

Publikációs lista

Név: Gergely Attila Levente

A. Doktori disszertáció Poli(alloocimen-*b*-izobutilén) termoplasztikus elsztomerek előállítása és karakterizációja. Akroni Egyetem, 2014.

B. Könyvek

B5. Külföldön megjelent könyvfejezetek

Judit E. Puskas, Marcela Castano, **Attila L. Gergely** Enzyme-catalyzed Polymer Functionalization In Green Polymer Chemistry: Biobased Materials and Biocatalysis, Ed(s): H. N. Cheng, Richard A. Gross, Patrick B. Smith, ACS Symposium Series, Vol. 1192, ISBN13: 9780841230651 eISBN: 9780841230668, 2015

C. Tudományos cikkek

C1. ISI folyóiratokban megjelent cikkek

2015

Gergely, A.L.; Puskas, J.E. Synthesis and Characterization of Thermoplastic Elastomers with Polyisobutylene and Polyalloocimene Blocks *J. Polym. Sci. Part A: Polym. Chem.*, **53**, **2015**, 1567-1574. Factorul de impact: 3.113

Roh, J.H.; Doy, D.; Lee, W.K.; **Gergely, A.L.**; Puskas, J.E.; Roland, C.M. Thermoplastic Elastomers of Alloocimene and Isobutylene Triblock Copolymers, *Polymer*, **56**, **2015**, 280-283. Factorul de impact: 3.562

2013

Gergely, A.L.; Turkarslan, O.; Puskas, J.E.; Kaszas, G. The Role of Electron Pair Donors in the Carbocationic Copolymerization of Isobutylene with Alloocimene, *J. Polym. Sci. Part A: Polym. Chem.*, **51**, **2013**, 4717-4721. Factorul de impact: 3.113

Puskas, J.E.; **Gergely, A.L.**; Kaszas, G. Controlled/Living Carbocationic Copolymerization of Isobutylene with Alloocimene, *J. Polym. Sci. Part A: Polym. Chem.*, **51**, **2013**, 29-33. Factorul de impact: 3.113

C2. Nemzetközi adatbázisban jegyzett folyóiratokban megjelent cikkek

Gergely, A.L. Crosslinking of thermoplastic leastomers, FMTU XXII., Március 22-23 **2017**. Cluj-Napoca, Romania. Proceedings 175-179, ISBN 2393-1280 (XXII. Fialat Műszakiak Tudományos Ülésszaka (FMTU)), **2017**. Kolozsvár, Romania

Gergely A. L.; Papp, I. A Pétervar-i csavar mozdásegyenletének meghatározása a kényszeregyenletek módszerével. Proceedings 131-136, ISBN 973-8231-50-7 XI. Fialat Műszakiak Tudományos Ülésszaka (FMTU), 2006. Március 24-25., Kolozsvár, Romania

C3. Más külföldi folyóiratban közölt cikkek

Gergely, A.L.; Puskas, J.E; Altstadt, V. Dynamic Fatigue Properties of Polyisobutylene-based Thermoplastic Elastomers: the Effect of Carbon Black Reinforcement, *TPE Magazin*, **2015**, 2, 121-123.

Gergely, A.L.; Puskas, J.E. A New Class of Polyisobutylene-based Thermoplastic Elastomers, *TPE Magazin*, **2015**, 1, 37-39.

C4. Hazai akkreditált folyóiratokban közölt cikkek

Gergely, A.L. The investigation of polymer-filler interaction, XXV. Nemzetközi Gépész Találkozó. The XXV.-th International Conference of Mechanical Engineering, p.307-310, Cluj-Napoca, April 27-30, 2017, Romania. Proceedings of the Conference. **ISSN: 2068-1267.**

Gergely, A.L. Korszerű műanyagok mechanikai tulajdonságainak lehetséges javítása (Possible improvement of the mechanical properties of novel thermoplastic elastomers). XXIV. Nemzetközi Gépész Találkozó. The XXIII.-th International Conference of Mechanical Engineering, p.307-310, Deva, April 21-24, 2016. Proceedings of the Conference. **ISSN: 2068-1267.**

D. Fordítások

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E. Könyvszerkesztés

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F. Találmányok.

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G. Kutatási programok

- | | |
|-----------|--|
| 2017-2018 | Kutatásvezető: Nanométer nagyságrendű polimer szálak gyártása újrahasznosított PET palackokból, IPC: 13/14/17.05.2017, 19000 RON |
| 2014-2015 | Kutatásvezető: Scaling up the Synthesis of Novel Poly(ethylene glycol) Based Dendrimers for Targeted Drug Delivery Applications, NSF SBIR Phase II, \$790000 |
| 2014-2015 | Kutatási csoport tagja: UV Curable Rubbers, LG Hausys, \$250000 |
| 2014-2015 | Kutatási csoport tagja: Novel Halogen-free Replacement for Halobutyl Rubber, NSF, PFI-AIR, \$800000 |
| 2014-2015 | Kutatási csoport tagja: Investigate the feasibility of replacement of the methyl chloride diluent with a diluent having a smaller carbon footprint, Honeywell, \$25000 |
| 2011-2013 | Kutatási csoport tagja: Diene-functionalized Polyisobutylene and Butyl Rubber for Improved Filler Interaction, NSF Center for Tire Research, \$70000 |
| 2010 | Kutatási csoport tagja: Filler Reactive Butyl, Goodyear, \$120000 |
| 2006 | Kutatási csoport tagja: Developing a universal method for determining the movement equations of mechanisms. |

I. Kitüntetések, díjak.

2015

Legjobb doktorandusz prezentáció: 186th Technical Meeting and Educational Symposium of the Rubber Division Meeting & Educational Symposium, 2015, Nashville, TN, USA.

2012

Legjobb doktorandusz poszter prezentáció: Rubber Expo and 182nd Technical Meeting & Educational Symposium, 2012, Cincinnati, OH, USA.

J. Idézettség.

Puskas, J.E.; **Gergely, A.L.**; Kaszas, G. Controlled/Living Carbocationic Copolymerization of Isobutylene with Alloocimene, *J. Polym. Sci. Part A: Polym. Chem.*, **51**, **2013**, 29-33.
Factorul de impact: 3.113

Sarkar, Preetom, and Anil K. Bhowmick. "Synthesis, characterization and properties of a bio-based elastomer: polymyrcene." *RSC Advances* 4.106 (2014): 61343-61354.

Trant, John F., et al. "Synthesis and properties of arborescent polyisobutylene derivatives and a paclitaxel conjugate: Towards stent coatings with prolonged drug release." *European Polymer Journal* 72 (2015): 148-162.

Trant, John F., et al. "Synthesis and properties of arborescent polyisobutylene derivatives and a paclitaxel conjugate: Towards stent coatings with prolonged drug release." *European Polymer Journal* 72 (2015): 148-162.

Turowec, Bethany A. *Butyl Rubber-Aliphatic Polyester Graft Copolymers for Biomedical Applications: Synthesis and Analysis of Chemical, Physical and Biological Properties*. Diss. The University of Western Ontario, 2013.

Turowec, Bethany A., and Elizabeth R. Gillies. "Synthesis, properties and degradation of polyisobutylene-polyester graft copolymers." *Polymer International* (2016).

Trant, John F., et al. "Polyisobutylene-paclitaxel conjugates with pendant carboxylic acids and polystyrene chains: Towards multifunctional stent coatings with slow drug release." *Journal of Polymer Science Part A: Polymer Chemistry* 54.14 (2016): 2209-2219.

Rodriguez, Andrea Carolina Charif. *New Applications for Linear and Arborescent Polyisobutylene-based Thermoplastic Elastomers*. Diss. The University of Akron, 2015.

Xie, Yi, et al. "Synthesis and properties of bromide-functionalized poly (isobutylene-co-p-methylstyrene) random copolymer." *Polymer International* 66.3 (2017): 468-476.

Radchenko, Alexei V., Hassen Bouchekif, and Frédéric Peruch. "Triflate esters as in-situ generated initiating system for carbocationic polymerization of vinyl ethers, isoprene, myrcene and ocimene." *European Polymer Journal* 89 (2017): 34-41.

Turowec, Bethany A., and Elizabeth R. Gillies. "Synthesis, properties and degradation of polyisobutylene–polyester graft copolymers." *Polymer International* 66.1 (2017): 42-51.

Sarkar, Preetom, and Anil K. Bhowmick. "Sustainable rubbers and rubber additives." *Journal of Applied Polymer Science* (2017).

Sahu, Pranabesh, Preetom Sarkar, and Anil K. Bhowmick. "Synthesis and Characterization of a Terpene-Based Sustainable Polymer: Poly-alloocimene." *ACS Sustainable Chemistry & Engineering* 5.9 (2017): 7659-7669.

Gergely, A.L.; Turkarslan, O.; Puskas, J.E.; Kaszas, G. The Role of Electron Pair Donors in the Carbocationic Copolymerization of Isobutylene with Alloocimene, *J. Polym. Sci. Part A: Polym. Chem.*, 51, **2013**, 4717-4721. Factorul de impact: 3.113

Stopka, Tobias, and Meike Niggemann. "Cyclopentanone as a Cation-Stabilizing Electron-Pair Donor in the Calcium-Catalyzed Intermolecular Carbohydroxylation of Alkynes." *Organic letters* 17.6 (2015): 1437-1440.

Radchenko, Alexei V., Hassen Boucekif, and Frédéric Peruch. "Triflate esters as in-situ generated initiating system for carbocationic polymerization of vinyl ethers, isoprene, myrcene and ocimene." *European Polymer Journal* 89 (2017): 34-41.

Stopka, M. Sc Tobias, Dieter Enders, and Meike Niggemann. *Vinylkationen als reaktive Intermediate*. No. RWTH-2017-02194. Fachgruppe Chemie, 2017.

Roh, J.H.; Doy, D.; Lee, W.K.; **Gergely, A.L.;** Puskas, J.E.; Roland, C.M. Thermoplastic Elastomers of Alloocimene and Isobutylene Triblock Copolymers, *Polymer*, 56, **2015**, 280-283. Factorul de impact: 3.562

Trant, John F., et al. "Synthesis and properties of arborescent polyisobutylene derivatives and a paclitaxel conjugate: Towards stent coatings with prolonged drug release." *European Polymer Journal* 72 (2015): 148-162.

Li, Hui, et al. "Grafting-through Strategy in Emulsion: An Eco-friendly and Effective Route for the Synthesis of Graft Copolymers." *ChemistrySelect* 1.9 (2016): 1870-1878.

Trant, John F., et al. "Polyisobutylene-paclitaxel conjugates with pendant carboxylic acids and polystyrene chains: Towards multifunctional stent coatings with slow drug release." *Journal of Polymer Science Part A: Polymer Chemistry* 54.14 (2016): 2209-2219.

Fu, Xiaowei, et al. "Use of short isobornyl methacrylate building blocks to improve the heat and oil resistance of thermoplastic elastomers via RAFT emulsion polymerization." *Journal of Applied Polymer Science* 134.40 (2017).

Zhao, Yongsheng, et al. "Tailoring the crystalline morphology and mechanical property of olefin block copolymer via blending with a small amount of UHMWPE." *Polymer* 109 (2017): 137-145.

Daugherty, William. "Effect of Electrospinning Parameters on AIBA/PEG Fiber Morphology." (2016).

Gergely, A.L.; Puskas, J.E. Synthesis and Characterization of Thermoplastic Elastomers with Polyisobutylene and Polyalloocimene Blocks. *J. Polym. Sci. Part A: Polym. Chem.*, 53, **2015**, 1567-1574. Factorul de impact: 3.113

Trant, John F., et al. "Synthesis and properties of arborescent polyisobutylene derivatives and a paclitaxel conjugate: Towards stent coatings with prolonged drug release." *European Polymer Journal* 72 (2015): 148-162.

Yang, Ji-Xing, et al. "Spontaneously Healable Thermoplastic Elastomers Achieved Through One-Pot Living Ring-Opening Metathesis Copolymerization of Well-Designed Bulky Monomers." *ACS applied materials & interfaces* (2016).

Turowec, Bethany A., and Elizabeth R. Gillies. "Synthesis, properties and degradation of polyisobutylene–polyester graft copolymers." *Polymer International* (2016).

Trant, John F., et al. "Polyisobutylene-paclitaxel conjugates with pendant carboxylic acids and polystyrene chains: Towards multifunctional stent coatings with slow drug release." *Journal of Polymer Science Part A: Polymer Chemistry* 54.14 (2016): 2209-2219.

Sahu, Pranabesh, Preetom Sarkar, and Anil K. Bhowmick. "Synthesis and Characterization of a Terpene-Based Sustainable Polymer: Poly-alloocimene." *ACS Sustainable Chemistry & Engineering* 5.9 (2017): 7659-7669.

Sarkar, Preetom, and Anil K. Bhowmick. "Sustainable rubbers and rubber additives." *Journal of Applied Polymer Science* (2017).

Daněk, Jan. "Termoplastické elastomery: Nové trendy." (2016).

Turowec, Bethany A., and Elizabeth R. Gillies. "Synthesis, properties and degradation of polyisobutylene–polyester graft copolymers." *Polymer International* 66.1 (2017): 42-51.

K. Nemzeti és nemzetközi konferenciákon való részvétel

2017

Gergely, A.L. A brief introduction of polymeric materials, Sapienita University Student Science Conference, Március 31-Április 1, 2017, Marosvásárhely, Romania. **Invited Speaker.**

Gergely, A.L. Crosslinking of thermoplastic leastomers, FMTU XXII., Március 22-23 **2017**. Cluj-Napoca, Romania.

Gergely, A.L. The investigation of polymer-filler interaction, OGÉT XXV, Április 27-30, **2017**, Cluj-Napoca, Romania.

2016

Gergely, A.L. Korszerű műanyagok mechanikai tulajdonságainak lehetséges javítása (Possible improvement of the mechanical properties of novel thermoplastic elastomers). XXIV. Nemzetközi Gépész Találkozó. The XXIII.-th International Conference of Mechanical Engineering, p.307-310, Deva, April 21-24, 2015. Proceedings of the Conference. ISSN: 2068-1267.

2015

Gergely, A.L.; Puskas, J.E.* Polyisobutylene-based Thermoplastic Elastomers by Two-phase Living Cationic Polymerization, International Symposium of Ionic Polymerization. July 5-10, 2015, Bordeaux, France.

Gergely, A.L.; Collister, E.; Das, D.; McLennan, G.; Drazba, J.; Puskas, J.E. Synthesis and Characterization of Folate Targeted Polymeric Cancer Diagnostic Agents, Cancer Nanotechnology, Gordon Research Conference June 28 - July 3, 2015, West Dover, VT

McClain, A.; Bruno, P.; Jindal, A.; Rosenthal, E.Q.; **Gergely, A.L.;** Cammasola, M.; Puskas, J.E. Cytotoxicity of Polyisobutylene-based Thermoplastic Elastomers, Midwest ASB Regional Meeting, February 17-18, 2015, Akron, OH.

Sen, S.; **Gergely, A.L.;** Collister, E.; Shrikhande, G.; Puskas, J.E. Green Fluorescein Compounds for Cancer Diagnosis, Midwest ASB Regional Meeting, February 17-18, 2015, Akron, OH.

Jindal, A.; Charif, A.; **Gergely, A.L.;** Puskas, J.E. Drug Eluting Electrospun Rubbery Fiber Mats, Midwest ASB Regional Meeting, February 17-18, 2015, Akron, OH.

2014

Gergely, A.L.*; Puskas, J.E. Novel Filler-interactive Butyl-type Thermoplastic Elastomers: Potential Replacement of Halobutyl Rubber, 186th Technical Meeting and Educational Symposium of the Rubber Division of the American Society, October 14-16, 2014, Nashville, TN, USA.

Gergely, A.L.*; Puskas, J.E. Synthesis of block copolymers of isobutylene and alloocimene, 247th ACS Technical Meeting, March 16-20, 2014, Dallas, TX, USA.

Jindal, A.; Charif, A.; **Gergely, A.L.;** Puskas, J.E. Drug Eluting Electrospun Rubbery Fiber Mats, ACS Rubber Division, 186th Technical Meeting, October 14-16, 2014, Nashville, TN, USA.

Gergely, A.L.*; Puskas, J.E., Altstädt, V. Dynamic Fatigue Properties of Polyisobutylene-based Thermoplastic Elastomers, PPS-30, Polymer Processing Society, June 8 – 12, 2014, Cleveland, OH, USA.

2013

Gergely, A.L.*; Puskas, J.E.; Kaszas, G. A New Class of Polyisobutylene-Based Thermoplastic Elastomers, PPS-29, July 15-19, 2013, Nuremberg, Germany.

Puskas, J.E.*; **Gergely, A.L.;** Kaszas, G. Living Carbocationic Polymerization in a Two-phase System, 10th IUPAC APME, August 18-23, 2013, Durham, United Kingdom.

Gergely, A.L.; Puskas, J.E.*; Kaszas, G. Novel Two-Phase Living Carbocationic Polymerization, IP'13, 2013, Awaji, Japan.

Gergely, A.L.*; Puskas, J.E.; Kaszas, G. Novel Filler Reinforced Polyisobutylene-based Thermoplastic Elastomers, International Elastomer Conference, October 7 – 11, 2013, Cleveland, OH, USA.

Puskas, J.E; **Gergely, A.L.*** Diene-functionalized Polyisobutylene and Butyl Rubber for Improved Filler Interaction, Center for Tire Research Fall 2013 Meeting, 2013, October 15 – 16, Akron, OH, USA.

Puskas, J.E; **Gergely, A.L.*** Diene-functionalized Polyisobutylene and Butyl Rubber for Improved Filler Interaction, Center for Tire Research Spring 2012 Meeting, 2013, June 3 – 5, Akron, OH, USA.

2012

Gergely A.L.*; Puskas, J.E., Altstädt, V. Dynamic Fatigue Properties of Polyisobutylene-based Thermoplastic Elastomers: The Effect Of Carbon Black Reinforcement, PPS-29, Polymer Processing Society, July 14 – 19, 2012, Nuremberg, Germany, Europe.

Puskas, J.E; **Gergely, A.L.*** Diene-functionalized Polyisobutylene and Butyl Rubber for Improved Filler Interaction, Center for Tire Research Fall 2012 Meeting, 2012, October 15 – 16, Akron, OH, USA.

Gergely, A.L.*; Puskas, J.E.; Kaszas, G. A New Polyisobutylene Based Thermoplastic Elastomer Rubber Expo and 182nd Technical Meeting & Educational Symposium, 2012, October 9 – 12, Cincinnati, OH, USA. (Best poster)

Gergely, A.L.*; Puskas, J.E.; Kaszas, G. Controlled Carbocationic Copolymerization of Isobutylene with Alloocimene, MACRO2012, World Polymer Congress, **2012**, June 24 – 29 Blacksburg, VA, USA.

2006

Gergely, A.L.*; Papp, I. Determination the movement equation of the Pétervar-i screw using the method of constraint equations, FMTU, 2006, Kolozsvár, Romania.

Dátum,

18.10.2017

Aláírás,