

Curriculum Vitae

Personal information

First name(s) / Surname(s)

Corina BRADU



Address(es) University of Bucharest, Faculty of Biology, Department of Systems Ecology and Sustainability
Research Center for Environmental Protection and Waste Management (PROTMED)
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Nationality Romanian

Date of birth 31.08.1968

Gender F

Occupational field

Chemistry: Environmental Chemistry

Work experience

Oct 2023 - present	Feb.2018-Sept 2023	2005-2018	1995-2005	1992-1995
Professor / senior researcher (category A)	Associated Professor / senior researcher (category A)	Lecturer / researcher (category C&B)	Assistant / researcher (category D)	Assistant
University of Bucharest, Faculty of Biology Research Center for Environmental Protection and Waste Management		University of Bucharest, Faculty of Chemistry / Faculty of Biology Research Center for Environmental Protection and Waste Management	University of Bucharest, Faculty of Chemistry Research Center for Environmental Protection and Waste Management	University of Bucharest, Faculty of Chemistry
☐ Director of the Research Center for Environmental Protection and Waste Recovery (UB-PROTMED) (2014-present) ☐ Director of the Competence Center for the Protection and Restoration of Ecosystems in the Lower Danube Basin and the Black Sea Coastal Zone – ResPonSE, University of Bucharest (2024-present)				
Main activities and responsibilities: (i) <i>Teaching:</i> bachelor and master courses; coordinator of M.Sc. research thesis; development of experiments for instructional laboratory; (ii) <i>Research in:</i> Water and wastewater treatment by advanced oxidation processes, adsorption and liquid phase catalytic reduction processes; Materials synthesis (catalysts, sorbents etc.); Analytical techniques for assessing the chemical and ecological status of water bodies.				

Education and training

Dates	2022	2006	1992
Title of qualification awarded	Habilitation in Environmental Science	PhD degree in chemistry	Licence in chemistry and physics
Principal subjects/occupational skills covered	<i>Non-conventional water treatment processes for sustainable use of water resources</i>	Catalysts preparation; Removal of organic pollutant from water by advanced oxidation processes	Dissertation thesis in organic chemistry
Name and type of organisation providing education and training	University of Bucharest, Faculty of Biology, Romania	University of Bucharest, Faculty of Chemistry, Romania	University of Bucharest, Faculty of Chemistry, Romania

Personal skills and competences	
Mother tongue(s)	Romanian
Other language(s)	French C2; English C1
Organisational skills and competences	- Project management : 2 national projects - as project manager; 5 national projects - partner responsible - Member of several Exam boards (admission and graduation) for Bachelor and Master Programmes (over 60 participations). - Member of Doctoral School in the Field of Ecology - Member of the doctoral committees for PhD students of Doctoral Schools from University of Bucharest; University <i>Politehnica</i> of Bucharest, and University Franche-Comté, Besançon (2010-present) - Member of the Faculty of Chemistry Council (2007-2014) - Member of the Faculty of Biology Council (2023 – present) - Member of the Commission of Quality Management of Faculty of Biology (2022-present). - Member of the organizing committee of: (i) Symposiums for young researchers from the Faculties of Geography, Biology and Chemistry „<i>Integrated Environmental Research and Sustainable Development</i>” under the auspices of the Romanian Academy, the National Institute of Geography and the Research Centre PROTMED (4 editions 2007-2010); (ii) Two summer schools: „<i>Integrated environmental monitoring</i>” April 15-21, 2002, Sinaia Research Station of the University of Bucharest (funded through the project D196 - CNCISIS) and „<i>Environmental integrated monitoring. Pollution prevention and control</i>”, July 2007, Buzău (financed through a CEEEX M3 project). (iii) A bilateral United State (Penn State University) – Romania (University of Bucharest) educational program for undergraduate students, <i>Connecting Humans and Nature through Conservation Experiences</i> – CHANCE (2021 and 2022). (iv) Short-term blended learning program in the CIVIS academic university network, ERASMUS+ "Environmental challenges facing the Danube River", (3 editions 2023, 2024 and 2025) - Member in the <i>Reviewing committee</i> of the <i>International Conference on Challenges and Solutions related to Xenobiotics and Antimicrobial Resistance in the Framework of Urban WasteWater Reuse: Towards a Blue Circle Society</i> – XENOWAC 2018, Cipru - Member in the management committee of 2 COST actions i) ES1403 – NEREUS New and emerging challenges and opportunities in wastewater reuse 2017-2018; (ii) CA19110 Plasma applications for smart and sustainable agriculture 2020-2021. - Guest Editor for Catalysts MDPI (2019) and for Molecules MDPI (2021); Topic Editor at Catalysts MDPI (2020-present)
Technical skills and competences	Laboratory experience includes: development of water treatment processes, catalyst preparation techniques; catalytic processes; analytical techniques (e.g.: Gas chromatography, Liquid chromatography; UV-Vis and IR spectroscopy, Atomic absorption spectrometry etc.)
Scholarships and specialization programs	- Intensive course “Knowledge necessary to certify the quality of developer of impact studies and environmental balance sheets” organized by the Institute of Environmental Research and Engineering (ICIM) and the European Center for Professional Technical Competence (CECPT) – Bucharest 1997, with a duration of 30 days; - Visiting professor/researcher - Three-month scholarship, 11.09.2017 – 10.12.2017, at Chrono-Environnement, University of Bourgogne Franche-Comté – Researcher/Teacher Mobility Support Program, Bourgogne Franche-Comté Region, France.

Research projects	7 national project as principal investigator, 2 of which as coordinator: - PNCDI-IV/5.9.4: Support for the development and consolidation of DANUBIUS-Ro (450920/31.07.2025) (2025-2028) - partner - PNRR-C9-I5: Integrated research and sustainable solutions to protect and restore Lower Danube Basin and coastal Black Sea ecosystems (Contract no. 760010/30.12.2022) (2023-2025) – coordinator - PNDR-SM16.1/16.1a: PUROWAX: Supporting Beekeepers to Obtain Pure Beeswax for Sustainable Agriculture and Improving Bee Health (No:C16100000011860500016/2021) (2021-2023) – partner - PN-III-P2-2.1-PTE-2019-0222: Treatment of water from sources contaminated with nitrates and chlorinated organic compounds using integrated catalytic reduction/oxidation and biofiltration processes, DENOX (26PTE/2020) (2020-2022) - partner - PN-III-PNCDI: Innovative nanotechnologies based on polymers for obtaining new advanced materials, NAPOLI (40 PCCDI /2018) (2018-2020) - partner - PN-II-PCCA: Integrated process for the removal of nitrates and organochlorine pesticides from natural water contaminated as a result of agricultural practices -INTEGRATREAT (100PCCA/2012) (2011-2015) – coordinator - PN-II-4 Partnerships in priority areas: Biosensors based on covalently immobilized enzymes on polymers, for monitoring nitrates and nitrites in drinking water (2008-2011) – partner - CEEX Program - Module I: MTBE (methyl tert-butyl ether) degradation technologies from water intended for human consumption (2005 -2008) – partner - Horizon 2000: Photochemical and photocatalytic processes for the purification of wastewater with organic load (1999-2001) - partner 5 international projects as team member (i.e. BiodivERsA project “Understanding cross-habitat linkages between blue and green infrastructure to optimize management of biodiversity, ecosystem services and multiple human uses” 2016-2019); over 45 national projects – as team member
Scientific publications and Communications	66 articles (61 ISI); 8 book chapters; 4 patents, 2 Special Issues coordinated 43 oral presentations (3 invited); 52 poster presentations; 12 articles in proceedings (3 ISI).
Bibliometric indicators	over 2550 citations; h-index: 23 (<i>Web of Science Core Collection</i>) / 25 (<i>Scopus</i>)

Selection of 10 relevant publications

JCR Articles:

1. Bilea, F., **Bradu, C.**, Cicirma, M., Medvedovici, A.V., Magureanu, M., *Plasma treatment of sulfamethoxazole contaminated water: Intermediate products, toxicity assessment and potential agricultural reuse*, Science of the Total Environment, 909 (2024) art. no. 168524.
2. Crini G., Cosentino C., **Bradu C.**, Fourmentin M., Cosentino C., Torri G., Ruzimuradov O., Alaton I. A., Tomei M. C., Derco J., Barhaumi M., Prosen H., Malinović B.N., Vrabel M., Huq M. M., Soltan J., Lichtfouse E., Morin-Crini N. *Innovative technologies to remove alkylphenols from wastewater: a review*, Environmental Chemistry Letters 20 (2022) p. 2597-2628.
3. Magureanu M., Bilea F., **Bradu C.**, Hong, D. *A review on non-thermal plasma treatment of water contaminated with antibiotics*, Journal of Hazardous Materials 417 (2021) art. no. 125481.
4. **Bradu C.**, Kutasi K., Magureanu M., Puac N., Živković S. *Reactive nitrogen species in plasma-activated water: generation, chemistry and application in agriculture*, Journal of Physics D: Applied Physics 53 (2020) art. no. 223001. (According to Web of Science, this highly cited paper received enough citation to place it in the top of 1% of the academic field of Physics in 2020.)
5. **Bradu C.***, Căpăț C., Papa F., Frunza L., Olaru E.A., Crini G., Morin-Crini N., Euvrard E., Balint I., Zgura I., Munteanu C. *Pd-Cu catalysts supported on anion exchange resin for the simultaneous catalytic reduction of nitrate ions and reductive dehalogenation of organochlorinated pollutants from water*, Applied Catalysis A: General 570 (2019) p. 120–129.
6. **Bradu C.**, Magureanu M., Parvulescu V.I., *Degradation of the chlorophenoxyacetic herbicide 2,4-D by plasma-ozonation system*. Journal of Hazardous Materials 336 (2017) p. 52-56.
7. Papa F., Balint I., Negrița C., Olaru E. A., Zgura I., **Bradu C.***, *Supported Pd-Cu Nanoparticles for Water Phase Reduction of Nitrates. Influence of the Support and of the pH Conditions*, Industrial & Engineering Chemistry Research 53 (2014) p. 19094–19103.

Book chapters:

8. **Bradu C.**, Olaru E.A., Magureanu M. et Crini G. *Procédés d'oxydation avancée pour le traitement des eaux*, In : Morin-Crini N.– Crini G (EDs), *Eaux industrielles contaminées - Réglementation, paramètres chimiques et biologiques & procédés d'épuration innovants*- (Collection : Pratiques & techniques, Série : Environnement et Développement durable), Presses universitaires de Franche-Comté, 2017, (ISBN : 978-2-84867-589-3) p. 417-445
9. Morin-Crini N., Lichtfouse E., Fourmentin M., Lado Ribeiro A.R., Noutsopoulos C., Mapelli F., Fenyvesi E., Gurgel M., Vieira A., Picos-Corrales L. A., Moreno-Piraján J.C., Giraldo L., Sohajda T., Mahmudul M., Soltan H., Torri G., Magureanu M., **Bradu C.**, Crini G. *Remediation of Emerging Contaminants*, In: Morin-Crini N., Lichtfouse E., Crini G. (Eds), *Emerging Contaminants Vol. 2. Environmental Chemistry for a Sustainable World*, vol 66. Springer, 2021. (ISBN: 978-3-030-69089-2 / eBook ISBN: 978-3-030-69090-8) p. 1-106.

Patents:

Bradu C., Căpăț Constantin, Olaru Elena-Alina, Papa Florica, Balint Ioan, State Răzvan, Frunză Ligia, Zgură Irina, *Catalyst and process for treating water polluted with nitrates and chlorinated organic compounds* – OSIM Patent nr. 132035 B1, Int.Cl. B01J23/44, C02F 9/04, 29.11.2019

25.09.2025