

Universitatea Națională de Știință și Tehnologie POLITEHNICA București

Facultatea **Inginerie Chimică și Bioinginerie**

Departamentul **Chimie Analitică și Ingineria Mediului**

Nume Prenume: **Bobirică Constantin**

Gradul didactic: **Conferențiar**

L I S T A

lucrărilor științifice în domeniul disciplinelor din postul didactic

T. TEZE DE DOCTORAT

T 1. TEZA DE DOCTORAT: ”Studii și cercetări privind evitarea poluării mediului cu ioni metalici conținuți în soluții reziduale prin insolubilizare, Domeniul fundamental Științe Inginerești, Domeniul Inginerie Chimică”, București, 2010

T 2. POSTDOCTORAT: „Treatment of Cathode Ray Tubes and Fluorescent Lamps Spent Glass by Stabilization/Solidification Processes”, domeniul de cercetare Environmental Engineering, finanțat de National Research Foundation of Korea (NRF), Department of Civil and Environmental Engineering, Hanyang University, September 23, 2013 – September 22, 2014, Republic of Korea

C. CĂRȚI PUBLICATE:

Ca – Cărți / cursuri (manuale) pentru uzul studenților, publicate în edituri recunoscute

Ca1. Ion I., Modrogan C., Orbulet O. D., Bobirică C., **Bobirică L.**, Ion A.C., Metode de separare aplicate în analiza unor probe de mediu și produse alimentare, Editura POLITEHNICA PRESS, 2020, București, ISBN: 978-606-515-913-6.

b - Cărți de specialitate publicate în edituri recunoscute (autor, coautor, editor)

Cb 1. Orbeci C., Bobirică C., **Bobirică L.**, Photocatalytic degradation of chlorophenols and antibiotics from wastewater In: Water Pollution and Remediation: Photocatalysis, Eds. Amir Al-Ahmed, Mohd Imran Ahamed, Eric Lichtfouse, Springer International Publishing, book title, Edition Number 1, 57, 2021, eBook ISBN 978-3-030-54723-3, DOI: 10.1007/978-3-030-54723-3, Series ISSN 2213-7114.

Cb 2. Bobirică C., *Evaluarea impactului asupra mediului*, Editura PRINTECH, 2015, București, ISBN 978-606-23-0353-2.

R, V. ARTICOLE/STUDII IN EXTENSO PUBLICATE

Ris - Reviste de specialitate de circulație internațională recunoscute (cotate indexate ISI Thomson Reuters, sau indexate în alte Baze de Date Internationale-BDI specifice domeniului, care fac un proces de selecție a revistelor pe baza unor criterii de performanță)

Ris 20. Bobirică L., Orbeci C., Pîrvu C., Constantinescu A., Bîru E.I., Ionică G.I., Matei E., Berbecaru A.C., **Bobirică C.**, Modular Photocatalytic Reactor for the Removal of Estrogens from Aqueous Solutions, *Catalysts*, 2024, 14(10), 661, Q2.

Ris 19. Grinzeanu M., Orbuleț O.D., Dăncilă A.M., **Bobirică C.**, Modrogan C., Bobirică L., Pandelescu M.A., Biomimetic Studies on the Antimicrobial Activity of Some Biocides Based on Garlic and Lavender in Surface Waters, *Biomimetics*, 2024, 9(10), 591, Q1.

Ris 18. Marin N., Orbeci C., Bobirică L., Boșomoiu M., **Bobirică C.**, Long-Term Leaching Assessment of Alkali-activated Materials Based on Compliance Leaching Tests, *UPB Scientific Bulletin, Series B: Chemistry and Materials Science*, 85 (4), 99 – 110, 2023, ISSN 1454-2331, WOS 001126670800003, FI 0,5.

Ris 17. Mârșolea (Cristea) A.C., Orbeci C., Bobirică L., **Bobirică C.**, Leaching Behavior of Polyethylene Terephthalate Containers Used for Water Bottling, *UPB Scientific Bulletin, Series B: Chemistry and Materials Science*, 85 (4), 21 – 28, 2023, ISSN 1454-2331, WOS 001126670800012, FI 0,5.

Ris 16. Lupu G.-I., Bobirică L., **Bobirică C.**, Orbeci C., Photocatalytic Oxidation of Azithromycin in Aqueous Solution by TiO₂-Coated Fiberglass Membrane, *UPB Scientific Bulletin, Series B: Chemistry and Materials Science*, 85 (2), 34 – 44, 2023, ISSN 1454-2331, WOS 001015437100003, FI 0,5.

Ris 15. Lupu G.-I., Orbeci C., **Bobirică C.**, Bobirică L., Lazăr E.S., Pandelescu J., Verziu M.N., Pîrvu C., Irodia R.-G. Photocatalytic degradation of azithromycin formulation in aqueous solution by doped titanium dioxide/fiberglass-rubberized silicone photocatalytic membrane, *Sustainable Environment Research*, 33(1), 36, 2023, DOI: 10.1186/s42834-023-00199-2, WOS 001099234800001, FI 4,9, Q2

Ris 14. Marin N., Orbeci C., Bobirică L., Rău I., Deleanu C., Stănescu P.O., Berbecaru A.C., Matei E., **Bobirică C.** Alternative Solid Activators from Waste Glass for One-Part Alkali-Activated Fly Ash/Red Mud Cements, *Materials*, 16(20), 6707, 2023, DOI: 10.3390/ma16206707, WOS 001095384600001, FI 3,4, Q2

Ris 13. Mârșolea A. C., Chiriac F. L., Orbeci C., Bobirică L., **Bobirică C.** *Migration and leaching behaviour of Bisphenol A from polyethylene terephthalate water bottles under different storage conditions.* *International Journal of Food Science and Technology*, 2023. DOI: 10.1111/ijfs.16583, WOS, FI 3,612, Q2

Ris 12. Bobirică L., **Bobirică C.**, Lupu G.L., Orbeci C. *Influence of Operating Parameters on Photocatalytic Oxidation of 2,4-Dichlorophenol in Aqueous Solution by TiO₂/Stainless Steel Photocatalytic Membrane*. Applied Sciences, 11 (24), 2021. DOI: 10.3390/app112411664, WOS 000735755300001, FI 2,838, Q2.

Ris 11. Matei E., Râpă M., Predescu A.M., Țurcanu A.A., Vidu R., Predescu C., **Bobirică C.**, Bobirică L., Orbeci C. *Valorization of Agri-Food Wastes as Sustainable Eco-Materials for Wastewater Treatment: Current State and New Perspectives*. Materials, 14 (16), 2021. DOI: 10.3390/ma14164581, WOS:000689458700001, FI 3,748, Q2.

Ris 10. Bobirică L., **Bobirică C.**, Orbeci C. *Examination of Photocatalyzed Chlorophenols for Sequential Photocatalytic-Biological Treatment Optimization*. Catalysts, 10 (9), 985, 2020. DOI: 10.3390/catal10090985, WOS:000580907200001, FI 4,501, Q2.

Ris 9. **Bobirică C.**, Orbeci C., Bobirică L., Palade P., Deleanu C., Pantilimon M.C., Pirvu C., Radu I.C. *Influence of Red Mud and Waste Glass on the Microstructure, Strength, and Leaching Behavior of Bottom Ash-Based Geopolymer Composites*. Scientific Reports, 10, 19827, 2020. DOI 10.1038/s41598-020-76818-4, WOS: 000594649000011, FI 3,998, Q1.

Ris 8. **Bobirică C.**, Bobirică L., Râpă M., Matei E., Predescu A.M., Orbeci C. *Photocatalytic Degradation of Ampicillin Using PLA/TiO₂ Hybrid Nanofibers Coated on Different Types of Fiberglass*. Water. 12 (1), 176, 2020. <https://doi.org/10.3390/w12010176>, WOS:000519847200176, FI 3,530, Q2.

Ris 7. Muhulet A., Tuncel C., Miculescu F.E., Pandele A.M., **Bobirică C.**, Orbeci C., Bobirică L., Palla-Papavlu A., Voicu S.I. *Synthesis and Characterization of Polysulfone–TiO₂ Decorated MWCNT Composite Membranes by Sonochemical Method*, Applied Physics A: Materials Science and Processing. 126, 233, 2020. <https://doi.org/10.1007/s00339-020-3408-9>, WOS:000516564000001, FI 2,98.

Ris 6. Modrojan, C., Pandele A.M., **Bobirică C.**, Dobrotă D., Dăncilă A.M., Gârleanu G., Orbuleț O.D., Borda C., Gârleanu D., Orbeci C. *Synthesis, Characterization and Sorption Capacity Examination for a Novel Hydrogel Composite Based on Gellan Gum and Graphene Oxide (GG/GO)*. Polymers, 12 (5), 1182, 2020. DOI: 10.3390/polym12051182, WOS:000541431100187, FI 4,967, Q1.

Ris 5. Dăncilă A.M., Căprărescu S., **Bobirică C.**, Purcar V., Gârleanu G., Vasile E., Modrojan C., Borda C., Dobrotă D. *Optimization of the Technological Parameters for Obtaining Zn-Ti Based Composites to Increase the Performance of H₂S Removal from Syngas*. Processes, 8 (5), 562, 2020. <https://doi.org/10.3390/pr8050562>, WOS:000541752600004, FI 3,352, Q2.

Ris 4. Orbuleț O.D., Modrojan C., Orbeci C., Dăncilă M.A., **Bobirică C.**, Bobirică L., Vasile E. *Influence of Sulfonation of Inert Macroporous and Macronet Resins on the SO₂ Adsorption Capacity*. Water, Air, and Soil Pollution, 229 (12), 2018, DOI: 10.1007/s11270-018-4041-5, WOS:000451653000001, FI 2,984.

Ris 3. **Bobirică C.**, Shim J.-H., Park J.-Y. *Leaching Behavior of Fly Ash-Waste Glass and Fly Ash-Slag-Waste Glass-Base Geopolymers*. Ceramics International, 44, (6), 5886–5893, 2018. DOI 10.1016/j.ceramint.2017.12, WOS:000427215100010, FI 5,532, Q1.

Ris 2. Bobirică C., Long D.T., Parsons M.J, Stănescu R., Voice T.C. *Examination of the Influence of Dissolved Halite (NaCl) on the Leaching of Lead (Pb) from Cement-Based Solidified Wastes*. Journal of Materials Cycles and Waste Management, 20 (1), 59–70, 2018. doi:10.1007/s10163-016-0552-6, WOS:000419896500005, FI 3,579.

Ris 1. Bobirică C., Shim J.-H., Pyeon J.-H., Park J.-Y. *Influence of Waste Glass on the Microstructure and Strength of Inorganic Polymers*. Ceramics International, 41, 13638–13649, 2015. DOI: 10.1016/j.ceramint.2015.07.160, WOS:000362860900138, FI 5,532, Q1.

Rio - Alte reviste de specialitate de circulație internațională

Rns 1. Lupu G.-I., Bobirică L., **Bobirică C.**, Orbeci C., Photocatalytic Oxidation Of Azithromycin in Aqueous Solution by TiO₂-Coated Fiberglass Membrane, UPB Scientific Bulletin, Series B: Chemistry and Materials Science, 85 (2), 2023, ISSN 1454-2331.

Rns - Reviste de specialitate de circulație națională recunoscute de CNCSIS

Vis- Volumele unor manifestări științifice internaționale recunoscute, organizate în țară și străinătate, indexate ISI Thomson Reuters sau indexate în alte Baze de Date Internationale - BDI specifice domeniului, care fac un proces de selecție a publicațiilor pe baza unor criterii de performanță

Vis 1. Orbuleț O.D., Modrogan C., **Bobirică C.**, Bobirică L., Dăncilă M.A., Orbeci C. *Anion Exchange Resin-Supported NZVI Permeable Reactive Barriers for Removal of Nitrates from Groundwater*. International Symposium “The Environment and the Industry”, 24-25 September 2020 (E-SIMI 2020), DOI: <http://doi.org/10.21698/simi.2020.ab02>.

Vis 2. Bobirică L., Modrogan C., **Bobirică C.**, Orbuleț O.D., Dăncilă M.A., Orbeci C. *New Materials for Removing Nitrate, Manganese, and Iron from Groundwater*. International Symposium “The Environment and the Industry”, SIMI 2019, 84-89, DOI:10.21698/simi.2019.fp11.

Vis 3. Modrogan C., **Bobirică C.**, Orbuleț O.D., Bobirică L., Dăncilă M.A., Orbeci C. *Synthesis and Characterization of New Materials for Advanced Groundwater Remediation*. International Symposium “The Environment and the Industry”, SIMI, 20th to 21st September, 2018, Bucharest, Romania, <http://doi.org/10.21698/simi.2018.ab16>.

Vis 4. Modrogan C., Dăncilă M.A., Orbuleț O.D., Orbeci C., **Bobirică C.** *Removal of Manganese from Groundwater by Adsorption on Gellan Gum/Fe₃O₄ Composite*. 18th International Multidisciplinary Scientific GeoConference, SGEM, 30th July – 9th August, Albena, Bulgaria. Conference Proceedings, 18 (5.1), 705 – 712, 2018, Publisher International Multidisciplinary Scientific Geoconference, ISSN:1314-2704, ISBN 978-619740835-5, 978-619740835-5, DOI: 10.5593/sgem2018/5.1/S20.091.

Vi - Volumele unor manifestări științifice internaționale recunoscute, organizate în țară și străinătate

Vi 24. Bobirică L., Orbeci C., **Bobirică C.**, Orbuleț O.D., Modrogan C. *Kinetics of Photocatalytic Degradation of Chlorophenols from Aqueous Solutions*. 22nd Romanian International Conference on Chemistry and Chemical Engineering (RICCCE 22), September 7-9, 2022, Sinaia, Romania.

Vi 23. Orbeci C., Bobirică L., **Bobirică C.**, Lupu G.I. *Evaluation of TiO₂-Photocatalytic Membrane to Removal of 2,4-DCP from Wastewater*. 22nd Romanian International Conference on Chemistry and Chemical Engineering (RICCCE 22), September 7-9, 2022, Sinaia, Romania.

Vi 22. Mârșolea A.C., Chiriac F.L., Orbeci C., **Bobirică C.**, Bobirică L., Iancu V.I. *Assessment of Bisphenol a release from PET water bottles under different storage temperature and duration*. 22nd Romanian International Conference on Chemistry and Chemical Engineering (RICCCE 22), September 7-9, 2022, Sinaia, Romania.

Vi 21. Lupu G.I., Bobirică L., **Bobirică C.**, Orbeci C., Matei E., Râpă M. *Photocatalytic Oxidation of Azithromycin in Aqueous Solution by TiO₂-Coated Fiberglass Membrane*. 22nd Romanian International Conference on Chemistry and Chemical Engineering (RICCCE 22), September 7-9, 2022, Sinaia, Romania.

Vi 20. Marin N., **Bobirică C.**, Bobirică L., Orbeci C. *Synthesis and Characterization of New Assortments of Solid Alkaline Activators for the Manufacture of One-Part Geopolymer Cements*. 22nd Romanian International Conference on Chemistry and Chemical Engineering (RICCCE 22), September 7-9, 2022, Sinaia, Romania.

Vi 19. Orbuleț O.D., Modrogan C., **Bobirică C.**, Dăncilă M.A., Bobirică L., Orbeci C., Căprărescu S. *Adsorption of Phosphates from Aqueous Solutions using LDH-type Materials*. 22nd Romanian International Conference on Chemistry and Chemical Engineering (RICCCE 22), September 7-9, 2022, Sinaia, Romania.

Vi 18. Andrei M., Oprescu C., Goicea D., **Bobirică C.**, Orbuleț O.D., Bobirică L., Modrogan C. *Green Biocides for Mitigation of Microbiologically Influenced Corrosion of Oilfield Equipment*. 12th International Conference on Materials Science and Engineering (BraMat 2022), March 9 - 12, 2022, Brașov, Romania.

Vi 17. **Bobirică C.**, Bobirică L., Râpă M., Matei E., Predescu A.M., Orbeci C. *Degradation of Ampicillin using PLA/TiO₂ Hybrid Nanofibers Coated on Fiberglass*. 8th International Conference on Materials Science and Technologies (RoMat2020), November 26-27, 2020, Bucharest, Romania.

Vi 16. Voicu S.I., Miculescu F., Pandele A.M., Orbeci C., Bobirică L., **Bobirică C.** *Composite Membranes based on Polysulfone-decorated Carbon Nanotubes for the Removal of Pharmaceutical Effluents*. 8th International Conference on Materials Science and Technologies (RoMat2020), November 26-27, 2020, Bucharest, Romania.

Vi 15. Negroiu M., Țurcanu A.A., Râpă M., Matei E., Orbeci C., **Bobirică C.**, Favier L., Coman G., Predescu C. *Comparison Study of Metal Removal Efficiency for Commercial Activated*

Carbon and Biochar Obtained from Banana Peels. 8th International Conference on Materials Science and Technologies (RoMat2020), November 26-27, 2020, Bucharest, Romania.

Vi 14. Țurcanu A.A., Râpă M., Matei E., Negroiu M., Orbeci C., **Bobirică C.**, Predescu A., Pantilimon C. *Preparation, characterization and testing of banana biochar and polysaccharides blends for removal of metal ions from polluted waters*. 8th International Conference on Materials Science and Technologies (RoMat2020), November 26-27, 2020, Bucharest, Romania.

Vi 13. Orbuleț O.D., Modrogan C., **Bobirică C.**, Dăncilă A.M., Orbeci C., Bobirică L. *Nitrates Removal from Groundwater using Nano Zerovalent Iron Supported on Anion Exchange Resin*. 10th International Conference on Environmental Engineering and Management (ICEEM10), September 18 – 21, 2019, Iași, Romania.

Vi 12. **Bobirică C.**, Orbeci C., Modrogan C., Orbuleț O.D., Bobirică L. *Use of Aluminosilicate Waste Materials as Precursors for Geopolymer Synthesis*. 10th International Conference on Environmental Engineering and Management (ICEEM10), September 18 – 21, 2019, Iași, Romania.

Vi 11. Modrogan C., Orbuleț O.D., Bobirică L., Dăncilă M.A., **Bobirică C.**, Orbeci C. *Nitrates Removal from Aqueous Solutions using Magnetite Nanoparticles Functionalized with EDTA*. 21st Romanian International Conference on Chemistry and Chemical Engineering (RICCCE 21), September 4 - 7, 2019, Constanța-Mamaia, Romania.

Vi 10. Orbuleț O.D., Orbeci C., **Bobirică C.**, Modrogan C., Dăncilă A.M., Bobirică L., *Phosphate Removal from Aqueous Solution using Nanosized Zerovalent Iron Supported by Anionic Exchange Resin*. 21st Romanian International Conference on Chemistry and Chemical Engineering (RICCCE 21), September 4 - 7, 2019, Constanța-Mamaia, Romania.

Vi 9. Orbuleț O.D., **Bobirică C.**, Modrogan C., Orbeci C., Dăncilă A.M., Bobirică L., Pitic A.I. *LDHS-type Materials for Phosphates Retention from Wastewater*. 11th International Conference on Materials Science and Engineering (BraMat 2019), March 13 - 16, 2019, Brașov, Romania.

Vi 8. **Bobirică C.**, Orbeci C., Bobirică L., Orbuleț O.D., Modrogan C., Dăncilă A.M. *Examination of Pb Immobilization Pathways in Cementitious Systems*. 11th International Conference on Materials Science and Engineering (BraMat 2019), March 13 - 16, 2019, Brașov, Romania.

Vi 7. Orbuleț O.D., Modrogan C., **Bobirică C.**, Orbeci C., Dăncilă M.A., Bobirică L. *Use of Autoclaved Cellular Concrete and Pumice Stone for the Removing of Phosphates from Wastewater*. 4th International Conference on Chemical Engineering Innovative Materials and Processes for a Sustainable Development, ICCE, October 31 - November 2, 2018, Iași, Romania.

Vi 6. Modrogan C, Orbuleț O.D., Dăncilă M.A., Orbeci C., **Bobirică C.**, Pandele M.A., Costache C. *Enlèvement de fer contenus dans les eaux souterraines par adsorption*. 10^{ème} édition du Colloque Franco-Roumain de Chimie Appliquée (COFrRoCA 2018), 27 au 29 Juin, 2018, Bacău, Romania.

Vi 5. Modrogan C., Orbuleț O.D., **Bobirică C.**, Dăncilă M.A., Ioniță D.N. *Removal Iron and Manganese from Groundwater*. 4th International Conference on Chemical Engineering

Innovative Materials and Processes for a Sustainable Development, October 31 - November 2, 2018, Iași, Romania.

Vi 4. Orbuleț O.D., Modrogan C., Dăncilă M.A., **Bobirică C.**, Orbeci C., Costache C. *Application of Static and Dynamic Kinetic Models for Evaluating Removal of Cr (VI) from Wastewaters*. International Congress of Health and Environment, October 23-25, 2017, Adana-Turkey.

Vi 3. Modrogan C., Orbuleț O.D., Dăncilă M.A., **Bobirică C.**, Orbeci C., Costache C. *Removal of some Heavy Metals from Industrial Wastewaters by Ion Exchange Method*. 20th Romanian International Conference on Chemistry and Chemical Engineering (RICCCE 20), 2017, September 6-9, Poiana Brașov, Romania.

Vi 2. Orbuleț O.D., Modrogan C., **Bobirică C.**, Bobirică L., Orbeci C., Costache C. *Application of Static and Dynamic Kinetic Models for Evaluating Phosphate Ions Sorption Processes in Soil*. 20th Romanian International Conference on Chemistry and Chemical Engineering (RICCCE 20), 2017, September 6-9, Poiana Brașov, Romania.

Vi 1. Orbuleț O.D., Modrogan C., Pandele M., Orbeci C., Dăncilă M.A., **Bobirică C.** *SO₂ removal from residual gases by solid adsorbents*. International Conference on Environmental Engineering and Management (ICEEM 09), 2017, September 6-9, Bologna, Italia.

Vn - Volumele unor manifestări științifice naționale

E. Brevete obținute în întreaga activitate

E 1. Orbeci Cristina, Matei Ecaterina, Râpă Maria, Predescu Cristian, Coman George, **Bobirică Constantin** și Bobirică Liliana, “Sistem cu membrană polimerică fotocatalitică pentru epurarea foto-oxidativă a apelor reziduale și procedeu de obținere a acestuia”, RO-BOPI 6/2022 din 30.06.2022

F. Contracte și rapoarte științifice (P,F)

F- Pi – proiecte internaționale

F – Alte lucrări de cercetare – dezvoltare

F 1. Contract de cercetare științifică competiție internă GNAC ARUT 2023 nr. 65/10.10.2023, ID proiect: 220235134, *Degradarea estrogenilor prin fotocataliză cu nano-fotocatalizatori imobilizați pe suport inert (ESFOTOCAT)*, durată 2023 – 2024 – **Cercetător**

F 2. Contract de cercetare științifică cu terți nr. 11821/02.07.2021, *Prepararea și caracterizarea unor noi sortimente de biocide verzi pentru atenuarea coroziunii bacteriene a echipamentelor metalice destinate exploataților petroliere* – **Director de proiect**.