

Publications in the last 10 years:

1. *One-pot synthesis and biological assessment of fluorescent magnetite clusters coated with polydopamine and -analogues* - **Anca Petran**, Maria Suciuc, Ioana Baldea, Sanda Boca, Ovidiu Pana, Cristian Leostean, Monica Dan, Alexander Bunge *Applied Surface Sci.* **2025**, 711, 164028 <https://doi.org/10.1016/j.apsusc.2025.164028>
2. *Poly-3,4-dihydroxybenzylidenedrazine, a different analogue of polydopamine* - Natalia Terenti, Alexandra Fălămaș, Diana Bogdan, Claudiu Filip, Adriana Vulcu, **Anca Petran** *Nanotechnology Reviews* **2024**; 13: 20240026, <https://doi.org/10.1515/ntrev-2024-0026>
3. *Polymer coating by oxidative polymerization of a new dopamine analogue with two amino groups* - **Anca Petran**, Claudia Lar, Diana Bogdan, Anja Caspari, Niculina D. Hadade, Adriana Vulcu, Adriana Popa, Frank Simon, Zimmerer Cordelia, Jürgen Liebscher *Polymer* **2024**, 312, 127630 <https://doi.org/10.1016/j.polymer.2024.127630>
4. *Poly-2-aminomethyl-3-(3,4-dihydroxyphenyl)propionamide: From Structure to Proprieties* - **Anca Petran**, Andreea Petronela Crișan, Claudia Lar, Adriana Popa, Teodora Radu, Alexandra Cioriță, Diana Bogdan, Mihaela Sillion, Claudiu Filip *ACS Applied Polymer Materials* **2023**, 5, 3370–3380 <https://pubs.acs.org/action/showCitFormats?doi=10.1021/acsapm.3c00027&ref=pdf>
5. *Oxidative Polymerization of 3,4-Dihydroxybenzylamine?The Lower Homolog of Dopamine* - **Anca Petran**, Claudiu Filip, Diana Bogdan, Cordelia Zimmerer, Sebastian Beck, Teodora Radu, Jürgen Liebscher, *Langmuir* **2023**, 39, 15, 5610–5620, <https://doi.org/10.1021/acs.langmuir.3c00604>
6. *Magnetic Nanoclusters Stabilized with Poly[3,4-Dihydroxybenzhydrazide] as Efficient Therapeutic Agents for Cancer Cells Destruction* - Ioana Baldea, **Anca Petran**, Adrian Florea, Alexandra Sevastre-Berghian, Iuliana Nenu, Gabriela Adriana Filip, Mihai Cenariu, Maria Teodora Radu, Cristian Iacovita., *Nanomaterials* **2023**, 13(5), 933 <https://doi.org/10.3390/nano13050933>
7. *ZnxFe3-xO4–ZnO heterojunction interfaced with poly(L-DOPA) electron transfer mediator layer for enhanced visible light photocatalytic activity* - Ovidiu Pana, **Anca Petran**, Adriana Popa, Maria Stefan, Teofil Danut Silipas, Cristian Leostean, Bogdan Stefan Vasile, Florina Pogacean, Dana Toloman *J. of Alloys and Compounds* **2024**, 986, 174168 <https://doi.org/10.1016/j.jallcom.2024.174168>
8. *Industrial Wastes as Filler in Bituminous Materials for Construction Industry: Toward Circular Economy* - Teodora Radu, Cristina Dima, Ramona Pinto, Alexander Bunge, Alexandrina Nan, **Anca Petran**, Marinela Ghita *ACS Sustainable Chemistry & Engineering* **2024**, 12, 1, 433-441, [10.1021/acssuschemeng.3c05484](https://doi.org/10.1021/acssuschemeng.3c05484)
9. *In situ detection and viability assessment of target microorganisms* - Sorin David, Raluca-Elena Cartoc, Ionela-Cristina Petcu, Cristina Polonschii, **Anca Petran**, Rodica Turcu, Dumitru Bratu, Mihaela Gheorghiu, Eugen Gheorghiu *Biosensors and Bioelectronics* **2024** 245 (2024) 115821 <https://doi.org/10.1016/j.bios.2023.115821>
10. *Exploiting Enzyme in the Polymer Synthesis for a Remarkable Increase in Thermal Conductivity* - **Anca Petran**, Teodora Radu, Monica Dan and Alexandrina Nan *Int. J. Mol. Sci.* **2023**, 24, 7606, <https://doi.org/10.3390/ijms24087606>
11. *Novel Synthetic Dopamine Analogues: Carbon-13/Nitrogen-15 Isotopic Labeling and Fluorescence Properties* - Claudia Lar, Stelian Radu, Emese Gál, Alexandra Fălămaș, József-Zsolt Szücs-Balázs, Claudiu Filip, **Anca Petran** *Analytical Lett.* **2022** <https://doi.org/10.1080/00032719.2022.2040525>
12. *Dopamine Photochemical Behaviour under UV Irradiation* - Alexandra Falama, **Anca Petran**, Alexandru-Milentie Hada, Attila Bende *Int. J. Mol. Sci.* **2022**, 23, 5483 <https://doi.org/10.3390/ijms23105483>

13. *Hybrid PVDF-P(L-DOPA)-ZnO membranes for dyes and antibiotics removal through simultaneous action of adsorption and photocatalysis processes* - Adriana Popa, Dana Toloman, Maria Stefan, **Anca Petran**, Sergiu Macavei, Sorin Ulinici, Manuela Stan, Lucian Barbu-Tudoran, Mihaela Vlassa, Ovidiu Pana *J. of Env. Chem. Eng.* **2021**, 9, 106812  
<https://doi.org/10.1016/j.jece.2021.106812>
14. *New insight into catechol photochemistry: the role of different monomer and dimer configurations in radiation-less decay of the S1 electronic excited state* - Attila Bende, Alex-Adrian Farcas, Alexandra Falamas, Anca Petran *Phys. Chem. Chem. Phys.*, **2022**, 24, 29165, DOI: 10.1039/d2cp03702e
15. *New Insights into Catechol Oxidation – Application of Ammonium Peroxydisulfate in the Presence of Arylhydrazines* - **Anca Petran**, Adriana Popa, Niculina D. Hădăde, Jürgen Liebscher *ChemistrySelect* **2020**, 5, 9523–9530 <https://doi.org/10.1002/slct.202002370>
16. *Evaluation of physico-chemical properties and biocompatibility of new surface functionalized Fe<sub>3</sub>O<sub>4</sub> clusters of nanoparticles* - T. Radu, **A. Petran**, D. Olteanu, I. Baldea, M. Potara, R. Turcu *Applied Surf. Sci.* **2020**, 501, 144267 <https://doi.org/10.1016/j.apsusc.2019.144267>
17. *Poly(benzofuran-co-arylacetic acid) – a new type of highly functionalized polymers* - A. Nan, A. Bunge, M. Cîrcu, **A. Petran**, N. D. Hădăde, X. Filip *Polym. Chem.*, **2017**, 8, 3504 DOI: 10.1039/c7py00523g
18. *Effects of rare earth doping on multi-core iron oxide nanoparticles properties* - **Anca Petran**, Teodora Radu, Gheorghe Borodi, Alexandrina Nan, Maria Suci, Rodica Turcu *Applied. Surf. Sci.* **2018** 428, 492-499 dx.doi.org/10.1016/j.apsusc.2017.09.160
19. *Synthesis, characterization, and cytotoxicity evaluation of high-magnetization multifunctional nanoclusters* - **Anca Petran**, Teodora Radu, Alexandrina Nan, Diana Olteanu, Adriana Filip, Simona Clichici, Ioana Baldea, Maria Suci, Rodica Turcu *J. Nanopart. Res.* **2017** 19:10 DOI 10.1007/s11051-016-3685-6
20. *Synthesis and characterization of size-controlled magnetic clusters functionalized with polymer layer for wastewater depollution* - I. Craciunescu, **A. Petran**, J. Liebscher, L. Vekas, R. Turcu *Mat. Chem. Phys.* **2017** 185, 91-97, <http://dx.doi.org/10.1016/j.matchemphys.2016.10.009>
21. *Tailoring the properties of magnetite nanoparticles clusters bycoating with double inorganic layers* - **A. Petran**, T. Radu, B. Culic, R. Turcu – *Appl. Surf. Sci.* **2016**, 390, 1-6, dx.doi.org/10.1016/j.apsusc.2016.08.037
22. *Melanin-like polydopa amides – synthesis and application in functionalization of magnetic nanoparticles* - **Anca Petran**, Radosław Mrówczyński, Claudiu Filip, Rodica Turcu Jürgen Liebscher *Polym. Chem.*, **2015**, 6, 2139, DOI: 10.1039/c4py01467g
23. *Micro- and nano-tubules built from loosely and tightly rolled up thin sheets* - L. Losensky, B. Goldenbogen, G. Holland, M. Laue, **A. Petran**, J. Liebscher, H. A. Scheidt, A. Vogel, D. Huster, E. Klipp, A. Arbusova - *Phys. Chem. Chem. Phys.* **2016**, 18, 1292-1301, DOI: 10.1039/c5cp06084b
24. *Self-assembly of a cholesteryl-modified nucleoside into tubular structures from giant unilamellar Vesicles* - L. Losensky, S. Chiantia, G. Holland, M. Laue, **A. Petran**, J. Liebscher, A. Arbusova - *RSC Advanced* **2015**, 5, 4502-4510, DOI: 10.1039/c4ra11289j
25. *Magnetic microgels, a promising candidate for enhanced magnetic adsorbent particles in bioseparation: synthesis, physicochemical characterization, and separation performance* - R. Turcu, V. Socoliuc, I. Craciunescu, **A. Petran**, A. Paulus, M. Franzreb, E. Vasile, L. Vekas - *Soft Mater* **2015**, 11,1008-1018, DOI: 10.1039/c4sm02430c