Marcin Banach

Academic degrees: BEng, PhD, DSc

Position: university professor

Engineering - technical field

Discipline Chemical engineering

Academic qualifications:

Academic teacher

Membership in professional and academic boards:

Academic merits:

Scientific publications in journals included in the Journal Citation Reports (JRC) database: 112. Total impact factor according to the JCR list according to the year of publication: 203,552. Hirsch index: 15. Monographs, scientific publications in international or national journals other than those included in the JRC database: 69. Realized original design, construction and technological achievements: 12. Custom-made studies (for industry): 39. Granted international patents and domestic, patent applications: Patents for the Cracow University of Technology: 39; Patents for another entity: 9; Patent applications for the Cracow University of Technology: Polish Patent Office - 12, PCT - 2; Patent applications for another entity: Polish Patent Office - 8, PCT - 6.

Professional qualifications/language skills

English

Research field:

Technologies for the production and application of nanomaterials and nanocomposites, green syntheses of nanomaterials production, reaction systems used in the processes of nanomaterials and nanocomposites production. Processes of obtaining stable suspensions and powders of metallic and oxide nanoparticles, composites, oxide systems and hybrid materials with controlled physicochemical and functional properties. Fertilizer micro and nanoglass, bionanglass. Bionanotechnological catalytic systems, nanozymes. Practical applications of nanomaterials, micro and nanomaterials with antimicrobial, photocatalytic properties, nanosorbents, mineral and natural sorbents. High purity nanomaterials. Property assessment incl. antimicrobial, catalytic nanoparticles, ecotoxicological evaluation of nanoparticles against organisms representing different trophic levels of the food chain. Management of by-products from technological processes, transformation of by-products.

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Useful links:

https://www.chemia.pk.edu.pl/pracownicy/strony-osobiste-pracownikow/pracownik/?id=128