



First name and surname of supervisor:
Katarzyna Matras-Postolek

Academic degrees : Ph.D. D.Sc Eng.

Position : Associate Professor

Engineering - technical field

Discipline Chemical engineering

Academic qualifications:

Academic professor, supervisor of the Functional Nanomaterials Group, principal investigator of research projects, and supervisor of engineering's, master's, and doctoral theses. A member of numerous scientific bodies, including the FNP Fellowship Club, the international AMPERE organization, and the Polish Chemical Society. Since 2021, Vice-Dean of the Faculty of Chemical Engineering and Technology at CUT for Evaluation and International Cooperation, as well as a member of the CUT Council for Excellence in Scientific Research.

Membership in professional and academic boards :

Member of the scientific committee of the international organization AMPERE, member of the Fellowship Club of the Foundation for Polish Science (FNP), member of the TOP 500 Innovators organization, member of the Polish Chemical Society.

Academic merits :

Author of 73 publications indexed in the Philadelphia List, with a Hirsch index of 23. Principal investigator of research projects funded by the National Science Centre (NCN), including Opus Lap, Sonata Bis, Polonez Bis, as well as the Lider project (NCBiR). Co-author of patent applications, including three international patents.

Selected Publications:

- K. Matras-Postolek et al., Formation and characterization of one-dimensional ZnS nanowires for ZnS/P3HT hybrid polymer solar cells with improved efficiency, Applied Surface Science, 451, 2018, 180-190.
- M. Oćwieja, K. Matras-Postolek et al., Formation and stability of manganese-doped ZnS quantum dot monolayers determined by QCM-D and streaming potential measurements, Journal of Colloid and Interface Science, 503, 2017, 186-197.
- M. Li, X. Zhang, K. Matras-Postolek, H. S. Chen, P. Yang, An anion-driven Sn^{2+} exchange reaction in CsPbBr_3 nanocrystals towards tunable and high photoluminescence, Journal of Materials Chemistry C, 2018, 6, 5506-5513.
- Y. Wei, X. Zhang, Z. Zhao, H.-S. Chen, K. Matras-Postolek, B. Wang, P. Yang, Controllable synthesis of P-doped MoS_2 nanopetals decorated N-doped hollow carbon spheres towards enhanced hydrogen evolution, Electrochimica Acta, 297, 2019, 553-563.
- C. Jia, X. Zhang, K. Matras-Postolek, B. Huang, P. Yang, Z-scheme reduced graphene oxide/ TiO_2 -Bronze/ $\text{W}_{18}\text{O}_{49}$ ternary heterostructure towards efficient full solar-spectrum photocatalysis, Carbon, 2018, 139, 415-426.

Major Awards and Distinctions: DAAD Scholarship for Polish doctoral students in Germany (2017). Laureate of the TOP 500 Innovators Program, Ministry of Science and Higher Education (2015). Honorary Visiting Professor at the University of Jinan (since 2014). Scholarship of the Minister of Science and Higher Education for Outstanding Young Scientists (2016).

Professional qualifications/language skills

concerns writing a thesis in a foreign language- English

Research field :

Materials chemistry, nanotechnology, materials science, functional nanomaterials for applications in optoelectronics, biology, and photocatalysis, nanomaterial printing, and sustainable development.

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