Lista lucrărilor ştiinţifice în domeniul disciplinelor din postul didactic

Numele și prenumele: Kántor József

A. Teza de doctorat

Synthesis and Electrospinning of Polyisobutylene-based Thermoplastic Elastomers, Dr. Judit E. Puskas (The University of Akron, USA).

C. Lucrări științifice publicate

C1. Lucrări publicate în reviste indexate ISI

1. Kantor, J.; Farmos, R.L.; Gergely, A.L. Optimization of Oil Sorbent Thermoplastic Elastomer Microfiber Production by Centrifugal Spinning. *Polymers* **2023**, *15*, 3368.
2. Kantor, J.; Gergely, A.L.; Farmos, R.L.; Hodgyai, N. Poly(Styrene-b-Isobutylene-b-Styrene) Triblock Copolymer Fiber Generation with Centrifugal Spinning, and Its Potential Application in Oil Collection. In Proceedings of the 2022 IEEE 22nd International Symposium on Computational Intelligence and Informatics and 8th IEEE International Conference on Recent Achievements in Mechatronics, Automation, Computer Science and Robotics (CINTI-MACRo), Budapest, Hungary, 21–22 November 2022; pp. 000077–000082.
3. Gergely, A.L.; Farmos, R.L.; Kantor, J.; Kantor, E. A.; Hodgyai, N. Recycled PET nanofiber membranes for air filtration. In Proceedings of the 2022 IEEE 22nd International Symposium on Computational Intelligence and Informatics and 8th IEEE International Conference on Recent Achievements in Mechatronics, Automation, Computer Science and Robotics (CINTI-MACRo), Budapest, Hungary, 21–22 November 2022; pp. 000057-000062
4. Bitay, E.; Gergely, A.L.; Kantor, J.; Szabo, Z.-I. Evaluation of Lapatinib-Loaded Microfibers Prepared by Centrifugal Spinning. *Polymers* **2022**, *14*, 5557.
5. Bitay, E.; Szabo, Z. I.; Kantor, J.; Molnar, K.; Gergely, A-L Scale-up and optimization of fenofibrate-loaded fibers electrospun by corona-electrospinning. *eXPRESS Polymer Letters*, **2021**, *15(4)*, 375-387.
6. Kantor, J.; Puskas, J. E.; Kaszas, G. The Effect of Reaction Conditions on the Synthesis of Poly(alloocimene-*b*-isobutylene-*b*-alloocimene) Block Copolymers. *Chinese Journal of Polymer Science* **2019**, *37(9)*, 884-890.

7. Kantor, J.; Collister, E. A.; Puskas, J. E., Mallamaci, M. P.; Comes, V. C. Mechanical Performance of Novel Polyisobutylene-based Elastomeric Polyurethanes Before and After Hydrolysis. *Rubber Chemistry and Technology* **2019**, *92(3)*, 481-495.
8. Alvarez Albarran, A.; Rosenthal-Kim, E.Q.; Kantor, J.; Liu, L. Nikolov, Z.; Puskas, J.E. Stimuli-responsive Antifouling Polyisobutylene-based Biomaterials via Modular Surface Functionalization. *J. Polym. Sci: Polym. Chem.* **2017, *55*, 1742–1749. DOI: 10.1002/pola.28540.**
9. Puskas, J.E.; Kantor, J.; Shrikhande, G. Reaction Engineering with Enzymes: A Relatively Uncharted Territory. *AICHE J.* 2016, *63* (1), 266–272. DOI: 10.1002/aic.15544.

C2. **Lucrări publicate în reviste indexate BDI**

1. Gergely, A.; Kantor, J. Process Optimization of PVDF Piezoelectric Nanofiber Production via Electrospinning. *Acta Universitatis Sapientiae Electrical and Mechanical Engineering* **2021**, *13*, 1-3.
2. Gergely, A.; Kantor, J.; Bitay, E.; Biro, D. Electrospinning of Polymer Fibers Using Recycled PET. *Acta Materialia Transylvanica* **2019**, *2(1)*, 19-26.

C6. Lucrări ştiinţifice publicate în reviste conferințelor internaționale

1. Puskas, J.E.; Kantor, J.; Shrikhande, G. Reaction Engineering in Enzyme-catalyzed Reactions, International Symposia on Chemical Reaction Engineering (ISCRE 24), June 12–15, Minneapolis, MN (**2016**).

G. Contracte de cercetare

2019 Membru al echipei de cercetare: Producția fibre polimerice conținând fenofibrate. DOMUS, 1,000,000 HUF.

2022 Membru al echipei de cercetare: Producția structurilor fibrilare polimerice cu metodă centrifugală. KPI, 10,000 EUR.

J. Citări

1. Kantor, J.; Gergely, A.L.; Farmos, R.L.; Hodgyai, N. Poly(Styrene-b-Isobutylene-b-Styrene) Triblock Copolymer Fiber Generation with Centrifugal Spinning, and Its Potential Application in Oil Collection. In Proceedings of the 2022 IEEE 22nd International Symposium on Computational Intelligence and Informatics and 8th IEEE International

Conference on Recent Achievements in Mechatronics, Automation, Computer Science and Robotics (CINTI-MACRo), Budapest, Hungary, 21–22 November 2022; pp. 000077–000082.

- Kantor, J.; Farmos, R.L.; Gergely, A.L. Optimization of Oil Sorbent Thermoplastic Elastomer Microfiber Production by Centrifugal Spinning. Polymers 2023, 15, 3368.
- Bitay, E.; Gergely, A.L.; Szabó, Z.-I. Optimization and Production of Aceclofenac-Loaded Microfiber Solid Dispersion by Centrifugal Spinning. Pharmaceutics 2023, 15, 2256.

2. Bitay, E.; Gergely, A.L.; Kantor, J.; Szabo, Z.-I. Evaluation of Lapatinib-Loaded Microfibers Prepared by Centrifugal Spinning. Polymers 2022, 14, 5557.
   - Bitay, E.; Gergely, A.L.; Szabó, Z.-I. Optimization and Production of Aceclofenac-Loaded Microfiber Solid Dispersion by Centrifugal Spinning. *Pharmaceutics* **2023**, *15*, 2256.
   - Rahdar M, Madadelahi M, Namazi M. Microfiber Generation on Centrifugal Microfluidic Platforms Using Fluidic Barriers. *Chemical Engineering and Processing-Process Intensification*. **2023** Sep 16:109553.

3. Bitay, E.; Szabo, Z. I.; Kantor, J.; Molnar, K.; Gergely, A-L Scale-up and optimization of fenofibrate-loaded fibers electrospun by corona-electrospinning. *eXPRESS Polymer Letters* **2021**, *15(4)*, 375-387.
   - Victor FS, Kugarajah V. Fabrication and characterization of electrospun iron oxide magnetic nanoparticles for their application in barrier textiles. Journal of Magnetism and Magnetic Materials. 2022 Nov 15;562:169768.
   - Bitay, E.; Gergely, A.L.; Kantor, J.; Szabo, Z.-I. Evaluation of Lapatinib-Loaded Microfibers Prepared by Centrifugal Spinning. *Polymers* **2022**, *14*, 5557.
   - Bitay, E; Gergely, A. L.; Balint, I.; Molnar, K.; Fulop, I.; Fogarasi, E.; Szabo, Z. I. Preparation and characterization of lapatinib-loaded PVP nanofiber amorphous solid dispersion by electrospinning. eXPRESS Polymer Letters 2021, 15(11), 1041-1050.

4. Gergely, A.; Kantor, J.; Bitay, E.; Biro, D. Electrospinning of Polymer Fibers Using Recycled PET. *Acta Materialia Transylvanica* **2019**, *2(1)*, 19-26. **(BDI)**
   - Bitay, E.; Gergely, A.L.; Szabó, Z.-I. Optimization and Production of Aceclofenac-Loaded Microfiber Solid Dispersion by Centrifugal Spinning. *Pharmaceutics* **2023**, *15*, 2256.

- Özen HA, Mutuk T, Yiğiter M. Smoke filtration performances of membranes produced from commercial PVA and recycled PET by electrospinning method and ANN modeling. Environmental Science and Pollution Research. 2023 Jan;30(2):2469-79.
- Gergely, A.L.; Farmos, R.L.; Kantor, J.; Kantor, E. A.; Hodgyai, N. Recycled PET nanofiber membranes for air filtration. In Proceedings of the 2022 IEEE 22nd International Symposium on Computational Intelligence and Informatics and 8th IEEE International Conference on Recent Achievements in Mechatronics, Automation, Computer Science and Robotics (CINTI-MACRo), Budapest, Hungary, 21–22 November 2022; pp. 000057-000062
- Li, X.; Peng, Y.; Deng, Y.; Ye, F.; Zhang, C.; Hu, X.; Liu, Y.; Zhang, D. Recycling and Reutilizing Polymer Waste via Electrospun Micro/Nanofibers: A Review. Nanomaterials 2022, 12(10), 1663.
- Suhaimi, N. A. S.; Muhamad, F.; Abd Razak, N. A.; Zeimaran, E. Recycling of polyethylene terephthalate wastes: A review of technologies, routes, and applications. Polymer Engineering and Science 2022, 62(8), 2355-2375.
- Sultan, O.; Abdullah, A.; Greesh, N.; Elfard, K.; Sweed, M. Production of Nanofibers from Waste Poly(Ethylene Terephthalate) Using Electrospinning Method. Journal of Nanoscience and Nanotechnology Application 2021, 6, 101.
- Bitay, E; Gergely, A. L.; Balint, I.; Molnar, K.; Fulop, I.; Fogarasi, E.; Szabo, Z. I. Preparation and characterization of lapatinib-loaded PVP nanofiber amorphous solid dispersion by electrospinning. eXPRESS Polymer Letters 2021, 15(11), 1041-1050.
- Bitay, E.; Szabo, Z. I.; Kantor, J.; Molnar, K.; Gergely, A-L Scale-up and optimization of fenofibrate-loaded fibers electrospun by corona-electrospinning. *eXPRESS Polymer Letters*, 2021, *15(4)*, 375-387.
- Hodgyai, N.; Farmos, R. L.; Gergely, A. The Design and Implementation of a Disk Electrospinning Device. Műszaki Tudományos Közlemények 2020, 13, 72-76.
- Gergely, A. The Production of Polyethylene Terephthalate Nanofibers by Electrospinning with Minimum Amount of Trifluoroacetic Acid. Biomedical Journal of Scientific and Technical Research, 2020, 29(3), 22399-22401.

5. Kantor, J.; Puskas, J. E.; Kaszas, G. The Effect of Reaction Conditions on the Synthesis of Poly(alloocimene-*b*-isobutylene-*b*-alloocimene) Block Copolymers. *Chinese Journal of Polymer Science* 2019, *37(9)*, 884-890.

- Baraczkai, D.; Domokos, J.; Szabo, D.; Molnar, K.; Juriga, D.; Krisch, E.; Nagy, K. S.; Kohidai, L.; Helfer, C. A.; Jedlovszky-Hajdu, A.; Puskas, J. E. Polyisobutylene – New opportunities for medical applications. *Molecules* 2021, *26*, 5207.
- Sahu, P.; Bhowmick, A. K.; Kali, G. Terpene Based Elastomers: Synthesis, Properties, and Applications. *Processes* 2020, *8*, 553.

6. Kantor, J.; Collister, E. A.; Puskas, J. E., Mallamaci, M. P.; Comes, V. C. Mechanical Performance of Novel Polyisobutylene-based Elastomeric Polyurethanes Before and After Hydrolysis. *Rubber Chemistry and Technology* 2019, *92(3)*, 481-495.
   - Molnar, K.; Helfer, C. A.; Kaszas, G.; Krisch, E.; Chen, D.; McKenna, G. B.; Kornfield, J. A.; Puskas, J. E. Liquid chromatography at critical conditions (LCCC): Capabilities and limitations for polymer analysis. *Journal of Molecular Liquids* **2021**, *322*, 114956.
   - Puskas, J. E.; Kaszas, G.; Molnar, K.; Helfer, C. A. *Polyisobutylene for the rescue: advanced elastomers for healthcare*. In Macromolecular Engineering Design, Synthesis and Application of Polymers, Lubnin, A.; Erdodi, G. (Eds.), Elsevier, 2021.

7. Alvarez Albarran, A.; Rosenthal-Kim, E.Q.; Kantor, J.; Liu, L. Nikolov, Z.; Puskas, J.E. Stimuli-responsive Antifouling Polyisobutylene-based Biomaterials via Modular Surface Functionalization. *J. Polym. Sci: Polym. Chem*. **2017,** *55*, 1742–1749.
   - Puskas, J. E.; Krisch, E.; Pillai, A. S.; Mulay, P. Enzyme-catalyzed amine-functionalization of poly(ethylene-glycol). Express Polymer Letters 2022, 16(9), 933-938.
   - Baraczkai, D.; Domokos, J.; Szabo, D.; Molnar, K.; Juriga, D.; Krisch, E.; Nagy, K. S.; Kohidai, L.; Helfer, C. A.; Jedlovszky-Hajdu, A.; Puskas, J. E. Polyisobutylene – New opportunities for medical applications. *Molecules* 2021, *26*, 5207.
   - Puskas, J. E.; Kaszas, G.; Molnar, K.; Helfer, C. A. *Polyisobutylene for the rescue: advanced elastomers for healthcare*. In Macromolecular Engineering Design, Synthesis and Application of Polymers, Lubnin, A.; Erdodi, G. (Eds.), Elsevier, 2021.
   - Li, J.; Xiaojuan, F.; Banglun, P.; Hanchao, L.; Wei, L. Polyisobutylene and its thermoplastic elastomers: how to transform from industry to medical treatment. *Chinese Journal of Tissue Engineering Research* 2020, *24(22)*, 3559-3565.
   - Jindal, A.; Molnar, K.; McClain, A.; Paiva dos Santos, B.; Camassola, M.; Puskas, J. E. Electrospun fiber mats from poly(alloocimene-b-isobutylene-b-alloocimene) thermoplastic

elastomer. *International Journal of Polymeric Materials and Polymeric Biomaterials* 2019, *69*, 263-267.

- Puskas, J. E. Rubber City Girl: The Path to the Goodyear Medal. *Rubber Chemistry and Technology* 2018, *91(1)*, 1-26.
- Jindal, A.; Puskas, J. E.; McClain, A.; Nedic, K.; Luebbers, M. T.; Baker, J. R.; Paiva dos Santos, B.; Camassola, M.; Jennings, W.; Einsporn, R. L.; Leipzig, N. D. Encapsulation and Release of Zafirlukast from electrospun polyisobutylene-based thermoplastic elastomeric fiber mat. *European Polymer Journal* 2018, *98*, 254-261.

8. Puskas, J.E.; Kantor, J.; Shrikhande, G. Reaction Engineering with Enzymes: A Relatively Uncharted Territory. *AICHE J*. 2016, *63 (1)*, 266–272. DOI: 10.1002/aic.15544.
   - Parundekar, A.; Viswanathan, G. A. Rerroactivity induced operating regime transition in an enzymatic futile cycle. *PLOS ONE* 2021, *16(4)*, e0250830
   - Zhou, X. J.; Zhu, C. T.; Zhang, L. Y.; You, S.; Wu, F. A.; Wang, J. Enrichment and purification of red pigments from defective mulberry fruits using biotransformation in a liquid-liquid-solid three-phase system. *Environmental Science and Pollution Research* 2020. https://doi.org/10.1007/s11356-020-08731-2
   - Nematian, T.; Salehi, Z.; Shakeri, A. Conversion of bio-oil extracted from *Chlorella vulgaris* micro algae to biodiesel via modified superparamagnetic nano-biocatalyst. *Renewable Energy* 2020, *146*, 1796-1804.
   - Hu, Y.; Sun, Y. Autonomous motion of immobilized enzyme on Janus particles significantly facilitates enzymatic reactions. *Biochemical Engineering Journal* 2019, *149*, 17242.