite mechanics</p>
P106	<p><u>Christian Franz</u>, Gerald Hoffmann, Chokri Cherif Institute of Textile Machinery and High Performance Material Technology (ITM), TU Dresden (Germany)</p> <p>Development of warp-knitted spacer fabrics for the use in fibre-reinforced plastics</p>
P107	<p><u>Duy Minh Phuong Vo</u>, Monireh Fazeli, Matthias Hübner, Gerald Hoffmann, Thomas Gereke, Chokri Cherif Institute of Textile Machinery and High Performance Material Technology (ITM), TU Dresden (Germany)</p> <p>Development of net shape woven fabrics</p>
P108	<p><u>Daniel Weise</u>¹, Nicole Fleischmann², Gerald Hoffmann¹, Nico Langhof², Chokri Cherif¹, Walter Krenkel² ¹Institute of Textile Machinery and High Performance Material Technology (ITM), TU Dresden (Germany) ²University of Bayreuth, Ceramics Material Engineering (CME), Bayreuth (Germany)</p> <p>Automated short-fiber preforming for carbon fiber reinforced ceramics</p>
P109	<p><u>Tristan Ruder</u>, <u>Vignaesh Sankaran</u>, Martin Waldmann, Uwe Hanke, Steffen Rittner, Chokri Cherif Institute of Textile Machinery and High Performance Material Technology (ITM), TU Dresden (Germany)</p> <p>Multiaxial warp knitting based technology for the production of new generation warp knitted textile preforms</p>
P110	<p><u>André Seidel</u>¹, Steffen Rittner¹, Kerstin Speck², Chokri Cherif¹ ¹Institute of Textile Machinery and High Performance Material Technology (ITM), TU Dresden (Germany) ²Institute of Concrete Structures, TU Dresden (Germany)</p> <p>Anchoring-suitable formed textile reinforcements for concrete use</p>
P111	<p><u>Rico Hickmann</u>¹, Chokri Cherif¹, Thomas Götze², Sven Wießner^{2,4}, Gert Heinrich^{2,4}, Johannes Storm³, Michael Kaliske³ ¹Institute of Textile Machinery and High Performance Material Technology (ITM), TU Dresden (Germany) ²Leibniz-Institute of Polymer Research Dresden e.V. (IPF), Dresden, (Germany) ³Institute for Structural Analysis (ISD), TU Dresden (Germany) ⁴Institute of Material Sciences, TU Dresden (Germany)</p> <p>Innovative bimodulare hybrid-yarns for textile reinforced elastomer components</p>