

List of publications:

1. A. Szymczyk, S. Paszkiewicz, I. Pawelec, S. Lisiecki, M. Jotko, Z. Špitalský, J. Mosnáček, Z. Roslaniec **“Oxygen Barrier Properties and Melt Crystallization Behavior of Poly(ethylene terephthalate)/Graphene Oxide Nanocomposites,”** J. Nanomaterials, Article ID 382610, 10 pages, in press.
2. S. Paszkiewicz, I. Pawelec, A. Szymczyk, Z. Spitalsky, J. Mosnacek, A. Kochmanska, Z. Roslaniec **„Effect of exfoliated graphite nanoplatelets' size on the phase structure, electrical, and barrier properties of poly(trimethylene terephthalate)-based nanocomposites”,** Polym. Eng. Sci., DOI:10.1002/pen.24107.
3. M. Ilčíková, M. Mrlík, T. Sedláček, M. Doroshenko, K. Koynov, M. Danko, J. Mosnáček **„Tailoring of viscoelastic properties and light-induced actuation performance of triblock copolymer composites through surface modification of carbon nanotubes”,** Polymer, doi:10.1016/j.polymer.2015.03.060.
4. Cs. Kosa, M. Sedlacik, A. Fiedlerova, Š. Chmela, K. Borska, J. Mosnacek **„Photochemically cross-linked poly(ϵ -caprolactone) with accelerated hydrolytic degradation”,** Eur. Polym. J., Vol. 68, p. 601–608 (2015).
5. G. Kasza, K. Mosnackova, A. Nador, Z. Osvath, T. Stumphauser, G. Szarka, K. Czanikova, J. Rychly, Š. Chmela, B. Ivan, J. Mosnacek **„Synthesis of hyperbranched poly(ethyleneimine) based macromolecular antioxidants and investigation of their efficiency in stabilization of polyolefins”,** Eur. Polym. J., Vol. 68, p. 609–617 (2015).
6. M. Cvek, M. Mrlik, M. Ilcikova, T. Plachy, M. Sedlacik, J. Mosnacek, V. Pavlinek **„A facile controllable coating of carbonyl iron particles with poly(glycidyl methacrylate): a tool for adjusting MR response and stability properties”,** J. Mater. Chem. C, Vol. 3, p. 4646 (2015).
7. J. Rychlý, K. Mosnáčková, L. Rychlá, Fiedlerová A., G. Kasza, A. Nádor, Z. Osváth, T. Stumphauser, G. Szarka, K. Czaniková, Š. Chmela, B. Iván, J. Mosnáček **„Comparison of the UV stabilisation effect of commercially available processing stabilizer Irganox HP 136 with Irganox 1010 and synthesized hyperbranched phenolic antioxidants”,** Polym. Degrad. Stab., Vol. 118, p. 10–16 (2015).
8. J. Mosnacek, A. Andicsová-Eckstein, K. Borska **„Ligand Effect and Oxygen Tolerance Studies in Photochemically Induced Copper Mediated Reversible Deactivation Radical Polymerization of Methyl Methacrylate in Dimethyl Sulfoxide”,** Polym. Chem., Vol. 6, p. 2523–2530 (2015).
9. L. Klukova, T. Bertok, M. Petrikova, A. Sediva, D. Mislovicova, J. Katrlík, A. Vikartovska, J. Filip, P. Kasák, A. Andicsová-Eckstein, J. Mosnáček, J. Lukác, J. Rovensky, R. Imrich, J. Tkac **„Glycoprofiling as a novel tool in serological assays of systemic sclerosis: A comparative study with three bioanalytical methods”,** Anal. Chim. Acta, Vol. 853, p. 555–562 (2015).
10. M. Ilčíková, M. Mrlík, Z. Špitalský, M. Mičušík K. Csomorová, V. Sasinková, A. Kleinová, J. Mosnáček **„A tertiary amine in two competitive processes: reduction of graphene oxide vs. Catalysis of Atom Transfer Radical Polymerization”,** RSC Adv., Vol. 5, p. 3370–3376 (2015).
11. S. Teixeira, M. P. Graça, M. Dionisio, M. Ilčíková, J. Mosnáček, Z. Špitalský, I. Krupa, L. Costa **„Self-standing elastomeric composites based on lithium ferrites and their dielectric behavior”,** J. Appl. Phys. Vol. 114, art. 224102 (2014).
12. S. Paszkiewicz, M. Nachman, A. Szymczyk, Z. Špitalský, J. Mosnáček, Z. Roslaniec **„Influence of expanded graphite (EG) and graphene oxide (GO) on physical properties of PET based nanocomposites”,** Pol. J. Chem. Tech., Vol.16 (4), p. 45–50 (2014).
13. J. Mosnáček, A. Kundys, A. Andicsová **„Reversible-deactivation radical polymerization of methyl methacrylate induced by photochemical reduction of various copper catalysts”,** Polymers, Vol. 6 (10), p. 2862–2874 (2014).

14. M. Ilčíková, M. Mrlík, T. Sedláček, M. Šlouf, A. Zhigunov, K. Koynov, J. Mosnáček „**Synthesis and photoactuating acrylic thermoplastic elastomers containing diblock copolymer-grafted carbon nanotubes**”, ACS Macro Lett., Vol. 3, p. 999-1003 (2014).
15. K. Borska, M. Danko, J. Mosnacek „**Photodegradation and Photochemical Cross-linking of Polylactide**”, Chem. Listy, Vol. 108, p. 1030-1039 (2014).
16. M. Ilčíková, J. Mosnáček, M. Mrlík, T. Sedláček, K. Csomorová, K. Czaniková, I. Krupa „**Influence of surface modification of carbon nanotubes on interactions with polystyrene-*b*-polyisoprene-*b*-polystyrene matrix and its photo-actuation properties**”. Polym. Adv. Technol., Vol. 25, p. 1293-1300 (2014).
17. M. Mrlik, M. Ilčíková, M. Sedlacik, J. Mosnáček, P. Peer, P. Filip „**Cholesteryl-coated carbonyl iron particles with improved anti-corrosion stability and their viscoelastic behaviour under magnetic field**”, Colloid Polym. Sci., Vol. 292, p. 2137-2143 (2014).
18. S. Paszkiewicz, A. Szymczyk, Z. Špitalský, J. Mosnáček, K. Kwiatkowski, Z. Roslaniec „**Structure and properties of nanocomposites based on PTT-block-PTMO copolymer and graphene oxide prepared by in situ polymerization**”, Eur. Polym. J., Vol. 50, p. 69-77 (2014).
19. M. Ilcikova, M. Mrlik, T. Sedlacek, D. Chorvat, I. Krupa, M. Slouf, K. Koynov, J. Mosnacek „**Viscoelastic and Photo-Actuation Studies of Composites Based on Nanotubes and Styrene-*b*-Isoprene-*b*-Styrene Block Copolymer Polystyrene-Grafted Carbon**”, Polymer, Vol. 55, p. 211-218 (2014).
20. S. Paszkiewicz, A. Szymczyk, Z. Spitalsky, J. Mosnacek, E. Janus, Z. Roslaniec „**Influence of Expanded Graphite on Synthesis Progress and Characteristic of PETG**”, Polimery, 58 (11-12), p. 893-899 (2013).
21. K. Czanikova, M. Ilcikova, I. Krupa, M. Micusik, P. Kasak, E. Pavlova, J. Mosnacek, D. Chorvat, Jr., and M. Omastova „**Elastomeric Photo-actuators and their Investigation by Confocal Laser Scanning Microscopy**”, Smart Mater. Struct., Vol. 22, art. 104001 (2013).
22. J. Mosnacek, K. Borska, M. Danko, I. Janigova „**Photochemically Promoted Degradation of Poly(ϵ -caprolactone) Film**”, Mater. Chem. Phys., Vol. 140 (1), p. 191-199 (2013).
23. M. Mrlik, M. Ilcikova, V. Pavlinek, J. Mosnacek, P. Peer, P. Filip „**Improved thermooxidation and sedimentation stability of covalently-coated carbonyl iron particles with cholesteryl groups and their influence on magnetorheology**”, J. Colloid Interface Sci., Vol. 396, p. 146-151 (2013).
24. M. Ilcikova, K. Czanikova, J. Mosnacek, M. Micusik, P. Kasak, M. Omastova, D. Chorvat Jr., I. Krupa, M. Šlouf, K. Koynov „**Photoactuating SIS Based Materials Designed for Haptic Aid-Tablets for Visually Impaired People**”, Chemik, Vol. 67 (3), p. 224-231 (2013).
25. I. Novak, M. Steviar, A. Popelka, I. Chodak, J. Mosnacek, M. Spirkova, I. Janigova, A. Kleinova, J. Sedliacik, J. Slouf „**Surface Modification of Polyethylene by Diffuse Barrier Discharge Plasma**”, Polym. Eng. Sci., Vol. 53 (3), p. 516-523 (2013).
26. J. Mosnacek, I. Lukac, M. Bertoldo, F. Ciardelli „**Applicability of photochemically generated pendant benzoyl peroxides in both “grafting from” and “grafting to” techniques**”, Chem. Papers, Vol. 67 (1), p. 9-17 (2013).
27. M. Brzezinski, M. Boguslawska, M. Ilcikova, J. Mosnacek, T. Biela „**Unusual Thermal Properties of Polylactides and Polylactide Stereocomplexes Containing Polylactide-Functionalized Multi-Walled Carbon Nanotubes**”, Macromolecules, Vol. 45, p. 8714-8721 (2012).
28. S. Paszkiewicz, A. Szymczyk, Z. Spitalsky, M. Soccio, J. Mosnacek, T. A. Ezquerra and Z. Roslaniec „**Electrical conductivity of poly(ethylene terephthalate)/expanded graphite nanocomposites prepared by *in situ* polymerization**”, J. Polym. Sci. B: Polym. Phys., Vol. 50 (23), p. 1645-1652 (2012).

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32. R. Nicolay, J. Mosnacek, K. K. Kar, S O. Fruchey, M. D. Cloeter, R. S. Harner, K. Matyjaszewski „**Efficient Polymerization Inhibition Systems for Acrylic Acid Distillation: Vapor Phase Inhibitors**“, Ind Eng Chem Res, Vol. 51 (12), p. 4467–4471 (2012).
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34. Z. Spitalsky, M. Danko, J. Mosnacek „**Preparation of Functionalized Graphene Sheets**“, Curr. Org. Chem., Vol. 15, p. 1133-1150 (2011).
35. A. Juhari, J. Mosnacek, J. A. Yoon, A. Nese, Koynov, T. Kowalewski, K. Matyjaszewski „**Star-like Poly(n-butyl acrylate)-b-poly(alpha-methylene-gamma-butyrolactone) Block Copolymers for High Temperature Thermoplastic Elastomers Applications**“, Polymer, 51 (21), p. 4806–4813 (2010).
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37. M. A. Bahattab, J. Mosnacek, A. A. Basfar, T. M. Shukri „**Cross-linked Poly(Ethylene Vinyl Acetate) (EVA) / Low Density Polyethylene (LDPE) / Metal Hydroxides Composites for Wire and Cable Applications**“, Polym. Bull., Vol. 64 (6), p. 569-580 (2010).
38. J. Mosnacek, J. A. Yoon, A. Juhari, K. Koynov, K. Matyjaszewski „**Synthesis, Morphology and Mechanical Properties of Linear Triblock Copolymers Based on Poly(α -Methylene- γ -Butyrolactone)**“, Polymer, Vol. 50, p. 2087-2094 (2009).
39. J. Mosnacek, A. A. Basfar, T. M. Shukri, M. A. Bahattab „**Poly(Ethylene Vinyl Acetate) (EVA) / Low Density Polyethylene (LDPE) / Ammonium Polyphosphate (APP) Composites Cross-linked by Dicumyl Peroxide for Wire and Cable Applications**“, Polym. J., Vol. 40, p. 460 – 464 (2008).
40. J. Mosnacek, K. Matyjaszewski „**Atom Transfer Radical Polymerization of Tulipalin A – A Naturally Renewable Monomer**“, Macromolecules, Vol. 41, p. 5509-5511 (2008).
41. T. M. Shukri, J. Mosnacek, A. A. Basfar, M. A. Bahattab, P. Noireaux, A. Coudreuse „**Flammability of Blends of Low Density Polyethylene (LDPE) and Ethylene Vinyl Acetate (EVA) Cross-linked by Both Dicumyl Peroxide and Ionizing Radiation for Wire and Cable Applications**“, J. App. Polym. Sci., Vol. 109, p. 167 – 173 (2008).
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44. M. Florczak, J. Libiszowski, J. Mosnacek, A. Duda, S. Penczek „**L,L-Lactide and ϵ -Caprolactone Block Copolymers by ‘Poly(L,L-lactide) Block First’ Route**”, Macromol. Rapid Comm., Vol. 28, p.1385 – 1391 (2007).
45. J. Mosnacek, M. Bertoldo, Cs. Kosa, C. Cappelli, G. Ruggeri, I. Lukac, F. Ciardelli „**Modification and Photostabilization of LDPE Film by Photodecomposition of Various Diazo-compounds and Methyl Azidocarboxylate**”, Polym. Degrad. Stab., Vol. 82, p.849 – 858 (2007).
46. I. Novak, M. Steviar, I. Chodak, I. Krupa, T. Nedelcev, M. Spirkova, M. M. Chehimi, J. Mosnacek, A. Kleinova „**Study of Adhesion and Surface Properties of Low-density Polyethylene Pre-treated by Cold Discharge Plasma**”, Polym. Adv. Technol., Vol. 18 (2), p. 97 – 105 (2007).
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Patents:

1. M. D. Cloeter, K. K. Kar, K. Matyjaszewski, J. Mosnacek, R. Nicolay, „**Synergistic polymerization inhibitor composition and method**”. Patent Application **WO2012121836 (A1)**

2. K. K. Kar, O. S. Fruchey, M. D. Cloeter, R. S. Harner, K. Matyjaszewski, R. Nicolay, J. Mosnacek, „**Polymerization Inhibitor Composition and Method of Inhibiting Polymerization of Distillable Monomers**“. Patent Applications **WO 2010096512 (A1); US2011290635 (A1); EP2398832 (A1); CN102325800 (A)**
3. I. Lukac, J. Mosnacek, „**Methods for the Preparation of 1-Phenyl-2-(4-vinylphenyl)-1,2-ethanedione Monomer, the Polymers Thereof and Diacyl Peroxide Groups Created Therein**“. Slovak Patent Application **SK4482002**