

Szczepan Bednarz



Academic degrees : PhD, DSc

Position : associate professor

Engineering - technical field

Discipline Chemical engineering

Academic qualifications:

MSc in polymer technology, PhD in organic chemistry. He has got over 15 years of experience in scientific and research work, covering in organic, polymer and food chemistry. Proficient in the use of various analytical techniques and purification methods. Stress-free dealing with the basic issues of chemical modeling and computer simulation of chemical processes.

Membership in professional and academic boards :

Academic merits :

The most important papers: 1. Mielczarek, K., Łabanowska, M., Kurdziel, M., Konefał, R., Beneš, H., Bujok, S., Kowalski, G., Bednarz, S. High-Molecular-Weight Polyampholytes Synthesized via Daylight-Induced, Initiator-Free Radical Polymerization of Renewable Itaconic Acid (2020) *Macromolecular Rapid Communications*, 41, 1900611. DOI:10.1002/marc.201900611. IF: 4.0782. Bednarz, S., Kowalski, G., Konefał, R. Unexpected irregular structures of poly(itaconic acid) prepared in Deep Eutectic Solvents (2019) *European Polymer Journal*, 115, pp. 30-36. DOI:10.1016/j.eurpolymj.2019.03.021. IF: 3.7413. Haraźna, K., Walas, K., Urbańska, P., Witko, T., Snoch, W., Siemek, A., Jachimska, B., Krzan, M., Napruszczewska, B.D., Witko, M., Bednarz, S., Guzik, M. Polyhydroxyalkanoate-derived hydrogen-bond donors for the synthesis of new deep eutectic solvents (2019) *Green Chemistry*, 21 (11), pp. 3116-3126. DOI:10.1039/c9gc00387h. IF: 9.4054. Bednarz, S., Wesołowska-Piętak, A., Konefał, R., Świergosz, T. Persulfate initiated free-radical polymerization of itaconic acid: Kinetics, end-groups and side products (2018) *European Polymer Journal*, 106, pp. 63-71. DOI: 10.1016/j.eurpolymj.2018.07.010. IF: 3.7415. Kasprzyk, W., Świergosz, T., Bednarz, S., Walas, K., Bashmakova, N.V., Bogdał, D. Luminescence phenomena of carbon dots derived from citric acid and urea-a molecular insight (2018) *Nanoscale*, 10, pp.13889-13894. DOI: 10.1039/c8nr03602k. IF: 6.9706. Bednarz, S., Półciwiatek, K., Wityk, J., Strachota, B., Kredatusová, J., Beneš, H., Wesołowska-Piętak, A., Kowalski, G. Polymerization-crosslinking of renewable itaconic acid in water and in deep eutectic solvents (2017) *European Polymer Journal*, 95, pp. 241-254. DOI: 10.1016/j.eurpolymj.2017.08.020. IF: 3.7417. Bogdał, D., Bednarz, S., Matras-Postolek, K. Microwave-assisted synthesis of hybrid polymer materials and composites (2016) *Advances in Polymer Science*, 274, pp. 241-294. DOI: 10.1007/12_2014_296. IF: 3.1418. Bednarz, S., Błaszczuk, A., Błazejewska, D., Bogdał, D. Free-radical polymerization of itaconic acid in the presence of choline salts: Mechanism of persulfate decomposition (2015) *Catalysis Today*, 257, pp. 297-304. DOI: 10.1016/j.cattod.2014.07.021. IF: 4.3129. Bednarz, S., Fluder, M., Galica, M., Bogdał, D., Maciejaszek, I. Synthesis of hydrogels by polymerization of itaconic acid-choline chloride deep eutectic solvent (2014) *Journal of Applied Polymer Science*, 131 (16), art.no. 40608, .DOI: 10.1002/app.40608. IF: 1.76810. Kasprzyk, W., Bednarz, S., Bogdał, D. Luminescence phenomena of biodegradable photoluminescent poly(diols citrates) (2013) *Chemical Communications*, 49 (57), pp. 6445-6447. DOI: 10.1039/c3cc42661k. IF:6.718

Professional qualifications/language skills

Polish, English

Research field :

Polymer chemistry, radical polymerization, renewable monomers, Deep Eutectic Solvents, modeling of polymerization kinetics. Analytical techniques and research tools: 1D/2D NMR, FTIR, Raman, ESI-MS, MALDI, numerical methods, computer simulations.

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Useful links :

https://www.researchgate.net/profile/Szczepan_Bednarz
<https://github.com/sbednarz/modeling>
<https://github.com/sbednarz/mcPolymerStuff>