

strengthening, permitting to obtain biocomposites with mechanical properties comparable to those of glass fibre reinforced polymer matrix composites.



References

- Mohanty AK, Misra M, Drzal LT. Sustainable biocomposites from renewable resources: Opportunities and challenges in the green materials world. *Journal of Polymers and the Environment* 2002; 10 (1-2): 19-26.
- Bledzki AK, Gassan J. Composites reinforced with cellulose based fibres. *Progress in Polymer Science* 1999; 24 (2): 221-274.
- Gupta B, Revagade N, Hilborn J. Poly(lactic acid) fiber: An overview. *Progress in Polymer Science* 2007; 32 (4): 455-482.
- Shumigin D, Tarasova E, Krumme A, Meier P. Rheological and mechanical properties of poly(lactic) acid/cellulose and LDPE/cellulose composites. *Materials Science (Medžiagotyra)* 2011; 17 (1): 32-36.
- Renner K, Moczó J, Vörös G, Pukan-szky B. Quantitative determination of interfacial adhesion in composites with strong bonding. *European Polymer Journal* 2010; 46: 2000-2004.
- Lee HS, Cho D, Han SO. Effect of natural fiber surface treatments on the interfacial and mechanical properties of henequen/polypropylen biocomposites. *Macromolecular Research* 2008; 16 (5): 411-417.
- Hann MA. Innovation in flax manufacture. *Textile Progress* 2005; 37 (3): 1-42.
- Sreekala MS., Kumaran MG., Joseph S, Jacob M. Oil palm fibre reinforced phenol formaldehyde composites: Influence of fibre surface modifications on the mechanical performance. *Applied Composite Materials* 2000; 7: 295-329.
- Matyjas-Zgondek E, Szyrkowska MI, Pawlaczyk A, Rybicki E. Influence of bleaching stages and dyeing process on changes in a selected heavy metal content in flax fibres. *Fibres and Textile in Eastern Europe* 2012; 20, 2(91): 91-95.
- Ku H, Wang H, Pattarachaiyakoop N, Trada M. A review on the tensile properties of natural fiber reinforced polymer composites. *Composites: Part B* 2011; 42: 856-873.
- Żyła R, Sójka-Ledakowicz J, Michalska K, Kos L, Ledakowicz S. Effect of UV/H₂O₂ oxidation on fouling in textile wastewater nanofiltration. *Fibres and Textile in Eastern Europe* 2012; 20, 1(90): 99-104.
- Porwal PK, Beyerlein IJ, Phoenix SL. Statistical strength of twisted fiber bundles with load sharing controlled by frictional length scales. *Journal of Mechanics of materials and Structures* 2007; 4 (2): 773-791.
- Goutianos S, Peijs T, Nystrom B, Skrifvars M. Development of flax fibre based textile reinforcements for composite applications. *Applied composite materials* 2006; 13: 199-215.
- Pang JWC, Fancey KS. Analysis of the tensile behaviour of viscoelastically prestressed polymeric matrix composites. *Composite Science and Technology* 2008; 68: 1903-1910.
- Foster JS, Harington R, Greeno R. Structure and Fabric. Part 2. Pearson Education Limited, Harlow, UK, 2007: 182.
- Bekampienė P, Domskienė J, Širvaitienė A. The effect of pre-tension on deformation behaviour of natural fabric reinforced composite. *Materials Science (Medžiagotyra)* 2011; 17 (1): 56-61.
- John MJ, Anandjiwala RD. Recent developments in chemical modifications and characterization of natural-fibre reinforced composites. *Polymer Composites* 2008; 29: 187-207.
- Duigou AL, Davies P, Baley Ch. Interfacial bonding of flax fibre/(L-lactide) biocomposites. *Composites Science and technology* 2010; 70: 231-239.
- Parlevliet P, Bersee H, Beukers H. Residual stresses in thermoplastic composites – a study of the literature. Part 1: Formation of residual stresses. *Composites. Part A: Applied Science and Manufacturing* 2006; 37 (11): 1847-1857.
- Baley C, Busnel F, Grohens Y, Sire O. Influence of chemical treatments on surface properties and adhesion of flax fibre/polyester resin. *Composites Part A: Applied Science and Manufacturing* 2006; 37 (10): 1626-1637.
- Packham DE. Handbook of adhesion. John Wiley & Sons Ltd, 2005: p. 638.
- Cierpucha W, Czaplicki Z, Mańkowski J, Kołodziej J, Zaręba S, Szporek J. Blended rotor-spun yarns with a high proportion of flax. *Fibres and Textiles in Eastern Europe* 2006; 14 (5): 80-83.

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4-7 June, Międzyzdroje, Poland

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- Institut of Polymers, Faculty of Chemical Technology and Engineering
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 - Modifiers and auxiliary agents
- Polymers and the environment
 - Biodegradable polymers
 - Polymeric biomaterials
 - Polymers and resins in water systems
 - Recycling of polymer materials

Invited Lectures (selected)

- **Andrzej K. Bledzki** 'Cellulose fibres substitute of glassfibres in biocomposites'
- **Danuta Ciechańska** 'Biomass as a source of functional polymeric materials'
- **Zbigniew Florjańczyk** 'Polymeric materials on the basis of unorganic-organic polymers'
- **Andrzej Gałęski** 'Composites and nanocomposites on the basis of polylactide'
- **Marek Kowalczyk** 'Synthesis and properties of biodegradable poly(ester-urethanes) and their application'

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