Dr. Corneliu Cojocaru

(UEFISCDI ID (UEF-iD): U-1700-039T-8358)
E-mail: cojocaru.corneliu@icmpp.ro

Researcher ID: L-4881-2014

ORCID: 0000-0002-3651-6178

Corneliu Cojocaru is an experienced researcher dealing with design of experiments, modelling and optimization of physical-chemical processes, and computational chemistry. **Expertise fields**: experimental design using response surface methodology (RSM), multiple regression modelling, artificial neuronal networks (ANNs), genetic algorithms (GAs); computer-aided modelling and optimization of physical-chemical processes; molecular modelling and computational chemistry; design of polymeric/composite materials (sorbents and membranes) for environmental applications; polymer assisted ultrafiltration. **Research directions**: (1) Modelling and optimization of processes in adsorption, membrane separation and advanced oxidation ((photo)catalytic processes); (2) Modelling of medium-sized molecules using quantum chemistry computational tools (*i.e., DFT and Semi-Empirical methods*); (3) Modelling of large atomistic systems using molecular mechanics, autodocking and molecular dynamics (MD) methods.

Scientific record: Articles published in international peer-reviewed journals (ISI ranked): **90** (out of which 32 articles as main author) summing up a total number of 1829 citations (according SCOPUS). Hirsch index**, H= 24** in SCOPUS, **H=24** in ISI Web of Science databases, **H=27** in Google Scholar). Patents (national): **2 patents** and **1 patent** application at OSIM Bucharest. Research and development projects based on national grants: **1 project as director** of the project, and 6 **projects as member**. Also, he was involved as a team-member in European research projects such as: (1) Advanced Method for Environmental Research and Control, **FP6** / MTKD-CT-2004-509226, Transfer of Knowledge (ToK) at Institute of Nuclear Chemistry and Technology from Warsaw (Poland); (2) Strengthening the Romanian research capacity in Multifunctional Polymeric Materials **FP7**-REGPOT-2010-1 (Grant Agreement no: 264115) at ICMPP Iasi, RO; (3) SupraChem Lab (ERA Chair, **Horizon 2020**) nr. 667387; "Laboratory of Supramolecular Chemistry for Adaptive Delivery Systems" at IntelCentru/ICMPP, Iasi, Romania.

SELECTED SCIENTIFIC ARTICLES
.

1	**C. Cojocaru**, L. Clima, Polymer assisted ultrafiltration of AO7 anionic dye from aqueous solutions: Experimental design, multivariate optimization, and molecular docking insights J. Membr. Sci. 604 (**2020**), Article 118054 /1-11.
2	**C. Cojocaru**, P. Samoila, P. Pascariu, Chitosan-based magnetic adsorbent for removal of water-soluble anionic dye: Artificial neural network modeling and molecular docking insights, Int. J. Biol. Macromol. 123 (**2019**) 587-599.
3	**C. Cojocaru**, L. Clima, Binding assessment of methylene blue to human serum albumin and poly(acrylic acid): Experimental and computer-aided modeling studies, J. Mol. Liquids 285 (**2019**) 811-821.
4	**C. Cojocaru**, A.C. Humelnicu, P. Samoila, P. Pascariu, V. Harabagiu, Optimized formulation of NiFe2O4@Ca-alginate composite as a selective and magnetic adsorbent for cationic dyes: Experimental and modeling study, React. Funct. Polym. 125 (**2018**) 57–69
5	**C. Cojocaru**, L. Pricop, P. Samoila, R. Rotaru, V. Harabagiu, *Surface hydrophobization of polyester fibers with poly(methylhydrodimethyl)siloxane copolymers: Experimental design for testing of modified nonwoven materials as oil spill sorbents*, Polymer Testing 59 (**2017**) 377-389.