

## Publication list Alexander Bunge

1. "Reaction of Epoxyketones with Hydrogen Peroxide – Ethane -1,1-dihydroperoxide as a Surprisingly Stable Product", H.-J. Hamann, **A. Bunge**, J. Liebscher, *Chem. Eur. J.*, **2008**, *14*, 6849-6851.
2. "A simple, efficient and versatile synthesis of primary *gem*-dihydroperoxides from aldehydes and hydrogen peroxide", **A. Bunge**, H.-J. Hamann, J. Liebscher, *Tetrahedron Lett.*, **2009**, *50*, 524-526.
3. "Enantioselective epoxidation of 2-substituted 1,4-naphthoquinones using *gem*-dihydroperoxides", **A. Bunge**, H.-J. Hamann, E. McCalmont, J. Liebscher, *Tetrahedron Lett.*, **2009**, *50*, 4629-4632.
4. "A New Dual Catalytic System for Asymmetric Morita-Baylis-Hillman Reaction", J. Shah, Z. Yacob, **A. Bunge**, J. Liebscher, *Synlett*, **2010**, 2079-2082.
5. "Synthesis and antimalarial activity of new 1,2,4,5-tetroxanes and novel alkoxy-substituted 1,2,4,5-tetroxanes derived from primary *gem*-dihydroperoxides", H.-J. Hamann, M. Hecht, **A. Bunge**, M. Gogol, J. Liebscher, *Tetrahedron Lett.*, **2011**, *52*, 107-111.
6. "Enantioselective epoxidation of tertiary allylic alcohols by chiral dihydroperoxides", **A. Bunge**, H.-J. Hamann, D. Dietz, J. Liebscher, *Tetrahedron*, **2013**, *69*, 2446-2450.
8. "Diazonium salt-mediated synthesis of new amino, hydroxy, propargyl, and maleinimido-containing superparamagnetic Fe@C nanoparticles as platforms for linking bio-entities or organocatalytic moieties", **A. Bunge**, L. Magerusan, I. Morjan, R. Turcu, G. Borodi, J. Liebscher, *J. Nanopart. Res.*, **2015**, *17(9)*, 379.
9. "Hybride Magnetic Nanostructure Based on Amino Acids Functionalized Polypyrrole", A. Nan, **A. Bunge**, R. Turcu, *Aip Conf. Proc.*, **2015**, 1700.
10. "Poly(benzofuran-co-arylacetic acid) - a new type of highly functionalized polymers", A. Nan, **A. Bunge**, M. Cîrcu, A. Petran, N. D. Hadade, X. Filip, *Polym. Chem.*, **2017**, *8(22)*, 3504-3514.
11. "Non-catalytic, solvent-free synthesis of poly(tartronic-co-glycolic acid) as a versatile coating for different surfaces", M. Cîrcu, **A. Bunge**, C. Vasilescu, S. Porav, A. Nan, *Polym. Int.*, **2018**, *67(2)*, 212-219.
12. "Correlation between synthesis parameters and properties of magnetite clusters prepared by solvothermal polyol method", **A. Bunge**, A. S. Porav, G. Borodi, T. Radu, A. Pîrnău, C. Berghian-

Grosan, R. Turcu, *J. Mater. Sci.*, **2019**, *54(4)*, 2853-2875.

13. "From high colloidal stability ferrofluids to magnetorheological fluids: tuning the flow behavior by magnetite nanoclusters", D. Susan-Resiga, V. Socoliuc, **A. Bunge**, R. Turcu, L. Vekas, *Smart Mater. Struct.* **2019**, *28(11)*, 115014.

14. "Raman spectra tell us so much more: Raman features and saturation magnetization for efficient analysis of manganese zinc ferrite nanoparticles", F. Nekvapil, **A. Bunge**, T. Radu, S. C. Pinzaru, R. Turcu, *J. Raman Spectrosc.*, **2020**, *51(6)*, 959-968.

15. "Single-cell Raman micro-spectroscopy for tracking of carotenoids in cyanobacteria exposed to Mn and Zn doped ferrite nanoparticles", F. Nekvapil, A. Bunge, L. B. Tudoran, S. C. Pinzaru, *Spectrochim Acta A*, **2021**, 254.

16. "Magnetic Nanoclusters Increase the Sensitivity of Lateral Flow Immunoassays for Protein Detection: Application to Pneumolysin as a Biomarker for *Streptococcus pneumoniae*", M. Salvador Fernández, J. L. Marqués Fernández, **A. Bunge**, J. C. Martínez-García, R. Turcu, D. Peddis, M. Del Mar García Suárez, M. D. Cima Cabal, M. Rivas, *Nanomaterials* **2022**, *12(12)*, 254.

17. "Substituted Poly(Vinylphosphonate) Coatings of Magnetite Nanoparticles and Clusters", **A. Bunge**, C. Leoştean, T. Radu, S.C. Tripon, G. Borodi, R. Turcu, *Magnetochemistry* **2022**, *8(8)*, 79.

18. "Characterization of the Lattice Transitions and Impurities in Manganese and Zinc Doped Ferrite Nanoparticles by Raman Spectroscopy and X-ray Diffraction (XRD)", F. Nekvapil, R. A. Bortnic, C. Leoştean, L. Barbu-Tudoran, **A. Bunge**, *Anal. Lett.* **2022**, *56(1)*, 42-52.

19. "Anticoagulant Properties of Coated Fe-Pd Ferromagnetic Shape Memory Ribbons" **A. Bunge**, A. Chiriac, M. Sofronie, I. Crăciunescu, A. S. Porav, R. Turcu, *Int. J. Mol. Sci.* **2023**, *24(3)*, 2452.

20. "Iridium-Based Nanohybrids: Synthesis, Characterization, Optical Limiting, and Nonlinear Optical Properties", N. Chazapis, M. Stavrou, G. Papaparaskeva, A. Bunge, R. Turcu, T. Krasia-Christoforou, S. Couris, *Nanomaterials* **2023**, *13(14)*, 2131.

21. "Green Synthesis of Gold, Silver, Copper, and Magnetite Particles Using Poly(tartaric acid) Simultaneously as Coating and Reductant", **A. Bunge**, T. Radu, G. Borodi, S. Boca, A. Nan, *Polymers* **2023**, *15(23)*, 4472.

22. “Synthesis of a Magnetic Nanostructured Composite Sorbent Only from Waste Materials”, **A. Bunge**, C. Leostean, R. Turcu, *Materials*, **2023**, *16*(24), 7696.
23. “Industrial Wastes as Filler in Bituminous Materials for Construction Industry: Toward Circular Economy”, T. Radu, C. Dima, R. Pinto, A. Bunge, A. Nan, A. Petran, M. Ghita, *ACS Sustainable Chemistry & Engineering* **2023**, *12*(1), 433-441. 24.
24. “Mechanical Behaviour of Industrial Waste Modified Bituminous Mastic”, T. Radu, A. Nan, I. Ganea, **A. Bunge**, C. Dima, M. Ghita, *Revista Romana de Materiale – Romanian Journal of Materials*, *2024*, *54*(2), 125-130.
25. “Impact of the Different molecular Weights of Polyethylene glycol (PEG) Coating Agents on the Magnetic Targeting Characteristics of Functionalized Magnetoresponse Nanoclusters”, S. I. Bernad, **A. Bunge**, M. C. Ioncica, R. Turcu, M. Dan, V. Socoliuc, D. Susan-Resiga, E. S. Bernad, *Magnetochemistry*, **2024**, *10*(7), 51.
26. “Synthetic Aggregates and Bituminous Materials Based on Industrial Waste”, A. Nan, C. Dima, M. Ghita, I.-V. Ganea, T. Radu, **A. Bunge**, *Materials*, **2024**, *17*(23), 6002.
27. “One-pot synthesis and biological assessment of fluorescent magnetite clusters coated with polydopamine and –analogues”, A. Petran, M. Suciu, I. Baldea, S. Boca, O. Pana, C. Leostean, M. Dan, **A. Bunge**, *Applied Surface Science*, **2025**, *711*, 164028.
28. “Sustainable eco-friendly scale-up synthesis of polytartaric acid using renewable feedstocks”, I. Rigo, A. Bunge, L. C. Pop, N. Terenti, A. Nan, *RSC Sustainability*, **2025**, *3*(11), 5241-5248.