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L I S T A LUCRĂRILOR ȘTIINȚIFICE

A. Teza de doctorat

2011 - “MATERIALE AVANSATE OBTINUTE PRIN SINTEZA IN NANOREACTOARE”

B. Cărți și capitole în cărți publicate în ultimii 5 ani (2021-2025)

C. Lucrări indexate ISI/BDI publicate în ultimii 5 ani (2021-2025)

2025

1. Maftai, A.E., **Ignat, M.**, Dobromir, M., Buzatu, A., Neamțu, M., A promising natural material for pollutants removal, Scientific Reports Open source preview, 2025, 15(1), 21456 Q1
2. Grecu, I., Cojocaru, C., **Ignat, M.**, Dascalu, I.-A., Sillion, M., Enache, A.-C., Harabagiu, V., Samoila, P., Understanding catalytic wet peroxide oxidation of organic pollutants by exploring new rare-earth doped manganese spinel ferrites, Journal of Environmental Chemical Engineering, 2025, 13(6), 119496 Q1
3. Sha’at, M., **Ignat, M.**, Doroftei, F., Ghizdovat V., Agop M., Barsan A., Cretan M.S., Sha’at F., Pavaloiu R.-D., Spac A.F., Ochiuz, L., Filip, C.N., Popa, O., Development of Modified Drug Delivery Systems with Metformin Loaded in Mesoporous Silica Matrices: Experimental and Theoretical Designs, Pharmaceutics, 2025, 17(7), 882 Q1
4. Coromelci, C.G., Maftai, A.E., **Ignat, M.**, Brinza, L., Qualitative and quantitative investigations of Cr (VI) uptake by amorphous nanoparticulate ferrites doped with organic chelating agents, (2025), Journal of Hazardous Materials Advances, 18, 100647. Q1

2024

5. Sha’at, M., **Ignat, M.**, Sacarescu, L., Spac, A.F., Barsan, A., Ghizdovat, V., Nazaretian, E., Dumitras, C., Agop, M., Rusu, C.M., Ochiuz, L., Multifractal Analysis and Experimental Evaluation of MCM-48 Mesoporous Silica as a Drug Delivery System for Metformin Hydrochloride, (2024), Biomedicines, 12(12), 2838.Q1
6. Horchidan, N., Airimioaei, M., Ababei, G., Stoian, G., Topală, I., Dobromir, M., **Ignat, M.**, Ciomaga, C.E., Neamțu, M., Novel piezoelectric $x\text{NF}-(1-x)\text{PZT}$ materials for catalytic/photocatalytic removal of pollutants, (2024), Surfaces and Interfaces, 2024, 51, 104604. Q1

7. Maftei A., Cojocaru C., Dobromir M., **Ignat M.**, Neamtu M., Novel nanohybrid iron (II/III) phthalocyanine-based carbon nanotubes as catalysts for organic pollutant removal: Process optimization by chemometric approach, (2024), Environmental Science and Pollution Research, 2024, 31(24), pp. 35651–35665. Q1
8. Fortună M.E., **Ignat M.***, Tudorachi N., Ungureanu E., Rotaru R., Harabagiu V., Hybrid Siloxane Materials Based on a Mutually Reactive Epoxy–Amine System: Synthesis, Structure, and Thermal Stability Investigations, (2024) Inorganics 12 (4), 118 Q2

2023

9. Zaltariov M.-F., Ciubotaru B.-I., Ghilan A., Peptanariu D., **Ignat M.**, Iacob M., Vornicu N., Cazacu M., Mucoadhesive Mesoporous Silica Particles as Versatile Carriers for Doxorubicin Delivery in Cancer Therapy (2023) International Journal of Molecular Sciences, 24 (19), art. no. 14687 Q1
10. Coromelci C.G., Turcu E., Doroftei F., Palamaru M.N., **Ignat M.***, Conjugated Polymer Modifying TiO₂ Performance for Visible-Light Photodegradation of Organics, (2023) Polymers, 15 (13), art. no. 2805 Q1
11. Zinicovscaia, I., Yushin, N., Humelnicu, D., Grozdov, D., **Ignat, M.**, Humelnicu, I., Adsorption Capacity of Silica SBA-15 and Titanosilicate ETS-10 toward Indium Ions, (2023) Materials, 16 (8), art. no. 3201. Q1
12. Dănilă R.-Ú., Dumitru I., **Ignat M.**, Pui A., CoFe₂O₄@HaP as Magnetic Heterostructures for Sustainable Wastewater Treatment, (2023) Materials, 16 (7), art. no. 2594. Q1
13. Zinicovscaia I., Yushin N., Humelnicu D., **Ignat M.**, Humelnicu I., Grozdov D., Vershinina T., Removal of Indium Ions from Aqueous Solutions Using Hydroxyapatite and Its Two Modifications, (2023) Separations, 10 (7), art. no. 401 Q2
14. Dănilă R., Amărândi R.-M., **Ignat M.**, Pui A., Mesoporous MgFe₂O₄@HaP@APTES nanocomposite as scaffold for α -glucosidase coupling (2023) Materials Today Communications, 36, art. no. 106427. Q2
15. Ghiorghita C.A., Humelnicu D., Dinu M.V., **Ignat M.**, Bonardd S., Díaz D.D., Dragan E.S., Polyelectrolyte complex composite cryogels with self-antibacterial properties and wide window for simultaneous removal of multiple contaminants, (2023) Chemical Engineering Journal, 459, art. no. 141562. Q1
16. Grecu I., Samoila P., Pascariu P., Cojocaru C., **Ignat M.**, Dascalu I.-A., Harabagiu V., Enhanced Photodegradation of Organic Pollutants by Novel Samarium-Doped Zinc Aluminium Spinel Ferrites, (2023) Catalysts, 13 (2), art. no. 266. Q1
17. Turcu E., Coromelci C.G., Harabagiu V., **Ignat M.**, Enhancing the Photocatalytic Activity of TiO₂ for the Degradation of Congo Red Dye by Adjusting the Ultrasonication Regime Applied in Its Synthesis Procedure, (2023) Catalysts, 13 (2), art. no. 345. Q1
18. Predeanu G., Slăvescu V., Drăgoescu M.F., Bălănescu N.M., Fiti A., Meghea A., Samoila P., Harabagiu V., **Ignat M.**, Manea-Saghin A.-M., Vasile B.S., Badea N., Green Synthesis of Advanced Carbon Materials Used as Precursors for Adsorbents Applied in Wastewater Treatment, (2023) Materials, 16 (3), art. no. 1036. Q1
19. Constantin, M., Spiridon, M., Ichim, D.L., Daraba, O.M., Suflet, D.M., **Ignat, M.**, Fundueanu, G., Synthesis, biological and catalytic activity of silver nanoparticles generated and covered by oxidized pullulan, (2023) Materials Chemistry and Physics, 295, art. no. 127141. Q1

20. Maftei, A.E., Ahmed, I., Neamtu, M., Coromelci, C.G., **Ignat, M.**, Brinza, L., Nanocrystalline structured ethylene glycol doped maghemite for persistent pollutants removal, (2023) Environmental Science: Water Research and Technology, 9, pp. 1634-1645. Q1

2022

21. Humelnicu, D., **Ignat, M.**, Dinu, M.V., Dragan, E.S., Optimization of Arsenic Removal from Aqueous Solutions Using Amidoxime Resin Hosted by Mesoporous Silica (2022) ACS Omega, 7 (35), pp. 31069-31080. Q1

22. Coromelci, C., **Ignat, M.**, Sacarescu, L., Neamtu, M., Enhanced visible light activated mesoporous titania by rare earth metal doping (2022) Microporous and Mesoporous Materials, 341, art. no. 112072. Q1

23. Ardelean, R., Popa, A., Drăgan, E.S., Davidescu, C.-M., **Ignat, M.**, New Polymeric Adsorbents Functionalized with Aminobenzoic Groups for the Removal of Residual Antibiotics (2022) Molecules, 27 (9), art. no. 2894. Q1

24. Ignat, M.-E., Dulman, V., Ignat, L., **Ignat, M.**, Humelnicu, I., Evaluation of the Adsorptive Potential of Zeolite Volcanic Tuff in Single and Binary Aqueous Solutions of the Basic Blue 41 Cationic Dye (2022) ChemistrySelect, 7 (14), art. no. e202104460. Q3

25. Humelnicu, D., Zinicovscaia, I., Humelnicu, I., **Ignat, M.**, Yushin, N., Grozdov, D., Study on the SBA-15 Silica and ETS-10 Titanosilicate as Efficient Adsorbents for Cu(II) Removal from Aqueous Solution (2022) Water (Switzerland), 14 (6), art. no. 857. Q1

26. Coromelci, C., Neamtu, M., **Ignat, M.**, Samoila, P., Zaltariov, M.F., Palamaru, M., Ultrasound assisted synthesis of heterostructured TiO₂/ZnFe₂O₄ and TiO₂/ZnFe_{1.98}La_{0.02}O₄ systems as tunable photocatalysts for efficient organic pollutants removal (2022) Ceramics International, 48 (4), pp. 4829-4840. Q1

27. Fortună, M.E., Pricop, L., Zaltariov, M., Popovici, D., **Ignat, M.**, Harabagiu, V., Simionescu, B.C., Cu(II)/Guanidine Functionalized Disiloxane Complex of Supramolecular Structures for Visible Light-Driven Photocatalysis of Congo Red (2022) Polymers, 14 (4), art. no. 817. Q1

28. Asaftei, I.-V., Lungu, N.-C., Bîrsa, L.-M., **Ignat, M.***, Validation of Zn-Cu/ZSM-5 catalyst performance, at pilot scale, in the catalytic conversion of butane (nC₄+i-C₄) technical fraction (2022) Comptes Rendus Chimie, 25. Q3

29. Mahu, E., Samoila, P., **Ignat, M.**, Cojocaru, C., Harabagiu, V., Influence of fuel nature on sol-gel microwave-ignited combustion synthesis of nanosized cobalt and nickel spinel ferrites (2022) Comptes Rendus Chimie, 25. Q3

30. Condurache, B.-C., Cojocaru, C., Samoila, P., **Ignat, M.**, Harabagiu, V., Data-driven modeling and optimization of oil spill sorption by wool fibers: retention kinetics and recovery by centrifugation (2022) International Journal of Environmental Science and Technology, 19 (1), pp. 367-378. (Q1)

2021

31. Brinza, L., Geraki, K., Matamoros-Veloza, A., **Ignat, M.**, Neamtu, M., The Irish kelp, Fucus vesiculosus, a highly potential green bio sorbent for Cd (II) removal: Mechanism, quantitative and qualitative approaches (2021) Journal of Cleaner Production, 327, art. no. 129422, . Q1

32. Chipurici, P., Vlaicu, A., Călinescu, I., Vinătoru, M., Busuioc, C., Dinescu, A., Ghebaur, A., Rusen, E., Voicu, G., **Ignat, M.**, Diacon, A., Magnetic silica particles functionalized with guanidine derivatives for microwave-assisted transesterification of waste oil (2021) Scientific Reports, 11 (1), art. no. 17518. Q1

33. Zinicovscaia, I., Yushin, N., Humelnicu, D., Grozdov, D., **Ignat, M.**, Demcak, S., Humelnicu, I., Sorption of ce(III) by silica sba-15 and titanosilicate ets-10 from aqueous solution (2021) Water (Switzerland), 13 (22), art. no. 3263 Q1
34. Lukacs, V.A., Caruntu, G., Condurache, O., Ciomaga, C.E., Curecheriu, L.P., Padurariu, L., **Ignat, M.**, Airimioaei, M., Stoian, G., Rotaru, A., Mitoseriu, L., Preparation and properties of porous BaTiO₃ nanostructured ceramics produced from cuboidal nanocrystals (2021) Ceramics International, 47 (13), pp. 18105-18115. (Q1)
35. Zinicovscaia, I., Yushin, N., Abdusamadzoda, D., Grozdov, D., Humelnicu, I., **Ignat, M.**, Humelnicu, D., Removal of vanadium ions from aqueous solutions using different type of hydroxyapatites: Adsorption isotherm, kinetics and thermodynamic studies (2021) Environmental Engineering and Management Journal, 20 (7), pp. 871-881. Q3
36. Samoila, P., Cojocaru, C., Mahu, E., **Ignat, M.**, Harabagiu, V., Boosting catalytic wet-peroxide-oxidation performances of cobalt ferrite by doping with lanthanides for organic pollutants degradation (2021) Journal of Environmental Chemical Engineering, 9 (1), art. no. 104961(Q1)
37. Soreanu, G., Cretescu, I., Diaconu, M., Cojocaru, C., **Ignat, M.**, Samoila, P., Harabagiu, V., Investigation of a biosystem based on Arthrospira platensis for air revitalisation in spacecrafts: Performance evaluation through response surface methodology (2021) Chemosphere, 264, art. no. 128465. (Q1)
38. Humelnicu, D., Zinicovscaia, I., Humelnicu, I., **Ignat, M.**, Experimental Studies on the Removal of Aluminium Ions from Synthetic Aqueous Solution by Hydroxyapatites (2021) Acta Chimica Slovenica, 68 (4), pp. 821-832. Q3
39. Mahu, E., Coromelci, C.G., Lutic, D., Asaftei, I.V., Sacarescu, L., Harabagiu, V., **Ignat, M.**, Tailoring mesoporous titania features by ultrasound-assisted sol-gel technique: Effect of surfactant/titania precursor weight ratio (2021) Nanomaterials, 11 (5), art. no. 1263 (Q1)

D. Lucrări publicate în ultimii 5 ani (2021-2025) în reviste și volume de conferințe cu referenți (neindexate)

- Reviste

- Selecție cu maximum 20 lucrări în volume de conferințe

1. Diug E., Ciobanu N., Guranda D., Ciobanu C., Ochiuz L., **Ignat M.**, New perspectives for the development of topic nanopharmaceuticals, «Промислова фармація — реалії та перспективи» (17-18 березня 2022 р., м. Харків. Ukraine)
2. M. E. Fortună, E. Ungureanu, D. C. Jităreanu, O. Ungureanu, **M. Ignat**, Effects of functionalized MWCNT on the aquatic environment – Proceedings of the 24th International Symposium "Environment And Industry" SIMI 2021, 24th September 2021 Bucharest, Romania

E. Brevete obținute în întreaga activitate

2025

1. Brevet de invenție Nr. 134943: "PROCEDEU RAPID DE SULFONARE A POLI (ARIL - ETHER) CETONELOR", Inventatori: SAMOILĂ PETRIȘOR [RO]; BALTAG LAURENȚIU

[RO]; COJOCARU CORNELIU [RO]; **IGNAT MARIA** [RO]; HARABAGIU VALERIA [RO], Solicitant: INST DE CHIMIE MACROMOLECULARA PETRU PONI DIN IASI [RO], Clasificare: internațional: B01D71/52, Număr cerere de brevet: RO20190000758 20191118; Data cererii: 2021-05-28, Data publicării mențiunii acordării brevetului: **30/09/2025 BOPI nr. 9/2025**

2. Brevet de invenție Nr. 133126: "PROCEDEU DE PREPARARE PENTRU FORMULĂRI FARMACEUTICE SEMISOLIDE TOPICE, CU PROPRIETĂȚI DE ELIBERARE MODIFICATĂ A SUBSTANȚEI ACTIVE", Inventatori: OCHIUZ LĂCRĂMIOARA [RO]; GHICIUC CRISTINA MIHAELA [RO]; LUPUȘORU ELENA CĂTĂLINA [RO]; TIMOFTE DANIEL VASILE [RO]; VASILE AURELIA [RO]; **IGNAT MARIA** [RO], Solicitanți: UNIV ALEXANDRU IOAN CUZA DIN IASI [RO]; UNIV DE MEDICINA SI FARMACIE GRIGORE T POPA DIN IASI [RO], Clasificare: internațional: A61K9/22, Număr cerere de brevet: RO20170000709 20170925, Data cererii: 2017-09-25, Data publicării mențiunii acordării brevetului: **29/08/2025 BOPI nr. 8/2025**.
3. Brevet de invenție Nr. 133127: "PROCEDEU DE PREPARARE A UNOR SISTEME DE TRANSPORT ȘI ELIBERARE MODIFICATĂ A MEDICAMENTELOR PENTRU FORMULĂRI FARMACEUTICE TOPICE SPECIFICE TERAPIEI LIMFOMULUI CUTANAT CU CELULE T", Inventatori: VASILE AURELIA [RO]; **IGNAT MARIA** [RO]; OCHIUZ LĂCRĂMIOARA [RO]; GHICIUC CRISTINA MIHAELA [RO]; LUPUȘORU ELENA CĂTĂLINA [RO]; TIMOFTE DANIEL VASILE [RO], Solicitanți: UNIV ALEXANDRU IOAN CUZA DIN IASI [RO]; UNIV DE MEDICINA SI FARMACIE GRIGORE T POPA DIN IASI [RO], Clasificare: internațional: A61K9/22, Număr cerere de brevet: RO20170000710 20170925; Data cererii: 2017-09-25, Data publicării mențiunii acordării brevetului: **30/04/2025 BOPI nr. 4/2025**

2024

4. Brevet de invenție Nr. 134885: "PROCEDEU DE OBTINERE A SILICEI POROASE CU APLICAȚII ÎN DEZUMIDIFICAREA FLUXURILOR GAZOASE", Inventatori: **IGNAT MARIA** [RO], SAMOILA PETRIȘOR [RO], BELE ADRIAN [RO], COJOCARU CORNELIU [RO], CRETESCU IGOR [RO], SOREANU GABRIELA [RO], HARABAGIU VALERIA [RO], Solicitant: INST DE CHIMIE MACROMOLECULARA PETRU PONI DIN IASI [RO], Clasificare internațională: B01D53/04, Număr cerere de brevet: RO20190000695, Data cererii: 2019-10-30, Data publicării mențiunii acordării brevetului: **30/12/2024 BOPI nr. 12/2024**.

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