

**Universitatea Națională de Știință și Tehnologie POLITEHNICA București**

Facultatea **Inginerie Chimică și Bioinginerii**

Departamentul **Chimie Analitică și Ingineria Mediului**

Nume Prenume: **Bobirică Liliana**

Gradul didactic: **Șef lucrări**

## **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 influența oxidării fotocatalitice a unor substanțe nebiodegradabile în procesul de epurare biologică*, domeniul fundamental Științe Inginerești, domeniul Inginerie Chimică, conducător științific: prof.dr.ing. Ionel Constantinescu. Ordinul nr 4387 din 06.06.2011, București.

#### **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.

**Cc - Cărți publicate în alte edituri, cu ISBN**

#### **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 15.** 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 14.** Grinzeanu M., Orbuleț O.D., Dăncilă A.M., Bobirică C., Modrogan C., Bobirică L., Pandele 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 13.** 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 12.** 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 11.** Lupu G.-I., **Bobirică L.**, Bobirică C., Orbeci C., Photocatalytic Oxidation of Azithromycin in Aqueous Solution by TiO<sub>2</sub>-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 10.** Lupu G.-I., Orbeci C., Bobirică C., **Bobirică L.**, Lazăr E.S., Pandele-Cusu 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 9.** 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 8.** Mârşolea 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*, 58 (10), 5609 – 5615, 2023. DOI: 10.1111/ijfs.16583, WOS 001023588100001, FI 3,612, Q2

**Ris. 7.** Lupu G.-I., Orbeci C., **Bobirică L.** Bobirică C., Pascu L.F. Key Principles of Advanced Oxidation Processes: A Systematic Analysis of Current and Future Perspectives of the Removal of Antibiotics from Wastewater – review, *Catalysts*, 13(9), 1280, 2023. DOI: 10.3390/catal13091280, WOS 001119197200001, FI 3,9, Q2

**Ris 6.** **Bobirică L.** Bobirică C., Lupu G.L., Orbeci C. Influence of Operating Parameters on Photocatalytic Oxidation of 2,4-Dichlorofenol in Aqueous Solution by TiO<sub>2</sub>/Stainless Steel Photocatalytic Membrane. *Applied Sciences*, 11 (24), 2021. DOI: 10.3390/app112411664, WOS 000735755300001, FI 2,838, Q2.

**Ris 5.** Matei E., Râpă M., Predescu A.M., Ţurcanu 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 4.** **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 3.** 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 2.** Bobirică C., **Bobirică L.** Râpă M., Matei E., Predescu A.M., Orbeci C. Photocatalytic Degradation of Ampicillin Using PLA/TiO<sub>2</sub> 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 1.** 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–TiO<sub>2</sub> 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 9.** Orbuleț O.D., Modrogan C., Orbeci C., Dăncilă M.A., Bobirică C., **Bobirică L.**, Vasile E. Influence of Sulfonation of Inert Macroporous and Macronet Resins on the SO<sub>2</sub> Adsorption Capacity. Water, Air, and Soil Pollution, 229 (12), 2018, DOI: 10.1007/s11270-018-4041-5, WOS:000451653000001, FI 2,984.

### **Rio - Alte reviste de specialitate de circulație internațională**

### **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 Internaționale - BDI specifice domeniului, care fac un proces de selecție a publicațiilor pe baza unor criterii de performanță**

**Vis 3.** 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 1.** 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>.

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

**Vi 27. Bobirică L.**, Ionică G.-I., Orbeci C., Burghelea A., Bobirică C., Removal of estrogens from wastewater by photocatalytic degradation, The 27<sup>th</sup> International Symposium “Environment and Industry” (SIMI), September 19 – 20, 2024, Constanța – Mamaia, Romania.

**Vi 26.** Orbuleț O.D., Modrogan C., Bobirică C., Dăncilă A.M., **Bobirică L.**, Dynamics of Nitrate Ion Migration Processes in Soil Columns Using Permeable Reactive Barriers 23<sup>rd</sup> Romanian International Conference on Chemistry and Chemical Engineering, September 4 – 7, 2024, Constanța – Mamaia, Romania.

**Vi 25.** Nica (Morogan) M.E., Orbeci C., Rău I., Meliță L. M., **Bobirică L.**, Ionică G.-I., Bobirică C., Photocatalytic Reactor for the Degradation of Estrogens from Wastewater Identification of the Binders Used in Historic Buildings Under Restoration, 23<sup>rd</sup> Romanian International Conference on Chemistry and Chemical Engineering, September 4 – 7, 2024, Constanța – Mamaia, Romania.

**Vi 24.** Orbeci C., Ionică G.-I., Bobirică C., **Bobirică L.**, Dăncilă A.M., Photocatalytic Degradation of Ivermectin from Wastewater, 23<sup>rd</sup> Romanian International Conference on Chemistry and Chemical Engineering, September 4 – 7, 2024, Constanța – Mamaia, Romania.

**Vi 23.** Bobirică C., Orbeci C., **Bobirică L.**, Ionică G.-I., Orbuleț O. D., Kinetic Modelling of the Photocatalytic Mineralisation of Endocrine Disruptors in Aqueous Solutions, 23<sup>rd</sup> Romanian International Conference on Chemistry and Chemical Engineering, September 4 – 7, 2024, Constanța – Mamaia, Romania.

**Vi 22.** Ionică G.-I., Orbeci C., **Bobirică L.**, Bobirică C., Voicu I. Ș., A Comparative Study on the Efficiency of Degradation of Azithromycin from Wastewater by Different Functionalized Materials, 23<sup>rd</sup> Romanian International Conference on Chemistry and Chemical Engineering, September 4 – 7, 2024, Constanța – Mamaia, Romania.

**Vi 21. Bobirică L.**, Orbeci C., Ionică G.-I., Irodia R., Pîrvu C., Bobirică C., Photocatalytic Reactor for the Degradation of Estrogens from Wastewater, 23<sup>rd</sup> Romanian International Conference on Chemistry and Chemical Engineering, September 4 – 7, 2024, Constanța – Mamaia, Romania.

**Vi 20.** Orbeci C., Lupu G.I., Bobirică C., **Bobirică L.**, Ivermectin removal from wastewater by photocatalytic degradation, 4th International Conference on Environmental Design ICED 2023, October 20-22, 2023, Athens, Greece.

**Vi 19.** Lupu G.I., Orbeci C., **Bobirică L.**, Bobirică C., Azithromycin removal from wastewater by photocatalytic degradation, 26th International Symposium “Environment and Industry”, September 27-29, 2023, Bucharest, Romania.

**Vi 18.** Satulu V., Pandele A.M., Bonciu A., Voicu S.I., Lupu G.I., **Bobirică L.**, Bobirică C., Orbeci C., Mitu B., Dinescu G., Robust CA-GO-PTFE membranes for azithromycin photo-degradation in wastewaters, E-MRS 2023 - Spring Meeting - SYMPOSIUM C, Advanced materials for environmental challenges, May 29 - June 2, 2023, Strasbourg, France.

**Vi 17.** **Bobirică L.**, Orbeci C., Bobirică C., Orbuleş O.D., Modrojan 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 16.** Orbeci C., **Bobirică L.**, Bobirică C., Lupu G.I. Evaluation of TiO<sub>2</sub>-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 15.** Mârşolea 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 14.** Lupu G.I., **Bobirică L.**, Bobirică C., Orbeci C., Matei E., Râpă M. Photocatalytic Oxidation of Azithromycin in Aqueous Solution by TiO<sub>2</sub>-Coated Fiberglass Membrane. 22nd Romanian International Conference on Chemistry and Chemical Engineering(RICCCE 22), September 7-9, 2022, Sinaia, Romania.

**Vi 13.** 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 12.** 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 11.** 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 10.** Bobirică C., **Bobirică L.**, Râpă M., Matei E., Predescu A.M., Orbeci C. Degradation of Ampicillin using PLA/TiO<sub>2</sub> Hybrid Nanofibers Coated on Fiberglass. 8th International Conference on Materials Science and Technologies (RoMat2020), November 26-27, 2020, Bucharest, Romania.

**Vi 9.** 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 8.** 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 7.** 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 6.** 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 5.** 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 4.** 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 3.** 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 2.** 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 1.** 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.

## **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 – **Director de proiect**

**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 exploatărilor petroliere* – **Cercetător.**