

Lista de lucrări științifice

ARTICOLE PUBLICATE ÎN JURNALE ISI:

- 1) Pîndaru AM, **Măruțescu L***, Popa M, Chifiriuc MC. A Label-Free Optical Flow Cytometry Based-Method for Rapid Assay of Disinfectants' Bactericidal Activity. *International Journal of Molecular Sciences*, **2024**; 25(13):7158. <https://doi.org/10.3390/ijms25137158>
- 2) **Marutescu LG**. Current and Future Flow Cytometry Applications Contributing to Antimicrobial Resistance Control. *Microorganisms*, **2023**, 11, 1300. <https://doi.org/10.3390/microorganisms11051300>
- 3) **Marutescu LG**, Popa M, Gheorghe-Barbu I, Barbu IC, Rodríguez-Molina D, Berglund F, Blaak H, Flach CF, Kemper MA, Spießberger B, Wengenroth L, Larsson DGJ, Nowak D, Radon K, de Roda Husman AM, Wieser A, Schmitt H, Pircalabioru Gradisteanu G, Vrancianu CO, Chifiriuc MC. Wastewater treatment plants, an "escape gate" for ESCAPE pathogens. *Front Microbiol.* **2023** 24; 14:1193907. doi: 10.3389/fmicb.2023.1193907.
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- 5) Apostol TV, Chifiriuc MC, Nitulescu GM, Olaru OT, Barbuceanu SF, Socea LI, Pahontu EM, Karnezan CM, **Marutescu LG**. In Silico and in vitro assessment of antimicrobial and antibiofilm activity of some 1,3-oxazole-based compounds and their isosteric analogues. *Appl. Sci.* **2022**, 12, 5571. <https://doi.org/10.3390/app12115571>
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- 7) Apostol TV, **Marutescu LG***, Draghici C, et al. Synthesis and biological evaluation of new N-Acyl-A-amino ketones and 1,3-Oxazoles derivatives. *Molecules*. 2021; 26(16):5019. doi:10.3390/molecules26165019
- 8) Vlad IM, Nuță DC, Ancuceanu RV, Caproiu MT, Dumitrascu F, Marinas IC, Chifiriuc MC, **Măruțescu LG***, Zarafu I, Papacocea IR, Vasile BȘ, Nicoară, AI, Ilie CI, Ficăi A, Limban C. et al. New O-Aryl-Carbamoyl-Oxymino-Fluorene derivatives with microbicidal and antibiofilm activity enhanced by combination with iron oxide nanoparticles. *Molecules*. **2021**; 26(10):3002. doi:10.3390/molecules26103002

- 9) Pircalabioru GG, Popa LI, **Marutescu L***, et al. Bacteriocins in the Era of Antibiotic Resistance: Rising to the challenge. *Pharmaceutics*. **2021**;13(2):196. doi:10.3390/pharmaceutics13020196
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- 1) Ilie M, **Dascalu L** and Macovei RA. Helicobacter Pylori Cag A antibodies and their clinical implications. LAP LAMBERT Academic Publishing **2014**, ISBN-13 (EAN): 978-3-659-52663-3.
- 2) Lazăr V., **Măruțescu L.**, Chifiriuc M.C. **2017**. Microbiologie generală și aplicată. Editura Universității din București, ISBN 978-606-16-0835-5.
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(IV) CAPITOLE DE CARTE ÎN VOLUME LA EDITURI INTERNAȚIONALE / NAȚIONALE

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- 2) **Măruțescu L.**, Frățiean D., Chifiriuc M. **2019**. Nanomedicine progress in prevention, detection, and treatment of tuberculosis. In: Nanomaterials for Drug Delivery and Therapy, Grumezescu AM (Ed), Elsevier Inc, pp.245-266. ISBN 978-0-12-813691-1.
- 3) Popa M., **Măruțescu L.**, Ion I., Kameron C., Bleotu C., Oprea E., Chifiriuc M.C., Lazăr V. **2018**. Antimicrobial and cytotoxic activity of graphenebased perioceuticals In: Fullerenes, Graphenes and Nanotubes A Pharmaceutical Approach, Grumezescu AM (Ed), Elsevier Inc. William Andrew, p 585-599, ISBN 978-0-12-813691-1.
- 4) Gheorghe I., Popa M., **Măruțescu L.**, Saviuc C., Lazar V., Chifiriuc M.C. **2017**. Lessons from inter-regn communication for the development of novel, ecofriendly pesticides. In: New Pesticides and Soil Sensors, Grumezescu AM (Ed), Elsevier Inc. Academic Press, p 1-45, ISBN 978-0-12-804299-1.

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- 8) Lazăr V., Colța T., **Măruțescu L.**, Dițu L.M., Chifiriuc M.C. 2013. New antiinfectious strategy based on antimicrobial and quorum sensing inhibitors from vegetal extracts and propolis. In *Microbial pathogens and strategies for combating them: science, technology and education*. Méndez-Vilas A (Ed), Badajoz: Formatex Research Center, p 1209-1219, ISBN 9788493984397.
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- 11) **Măruțescu L.** 2013. Studiul imunocitologic al celulelor sangvine. Capitol publicat în: *Principii și tehnici de analiză imunologică și moleculară utilizate în laboratorul clinic* (coordonatori: G. Mihăescu, M.C. Chifiriuc, V. Lazăr), Editura Universității din București, p. 178-199. ISBN: 978-606-16-0264-3.

(V) BREVETE SI CERERI DE BREVETE:

- 1) Socoteanu Greta Mihaela; Vodă Raluca Diana; Vișinescu Diana Beatrice; Calderon-Moreno Jose-Maria; Atkinson Irina; Culiță Daniela Cristina; Popa Marcela; **Măruțescu Luminița Gabriela**; Chifiriuc Mariana Carmen; Carp Oana. Procedeu de obținere a unor materiale de ZnO dopate cu metale tranziționale și lantanide cu proprietăți bacteriostatice și bactericide, RO134046 (B1)
- 2) Bleotu Coralia; Chifiriuc Mariana Carmen; Manea Cristina; Matei Lilia; Dragu Laura Denisa; Alexiu Irina Daniela; Popa Marcela; Diaconu Carmen Cristina; Economescu Chivu Mihaela; Neagu Ana Iulia; **Măruțescu Luminița Gabriela**; Alexandru Georgeta; Necula Laura

- Georgiana; Mambet Cristina; Suci Alexandru; Crișan Iuliana; Curuțiu Carmen; Burlibasa Liliana; Constantin Nicoleta; Lazăr Veronica. Procedeu de obținere a unui extract total concentrat de rostopască () cu activitate antimicrobiană, antivirală, antitumorală și imunomodulatoare, RO134092 (A2)
- 3) Apostol Theodora - Venera; Bărbuceanu Ștefania Felicia; Socea Laura Ileana; Șaramet Ioana; Drăghici Constantin; Rădulescu Valeria; Chifiriuc Mariana-Carmen; **Măruțescu Luminița Gabriela**; Olaru Octavian Tudorel; Nițulescu George Mihai. Derivați de 4-izopropil-1,3-oxazol- 5(-onă care conțin un substituent diarilsulfonil în poziția 2 cu acțiune antimicrobiană, RO134367 (A0)
- 4) Chifiriuc Carmen Mariana; Bleotu Coralia; Manea Cristina; **Marutescu Luminița Gabriela**; Matei Lilia; Dragu Laura Denisa; Alexiu Irina Daniela; Diaconu Carmen Cristina; Economescu Chivu Mihaela; Neagu Iulia Ana; Lazăr Veronica; Alexandru Georgeta; Pitică Ioana Mădălina; Ataman Marius; Suci Alexandru; Crișan Iuliana; Curutiu Carmen; Burlibasa Liliana; Constantin Nicoleta; Popa Marcela. Procedeu de obținere a unui extract total concentrat de cătină roșie () cu activitate antimicrobiană, antivirală, imunomodulatoare și antiproliferativă, RO134091 (A2)
- 5) Vlad Ilinca Margareta; Limban Carmen; Missir Alexandru Vasile; Morusciag Laurențiu; Nuță Diana Camelia; Dumitrașcu Florea; Chifiriuc Mariana Carmen; Popa Marcela; **Măruțescu Luminița Gabriela**; Căproiu Miron Teodor; Dinu Pîrvu Cristina Elena; Costea Teodora; Ancuceanu Viorel Robert; Gîrd Cerasela Elena; Anuța Valentina; Velescu Bruno Ștefan. Derivați ai O - aril- carbamoil - oximino - fluorenilui, compoziție farmaceutică ce îi conține și utilizarea acestora, RO134432 (A0)
- 6) Lupșa Mădălina; Popa Marcela; Chifiriuc Mariana Carmen; **Măruțescu Luminița Gabriela**; Bădică Petre; Batalu Nicolae-Dan; Grigoroșcuță Mihai Alexandru; Burdușel Mihail; Aldica Gheorghe Virgil. Apă de gură pe bază de clorhexidină și MgB₂ ca ingrediente active, cu efect sinergic împotriva colonizării microbiene și formării plăcii dentare RO134808 (A0)
- 7) **Marutescu Luminița Gabriela**; Velican Alexandra Mihaela; Popa Marcela; Kamerzan Crina Maria; Chifiriuc Mariana-Carmen Metodă rapidă de diagnostic microbiologic și de determinare a sensibilității la antibiotice a bacililor gram-negativi uropatogeni cu ajutorul citometriei in flux, RO135083 (A2)

(VI) PARTICIPĂRI LA CONFERINȚE INTERNAȚIONALE

Comunicări orale

- 1) Mitache M, **Marutescu** L, Nicolescu O, Gheroghe I, Hassanzadeh E, Rusu E, Curutiu C, Chifriuc C. Resistance features in bacterial strains isolated from the hospital environment before and during COVID-19. 6th International Conference on Prevention & Infection Control (ICPIC 2021), online 03.09.2021, prezentare orală

- 2) **Măruțescu L.** Sample preparation for flow cytometry analysis. *Immune Modulation Certificate For Post Graduate Students Enabled by Blended Learning* IMCert, online 18-23.12.2021, prezentare online.
- 3) **Măruțescu L.** Environment, Infection, sepsis, immune exhaustion. *Immune Modulation Certificate For Post Graduate Students Enabled by Blended Learning* IMCert, online 18-23.12.2021, prezentare online.
- 4) **Marutescu L.** Nanotechnology-based approaches in biomedical applications. The annual international conference of the RSBMB, 25 - 27 September 2024 (Keynote Speaker)
- 5) **Marutescu L.** Chifriuc MC. Rapid detection of pathogens and resistance – contribution of flow cytometry. *Biodynamics -A Transdisciplinary Approach*. 19-21.05.2022

Poster

- 1) **Măruțescu L.**, Enea A., Antoniadis N.M., Dragu E., Popa M., Costea D.A., Neculae M., Codrici E., Ristoiu V., Lazăr V., Chifiriuc M.C., Grigore R., Ancuta P. Longitudinal Analysis of SARS-CoV-2 Immunity in Patients with Head and Neck Cancer. Poster, 7th European Congress of Immunology, Dublin, Ireland, 1-4 September 2024
- 2) Pindaru A., Chifiriuc M.C., Popa M., **Măruțescu L.** Label-free flow cytometry for fast evaluation of surface disinfectants bactericidal efficacy. poster, abstract ID 08433, 34th, European Congress of Clinical Microbiology and Infectious Diseases, 27-30 April 2024 in Barcelona, Spain.
- 3) **Măruțescu L.**, Popa M., Pindaru A., Chifiriuc M.C. Label-free flow cytometry for fast evaluation of surface disinfectants bactericidal efficacy. Pindaru A., Chifiriuc M.C., poster, abstract ID 203, CYTO 2024, Edinburgh, Scotland.
- 4) **Luminița Măruțescu***, Alexandru Enea*, Elena Dragu, Marcela Popa, Diana Antonia Costea, Marian Neculae, Carmen Chifiriuc, Elena Codrici, Violeta Ristoiu, Veronica Lazăr, Raluca Grigore*, Petronela Ancuța. SARS-CoV-2 Humoral Immunity in a Cohort of Patients with Head and Neck Carcinoma. Summer Innate Immunology Conference, 7-8 September 2022, Cluj.
- 5) **Luminița Măruțescu***, Alexandru Enea*, Elena Dragu, Marcela Popa, Diana Antonia Costea, Marian Neculae, Carmen Chifiriuc, Elena Codrici, Violeta Ristoiu, Veronica Lazăr, Raluca Grigore*, Petronela Ancuța. SARS-CoV-2 Humoral Immunity in a Cohort of Patients with Head and Neck Carcinoma, Association for Molecular Pathology Europe Congress, June 18–20, 2023, Milan, Italy
- 6) Zarafu I, Ioniță P, Marinescu M, Avramescu S, Popa M, **Măruțescu L**, Anastasiu P, Chifiriuc MC. Influence of aqueous extracts of three plant species on microbial growth in planktonic and biofilm state. Joint ESENIAS and DIAS Scientific Conference and 8th ESENIAS Workshop, 26-28.09.2018, Bucharest.
- 7) Zarafu I, Ioniță P, Marinescu M, Avramescu S, Popa M, **Măruțescu L**, Chifiriuc MC, Anastasiu P. Bioevaluation of the antimicrobial properties of Berberis vulgaris extracts. Joint ESENIAS and DIAS Scientific Conference and 8th ESENIAS Workshop, 26-28.09.2018, Bucharest.

- 8) Zarafu I, Ioniță P, Marinescu M, Popa M, **Măruțescu** L, Chifiriuc MC, Anastasiu P. Bioevaluation of *Cuscuta campestris* total extracts for potential therapeutic applications. Joint ESENIAS and DIAS Scientific Conference and 8th ESENIAS Workshop, 26-28.09.2018, Bucharest
- 9) Gheorghe I, Barbu I, Surleac M, Popa L, Paraschiv S, Popa M, Grădișteanu G, Măruțescu L, Talapan D, Banciu A, Stoica C, Gheorghe S, Irina L, Niță Lazăr M, Muntean A, Oțelea D, Popa MI, Chifiriuc MC. Tracking down multidrug-resistant *Acinetobacter baumannii* isolates from hospital to the aquatic environment via the wastewater network. 31st European Congress of Clinical Microbiology & Infectious Diseases, online 09-12.07.2021, poster
- 10) Mitache MM, Banu O, Borcan E, Gheorghe I, **Măruțescu** L, Popa M, Predescu M, Rusu E, Chifiriuc MC. Resistance and virulence patterns in Gram negative and Gram positive rods isolated from the hospital environment in Bucharest, Romania. 11th Healthcare Infection Society (HIS) International Conference, 26-28.11.2018 Liverpool, England.
- 11) Cristea VC, Gheorghe I, Holban A, **Măruțescu** L, Popa M, Grădișteanu G, Bleotu C, Lazăr V, Chifiriuc MC. Antimicrobial resistance and virulence features in *Salmonella* sp. strains isolated from community-acquired infections. 28th European Congress of Clinical Microbiology and Infectious Diseases, 21-24.04.2018, Madrid, Spain.
- 12) Gheorghe I, **Măruțescu** L, Popa M, Hithman N, Cristea VC, Trușcă BS, Borcan E, Ghiță MC, Chifiriuc MC, Lazăr V. Resistance and virulence markers in carbapenem-resistant *Acinetobacter baumannii* community acquired and nosocomial isolates. 28th European Congress of Clinical Microbiology and Infectious Diseases, 21-24.04.2018, Madrid, Spain.
- 13) Velican A, Kamerzan C, **Măruțescu** L, Cristea V, Angheliescu CM, Lazăr V, Chifiriuc MC. Rapid flow cytometry assay for the detection and antibiotic susceptibility assay of *Escherichia coli* in stimulated urine positive samples. 28th European Congress of Clinical Microbiology and Infectious Diseases, 21-24.04.2018, Madrid, Spain.
- 14) Sadik Shalal O, Chifiriuc MC, Almahdawy OT, Alkurjia D, Ditu LM, **Măruțescu** L, Popa M, Lazăr V, Banu O, Ioniță P, Zarafu I. In vitro assay of gold nano-particles anti-fungal activity against planktonic and adherent 12 *Candida albicans* strains, 28th European Congress of Clinical Microbiology and Infectious Diseases, 21-24.04.2018, Madrid, Spain.
- 15) Almahdawy OT, Badica P, Batalu D, Gheorghe I, Popa M, Sadik Shalal O, Alkurjia D, Banu O, **Măruțescu** L, Mihăescu G, Chifiriuc C. In vitro activity of novel inorganic nanoparticles based on halogenated magnesium salts on MRSA cells in planktonic and adherent growth state, 28th European Congress of Clinical Microbiology and Infectious Diseases, 21-24.04.2018, Madrid, Spain.
- 16) Alexiu I, Matei L, Pitica IM, Dragu D, Popa M, **Măruțescu** L, Coman C, Economescu M, Necula L, Mambert C, Neagu AI, Diaconu CC, Crișan I, Bleotu C. Three medicinal plants tested for their antimicrobial and antiviral activity, 2nd World Congress and Expo on Traditional and Alternative Medicine, 14-16.06.2018, Roma Italia.
- 17) Popa M, **Măruțescu** L, Bawie Najee H, Oprea E, Bleotu C, Kamerzan C, Chifiriuc MC, Lazăr V. *Carum carvi* and *Anethum graveolens* essential oils physico-chemical

characterization and potential applications in the periodontal disease treatment, The Joint Congress of the 19th International Symposium on Gnotobiology, the 50th Congress of Japanese Association of Germfree Life and Gnotobiology and the 39th Congress of the Society for Microbial Ecology and Disease, 07-10.06.2017 Tokyo, Japonia

18) Ciubuca B, C. Kamerzan, M. Chifiriuc, O. Banu, P. Sorina, V. Lazar, L. **Marutescu**, Development and sequential analysis of a new multi-agent, anti-acne formulation based on plant-derived antimicrobial and anti-inflammatory compounds. EV0636, ECCMID 2016 9-12 Apr., Amsterdam, The Netherlands

19) Banu O., Gheorghe I., Czobor I., **Marutescu L.**, Cotar A.I., Mihai M., Holban A.M., Lazar V., Chifiriuc M.C. Comparative molecular characterization of SCCmec among *Staphylococcus aureus* clinical strains isolated from chronic ulcers and infections occurred in patients with cardiovascular surgery, 25th ECCMID, Copenhagen, Denmark 25:04:2015 - 28:04:2015

20) Chifiriuc M.C., Sorescu G., Popa R., Borcan E., Vasile L., **Marutescu L.**, Popa C., Proficiency of Romanian laboratories to perform microbial identification and susceptibility testing results of participation in the external quality assessment schemes provided by CALILAB in 2013, 24th European Congress of Microbiology and Infectious Diseases, Barcelona/ Spania, 10-13 mai 2014

21) Iordache F., Holban A.M., Curutiu C., Lazar V., Dițu L.M., **Marutescu L.**, Chifiriuc C.M. Modulation of the expression of adhesion and inflammatory response in endothelial cells by *Pseudomonas aeruginosa* quorum-sensing molecules. 24th European Congress of Microbiology and Infectious Diseases, Barcelona/ Spania, 10-13 mai, 2014

22) Holban A. Bleotu C., Chifiriuc M., Ditu L., **Marutescu L.**, Curutiu C, Lazar V., Phenotypical and gene expression study of the impact of *Pseudomonas aeruginosa* culture fractions on the human mesenchymal stem cells viability and cytokine profile, 24th European Congress of Microbiology and Infectious Diseases, Barcelona/ Spania, 10-13 mai, 2014

23) Ditu L.M., Chifiriuc M.C., Bleotu C., Holban A.M., Curutiu C., **Marutescu L.**, Ficai A., Mihaescu G. Assessment of the anti-adherence and anti-biofilm activity of novel biocompatible PE and PVC polymers. 24th European Congress of Microbiology and Infectious Diseases, Barcelona/ Spania, 10-13 mai 2014, poster.

24) Sarbu I., Vassu T., Stoica I., **Marutescu L.**, Chifiriuc C., Nedelcu I., Pelinescu D., 2014, The influence of lactic acid bacteria strains on the antifungal resistance mechanisms of *Candida albicans* strains, 11th Symposium on Lactic Acid Bacteria, Egmond Aan Zee/Olanda, 31 august-04 septembrie

25) Ionescu R., Sarbu I., Vassu T., Stoica I., Ditu L.M., **Marutescu L.**, Chifiriuc C.M., Petrut S., Pelinescu D., 2014, Study of some lactic acid bacteria strains probiotic effect for use in gastrointestinal infections, 3rd International Conference on Clinical Microbiology and Microbial Genomics, Valencia/ Spania, 24-26 septembrie

(VII) PARTICIPĂRI LA CONFERINȚE NAȚIONALE

Conferințe plenare

- 1) **Măruțescu L.** Metode de detectare și cuantificare a rezistenței la antibiotice în ape reziduale. Conferința anuală a Institutului Național de Cercetare-Dezvoltare Medico-Militară "Cantacuzino", 20.11.2018, București.

Comunicări orale

- 1) **Marutescu L.** Advanced Principles of above 5 colors flow cytometry. Workshop Design and validation of panels for Multi-color flow cytometry, 14 November 2024, București
- 2) **Măruțescu L,** Popa M, Pîndaru A, Chifiriuc MC. Citometria în flux pentru evaluarea rapidă a eficacității bactericide a dezinfectanților. Al XVII-lea Congres Național de Citometrie din România, 16-17 mai 2024, București
- 3) Tihăuan B.M., **Măruțescu L.,** Grădișteanu Pîrcălăbioru G., Axinie M., Perișoară A., Chifiriuc M.C. Evaluarea in vitro a biocompatibilității și a răspunsului inflamator al unui nou hidrogel hibrid încărcat cu canabidiol, prezentare orală, Al XVII-lea Congres Național de Citometrie din România, 16-17 mai 2024, București.
- 4) **Măruțescu L,** Popa M, Pîndaru A, Chifiriuc C. Label-free flow cytometry for fast evaluation of surface disinfectants bactericidal efficacy. 2024. Al XVII-lea Congres Național de Citometrie, 16-17 Mai, București.
- 5) **Măruțescu L.** Dezvoltarea unei metode rapide bazate pe citometria în flux pentru testarea eficacității dezinfectanților împotriva agenților nosocomiali. Al XVI-lea Congres Național de Citometrie 25-26/05. 2023. București
- 6) **Măruțescu L.** Interacțiunea in vitro a celulelor mononucleare din sângele periferic cu biofilmele de *K. pneumoniae*. Al XVI-lea Congres Național de Citometrie 25-26/05. 2023. București
- 7) **Măruțescu L.** Velican A, Banu O, Borcan E, Popa M, Chifiriuc C. Rapid flow cytometric method for microbial detection and antibiotic susceptibility assay directly from clinical specimens, Al XII-lea Congres Național de Citometrie 30-31 mai, 2019, București
- 8) Popa M, Chifiriuc MC, Postolache C, **Măruțescu L,** Chifiriuc MC. Fundamentarea unor strategii de intervenție asupra gunoierului de grajd pentru diminuarea riscului asociat rezistenței la antibiotice - Proiectul ARMIS. Simpozionul cercetătorilor, 17-18.04.2021 online, prezentare orală.
- 9) Dinu A, Gheorghe I, Talapan D, Miliță N, Romascu L, Popa M, **Măruțescu L,** Chifiriuc MC. Rezistența la antibiotice a tulpinilor de *Acinetobacter baumannii* izolate din gunoi de grajd transformat în biogaz și compostat. Simpozionul cercetătorilor, online 17-18.04.2021, prezentare orală.
- 10) Popa LI, Gheorghe I, Barbu Czobor I, Surleac M, Paraschiv S, **Măruțescu L,** Popa M, Pîrcălăbioru G, Talapan D, Niță M, Streinu-Cercel A, Oțelea D, Muntean A, Popa MI, Dragomirescu C, Chifiriuc MC. Persistența unei clone *Klebsiella pneumoniae* ST101 multi-

rezistente din mediul clinic în influentul și efluentul spitalului după clorinare. Conferința Științifică de Primăvară a AOSR, online 13-14.05.2021, prezentare orală.

11) Chifiriuc MC, **Măruțescu** L. Rezistența la antibiotice în apele uzate: riscuri de transmitere la angajați și la rezidenții din proximitatea stațiilor de tratare a apelor reziduale – AWARE-WWTP. Simpozionul cercetătorilor, online 17-18.04.2021, prezentare orală.

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