Monica Magureanu - Curriculum Vitae

Personal information

Date and place of birth, nationality: 14.10.1972, Bucharest, Romanian
Title: Doctor in Physics, since 2002
Affiliation: National Institute for Lasers, Plasma and Radiation Physics (INFLPR),
Atomistilor Str. 409, PO Box MG-36, 077125 Magurele-Bucharest, Romania
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Education

1999 - 2002 – PhD (Doctor in Natural Sciences – Experimental Physics) – Institute of Low Temperature Plasma Physics (INP), Ernst-Moritz-Arndt-Universitaet Greifswald, Germany
Title of PhD Thesis: "Methane conversion into higher hydrocarbons in a microwave plasma"
1996 - 1997 – Master of Sciences - University of Bucharest, Faculty of Physics, Department of Optics, Spectroscopy, Plasma and Lasers
MSc Dissertation: "Interaction of electron beams with high temperature superconductors"
1991 - 1996 – Bachelor of Science - University of Bucharest, Faculty of Physics
Title of Diploma Thesis "Non-thermal processes for X-ray emission in plasma focus"

Professional experience and jobs

2002 - present – Scientific Researcher in INFLPR (since 2009 – senior researcher I)
coordinates the Plasma Chemistry team in the Plasma Chemistry and Advanced Functional Materials Group in INFLPR, Plasma Physics and Nuclear Fusion Laboratory
1999 - 2002 – PhD Student - Institute of Low Temperature Plasma Physics (INP), Greifswald, Germany
1996 - 1999 – Research Assistant in INFLPR

Scientific activity and results

Main research topics: Plasma physics, Electrical discharges in contact with liquid, Nonthermal plasma at atmospheric pressure for environmental applications (water and gas treatment), Plasma chemistry, Plasma-assisted catalysis, Plasma treatment of seeds, Plasma treatment of materials

Other scientific activities:

- Supervision of students
- Member in the jury for PhD and Master students (1 – national, 5 – international)
- Reviewer for numerous journals of Elsevier, Wiley, IOP (IOP Trusted Reviewer), Springer
- Evaluator for international projects (ERC, ANR-France, Estonian Research Council)
- President of the Plasma Physics Section of the Romanian Physics Society, since 2023

Publications:

- 54 ISI articles, 9 articles in proceedings
- 5 book chapters (Elsevier, 2008; Wiley, 2012; Taylor and Francis, 2016; Springer Nature, 2021)
- co-editor for a book (Wiley, 2012)
- 13 invited lectures at international conferences (EEM2025, Bijeljina, Bosnia and Herzegovina; IBWAP 2025, Constanta, Romania; GD2023, Greifswald, Germany; EEM2023, Jahorina, Bosnia and Herzegovina; IBWAP 2022, Constanta, Romania; BPU11,

2022, Belgrade, Sebia; AAPPS-DPP 2021; CESPC-8, 2019, Gozd Martuljek, Slovenia; ICPL 2017, Prague, Czech Republic; WAAPT 2016, Ljubljana, Slovenia; XXII ESCAPMPIG, 2014, Greifswald, Germany; NICE-10, 2003, Frankfurt, Germany)
- 3 invited seminars (EPFL Lausanne, 2004; GREMI Orleans, 2018, 2019)
- 3 patent requests

Citations: > 3100 (ISI Web of Science); average per item 51; H index 29
- 3 highly cited papers, according to Web of Science, top 1% in the academic fields of: Physics (C. Bradu et al., J. Phys. D: Appl. Phys. 53 (2020) 223001), Engineering (M. Magureanu et al., J. Hazard. Mater. 417 (2021) 125481), Chemistry (N. Morin-Crini et al., Environ. Chem. Lett. 20 (2022) 1333-1375); for the first two M. Magureanu is the corresponding author

Guest Editor :
- Plasma Processes and Polymers (Wiley) – Special Issue "Plasma and Agriculture III", 2025
- Journal of Physics D: Applied Physics (IOP Science) – Special Issue on the Fundamentals and Applications of Plasmas in Agriculture and Food Technologies, 2025
- Catalysts (MDPI) – Special Issue "Plasma-Catalysis for Environmental and Energy-Related Applications", 2022

Research projects:
- 7 national projects as coordinator, 1 national project as responsible for the INFLPR team
- 3 international bilateral projects, as coordinator of the Romanian team (Romania-Switzerland, SCOPES Project, 2005-2008; Romania-France, Brancusi-PHC Project 2019-2021; France-Romania, IRP Project 2024-2028)
- COST Action CA19110 "Plasma applications for smart and sustainable agriculture", management committee member and Work Group vice-leader
- participation in several other research projects as key researcher

Award: The Romanian Academy award "Dragomir Hurmuzescu" in the field of physics, 2022.

22.07.2025

Articles:

55. F. Bilea, C. Bradu, A.V. Medvedovici, D. Hong, M. Magureanu, Pulsed corona discharge: an advanced treatment method for antibiotic-contaminated water, Journal of Physics D: Applied Physics 57 (2024) 435205, https://doi.org/10.1088/1361-6463/ad6882

54. F. Bilea, M. Garcia-Vaquero, M. Magureanu, I. Mihaila, V. Mildažienė, M. Mozetič, J. Pawlat, G. Primc, N. Puac, E. Robert, A. Stancampiano, I. Topala, R. Žūkienė, Non-Thermal Plasma as Environmentally-Friendly Technology for Agriculture: A Review and Roadmap, Critical Reviews in Plant Sciences, 43 (2024) 428–486, https://doi.org/10.1080/07352689.2024.2410145

53. P. Cyganowski, D. Terefinko, A. Motyka-Pomagruk, W. Babinska-Wensierska, M.A. Khan, T. Klis, W. Sledz, E. Lojkowska, P. Jamroz, P. Pohl, M. Caban, M. Magureanu, A. Dzimitrowicz, The Potential of Cold Atmospheric Pressure Plasmas for the Direct Degradation of Organic Pollutants Derived from the Food Production Industry, Molecules 29 (2024) 2910, https://doi.org/10.3390/molecules29122910

52. F. Bilea, C. Bradu, M. Cicirma, A.V. Medvedovici, M. Magureanu, Plasma treatment of sulfamethoxazole contaminated water: Intermediate products, toxicity assessment and potential agricultural reuse, Science of the Total Environment 909 (2024) 168524, https://doi.org/10.1016/j.scitotenv.2023.168524

51. P. Brault, F. Bilea, M. Magureanu, C. Bradu, O. Aubry, H. Rabat, D. Hong, Plasma degradation of water organic pollutants: Ab-initio molecular dynamics simulations and experiments, Plasma Processes and Polymers, 20 (2023) 2300116, https://doi.org/10.1002/ppap.202300116

50. F. Bilea, T. Tian, M. Magureanu, H. Rabat, M.-A. Antoissi, O. Aubry, D. Hong, Removal of a mixture of antibiotics in water using non-thermal plasma, Plasma Processes and Polymers (2023) 2300020, https://doi.org/10.1002/ppap.202300020

49. I. Florescu, I. Radu, A. Teodoru, L. Gurau, C. Chireceanu, F. Bilea, M. Magureanu, Positive Effect Induced by Plasma Treatment of Seeds on the Agricultural Performance of Sunflower, Plants 12 (2023) 794. https://doi.org/10.3390/plants12040794

48. N. Morin-Crini, E. Lichtfouse, M. Fourmentin, A.R. Lado Ribeiro, C. Noutsopoulos, F. Mapelli, É. Fenyvesi, M. Gurgel Adeodato Vieira, L.A. Picos-Corrales, J.C. Moreno-Piraján, L. Giraldo, T. Sohajda, M. Mahmudul Huq, J. Soltan, G. Torri, M. Magureanu, C. Bradu, G. Crini, Removal of emerging contaminants from wastewater using advanced treatments. A review, Environmental Chemistry Letters 20 (2022) 1333-1375, https://doi.org/10.1007/s10311-021-01379-5

47. M. Magureanu, F. Bilea, C. Bradu, D. Hong, A review on non-thermal plasma treatment of water contaminated with antibiotics, Journal of Hazardous Materials 417 (2021) 125481, https://doi.org/10.1016/j.jhazmat.2021.125481

46. M. Magureanu, N.B. Mandache, C. Rizescu, C. Bucur, B. Cojocaru, I.C. Man, A. Primo, V.I. Parvulescu, H. Garcia, Engineering hydrogenation active sites on graphene oxide and N-

doped graphene by plasma treatment, Applied Catalysis B: Environmental 287 (2021) 119962, https://doi.org/10.1016/j.apcatb.2021.119962

45. M. Magureanu, N.B. Mandache, F. Gherendi, C. Rizescu, B. Cojocaru, A. Primo, H. Garcia, V.I. Parvulescu, Improvement of catalytic activity of graphene oxide by plasma treatment, Catalysis Today 366 (2021) 2–9, https://doi.org/10.1016/j.cattod.2020.07.022

44. P. Brault, M. Abraham, A. Bensebaa, O. Aubry, D. Hong, H. Rabat, M. Magureanu, Insight into plasma degradation of paracetamol in water using a reactive molecular dynamics approach, Journal of Applied Physics 129 (2021) 183304; doi: 10.1063/5.0043944

43. T. Tian, H. Rabat, M. Magureanu, O. Aubry, D. Hong, Electrical investigation of a pin-to-plane dielectric barrier discharge in contact with water, Journal of Applied Physics 130 (2021) 113301; https://doi.org/10.1063/5.0056654

42. M. Magureanu, C. Bradu, Catalysts: Special Issue on Plasma-Catalysis for Environmental and Energy-Related Applications, Catalysts 11 (2021) 1439; https://doi.org/10.3390/catal11121439

41. C. Bradu, K. Kutasi, M. Magureanu, N. Puač, S. Živković, Reactive nitrogen species in plasma-activated water: generation, chemistry and application in agriculture, Journal of Physics D: Applied Physics 53 (2020) 223001, https://doi.org/10.1088/1361-6463/ab795a

40. F. Bilea, C Bradu, M Magureanu, Potential of plasma treatment as water reclamation process for irrigation, Journal of Physics D: Applied Physics 53 (2020) 224002, https://doi.org/10.1088/1361-6463/ab7c05

39. F. Bilea, C. Bradu, N.B. Mandache, M. Magureanu, Characterization of the chemical activity of a pulsed corona discharge above water, Chemosphere 236 (2019) 124302, https://doi.org/10.1016/j.chemosphere.2019.07.033

38. Research regarding the impact of cold plasma treatment applied to wheat crop seeds, M. Gidea, R. Teodorescu, V. Tudor, C. Mihalascu, D. Mihalache, D. Burghila, C. Slave, M. Magureanu, Romanian Biotechnological Letters 24 (2019) 922-928, https://doi.org/10.25083/rbl/24.5/922.928

37. A. Primo, A. Franconetti, M. Magureanu, N. B. Mandache, I. C. Bucur, C. Rizescu, B. Cojocaru, V. I. Parvulescu, H. Garcia, Engineering active sites on reduced graphene oxide by hydrogen plasma irradiation: Mimicking bifunctional metal/supported catalysts in hydrogenation reactions, Green Chemistry 20 (2018), 2611-2623, https://doi.org/10.1039/C7GC03397D

36. Magureanu M., Sirbu R., Dobrin D., Gidea M., Stimulation of the Germination and Early Growth of Tomato Seeds by Non-thermal Plasma, Plasma Chemistry and Plasma Processing, 38 (2018) 989-1001, https://doi.org/10.1007/s11090-018-9916-0

35. M. Magureanu, C. Bradu, V.I. Parvulescu, Plasma processes for the treatment of water contaminated with harmful organic compounds, Journal of Physics D: Applied Physics 51 (2018) 313002, https://doi.org/10.1088/1361-6463/aacd9c

34. M. Magureanu, N.B. Mandache, C. Bradu, V.I. Parvulescu, High efficiency plasma treatment of water contaminated with organic compounds. Study of the degradation of ibuprofen, Plasma Processes and Polymers, 15 (2018) 1700201, https://doi.org/10.1002/ppap.201700201

33. C. Bradu, M. Magureanu, V.I. Parvulescu, Degradation of the chlorophenoxyacetic herbicide 2,4-D by plasma-ozonation system, Journal of Hazardous Materials 336 (2017) 52-56,
http://dx.doi.org/10.1016/j.jhazmat.2017.04.050

32. M. Magureanu, D. Dobrin, C. Bradu, F. Gherendi, N.B. Mandache, V.I. Parvulescu, New evidence on the formation of oxidizing species in corona discharge in contact with liquid and their reactions with organic compounds, Chemosphere 165 (2016) 507-514,
http://dx.doi.org/10.1016/j.chemosphere.2016.09.073

31. M. Magureanu, N.B. Mandache, V.I. Parvulescu, Degradation of pharmaceutical compounds in water by non-thermal plasma treatment, Water Research 81 (2015) 124-136,
http://dx.doi.org/10.1016/j.watres.2015.05.037

30. D. Dobrin, M. Magureanu, N.B. Mandache, M.-D. Ionita, The effect of non-thermal plasma treatment on wheat germination and early growth, Innovative Food Science and Emerging Technologies 29 (2015) 255–260, http://dx.doi.org/10.1016/j.ifset.2015.02.006

29. D. Dobrin, M. Magureanu, C. Bradu, N.B. Mandache, P. Ionita, V.I. Parvulescu, Degradation of methylparaben in water by corona plasma coupled with ozonation, Environmental Science and Pollution Research 21 (2014) 12190-12197, https://doi.org/10.1007/s11356-014-2964-y

28. A.L. Mihai, D. Dobrin, M. Măgureanu, M.E. Popa, Positive effect of non-thermal plasma treatment on radish seeds, Romanian Reports in Physics 66 (2014) 1110-1117

27. D. Dobrin, M. Magureanu, C. Bradu, N.B. Mandache, V.I. Parvulescu, Combination of non-thermal plasma and ozonation for the degradation of endocrine disrupting compounds in water, 2014, 2014 International Conference on Optimization of Electrical and Electronic Equipment, OPTIM 2014, 6850938, pp. 1047-1052, https://doi.org/10.1109/OPTIM.2014.6850938

26. D. Dobrin, C. Bradu, M. Magureanu, N.B. Mandache, V.I. Parvulescu, Degradation of diclofenac in water using a pulsed corona discharge, Chemical Engineering Journal 234 (2013) 389-396, http://dx.doi.org/10.1016/j.cej.2013.08.114

25. M. Magureanu, D. Dobrin, N.B. Mandache, C. Bradu, A. Medvedovici, V.I. Parvulescu, The mechanism of plasma destruction of enalapril and related metabolites in water, Plasma Processes and Polymers 10 (2013) 459-468, https://doi.org/10.1002/ppap.201200146

24. M. Magureanu, C. Bradu, D. Piroi, N.B. Mandache, V.I. Parvulescu, Pulsed corona discharge for degradation of methylene blue in water, Plasma Chemistry Plasma Processing 33 (2013) 51-64,
https://doi.org/10.1007/s11090-012-9422-8

23. M. Magureanu, D. Dobrin, N.B. Mandache, B. Cojocaru, V.I. Parvulescu, Toluene oxidation by non-thermal plasma combined with palladium catalysts, Frontiers in Chemistry, 1 (2013) 7,
https://doi.org/10.3389/fchem.2013.00007

22. M. Magureanu, D. Piroi, N.B. Mandache, C. Bradu, A. Medvedovici, V.I. Parvulescu, Degradation of pharmaceutical compounds in aqueous solution using non-thermal plasma, Proceedings of the International Conference on Optimisation of Electrical and Electronic Equipment, OPTIM 2012, 6231955, pp. 1375-1379, https://doi.org/10.1109/OPTIM.2012.6231955

21. M. Magureanu, D. Piroi, N.B. Mandache, V. David, A. Medvedovici, C. Bradu, V.I. Parvulescu, Degradation of antibiotics in water by non-thermal plasma treatment, Water Research 45 (2011) 3407-3416, https://doi.org/10.1016/j.watres.2011.03.057

20. M. Magureanu, D. Piroi, N.B. Mandache, V.I. Pârvulescu, V. Pârvulescu, B. Cojocaru, C. Cadigan, R. Richards, H. Daly, C. Hardacre, In situ study of ozone and hybrid plasma Ag-Al catalysts for the oxidation of toluene: Evidence of the nature of the active sites, Applied Catalysis B: Environmental 104 (2011) 84-90, https://doi.org/10.1016/j.apcatb.2011.02.025

19. M. Magureanu, D. Piroi, N.B. Mandache, V.I. Parvulescu, Toluene oxidation in a dielectric barrier discharge combined with heterogeneous catalysis, Romanian Reports in Physics, 56 (2011) 156-162,

18. D. Piroi, M. Magureanu, N.B. Mandache, V. David, V. Parvulescu, Pulsed dielectric barrier discharge generated at the gas-liquid interface for the degradation of the organic dye methyl red in aqueous solution, 2010, Proceedings of the International Conference on Optimisation of Electrical and Electronic Equipment, OPTIM 2010, 1323-1328, https://doi.org/10.1109/OPTIM.2010.5510325

17. M. Magureanu, D. Piroi, N.B. Mandache, V. David, A. Medvedovici, V.I. Parvulescu, Degradation of pharmaceutical compound pentoxifylline in water by non-thermal plasma treatment, Water Research 44 (2010) 3445-3453, https://doi.org/10.1016/j.watres.2010.03.020

16. M. Magureanu, D. Piroi, N.B. Mandache, V. Parvulescu, Decomposition of methylene blue in water using a dielectric barrier discharge: Optimization of the operating parameters, Journal of Applied Physics, 104 (2008) 103306, http://dx.doi.org/10.1063/1.3021452

15. M. Magureanu, D. Piroi, F. Gherendi, N.B. Mandache, V. Parvulescu, Decomposition of methylene blue in water by corona discharges, Plasma Chemistry and Plasma Processing 28 (2008) 677-688, https://doi.org/10.1007/s11090-008-9155-x

14. M. Magureanu, N.B. Mandache, V.I. Parvulescu, Chlorinated organic compounds decomposition in a dielectric barrier discharge, Plasma Chemistry and Plasma Processing 27 (2007) 679-690, https://doi.org/10.1007/s11090-007-9103-1

13. M. Magureanu, N.B. Mandache, V. Parvulescu, Degradation of organic dyes in water by electrical discharges, Plasma Chemistry and Plasma Processing 27 (2007) 589-598,
https://doi.org/10.1007/s11090-007-9087-x

12. M. Magureanu, N.B. Mandache, J. Hu, R. Richards, M. Florea, V.I. Parvulescu, Plasma-assisted catalysis total oxidation of trichloroethylene over gold nano-particles embedded in SBA-15 catalysts, Applied Catalysis B: Environmental, 76 (2007) 275-281, https://doi.org/10.1016/j.apcatb.2007.05.030

11. M. Magureanu, N.B. Mandache, V.I. Parvulescu, Ch. Subrahmanyam, A. Renken, L. Kiwi-Minsker, Improved performance of non-thermal plasma reactor during decomposition of trichloroethylene: Optimization of the reactor geometry and introduction of catalytic electrode, Applied Catalysis B: Environmental, 74 (2007) 270-277, https://doi.org/10.1016/j.apcatb.2007.02.019

10. Ch. Subrahmanyam, M. Magureanu, D. Laub, A. Renken, L. Kiwi-Minsker, Nonthermal plasma abatement of trichloroethylene enhanced by photocatalysis, Journal of Physical Chemistry C, 111 (2007) 4315-4318, https://doi.org/10.1021/jp066731o

9. M. Magureanu, N.B. Mandache, E. Gaigneaux, C. Paun, V.I. Parvulescu, Toluene oxidation in a plasma-catalytic system, Journal of Applied Physics 99 (2006) 123301, http://dx.doi.org/10.1063/1.2204353

8. Ch. Subrahmanyam, M. Magureanu, A. Renken, L. Kiwi-Minsker, Catalytic abatement of volatile organic compounds assisted by non-thermal plasma. Part 1: A novel dielectric barrier discharge reactor containing catalytic electrode, Applied Catalysis B: Environmental, 65 (2006) 150-156, https://doi.org/10.1016/j.apcatb.2006.01.006

7. M. Magureanu, N.B. Mandache, P. Elloy, E.M. Gaigneaux, V.I. Parvulescu, Plasma-assisted catalysis for volatile organic compounds abatement, Applied Catalysis B: Environmental, 61 (2005) 12-20, https://doi.org/10.1016/j.apcatb.2005.04.007

6. M. Magureanu, N.B. Mandache, V.I. Pârvulescu, Toluene oxidation in a pulsed dielectric barrier discharge, Journal of Optoelectronics and Advanced Materials 7 (2005) 1623-1627

5. M. Magureanu, N.B. Mandache, C. Ruset, Pulsed multipoint-to-plate corona discharge for VOC abatement, Journal of Advanced Oxidation Technologies 7 (2004) 128-132 https://doi.org/10.1515/jaots-2004-0205

4. M. Heintze, M. Magureanu, M. Kettlitz, Mechanism of C2 hydrocarbon formation from methane in a pulsed microwave plasma, Journal of Applied Physics, 92 (2002) 7022-7031 https://doi.org/10.1063/1.1521518

3. M. Heintze, M. Magureanu, Methane conversion into acetylene in a microwave plasma: Optimization of the operating parameters, Journal of Applied Physics, 92 (2002) 2276-2283 https://doi.org/10.1063/1.1497457

2. M. Heintze, M. Magureanu, Methane conversion into aromatics in a direct plasma-catalytic process, Journal of Catalysis, 206 (2002) 91-97, https://doi.org/10.1006/jcat.2001.3467

1. B.M. Novac, M. Magureanu, I.R. Smiths, High electric fields sustained in fast EBW experiments, Journal of Physics D: Applied Physics, 31 (1998) L57-L58, https://doi.org/10.1088/0022-3727/31/17/001

Books / Book chapters:

5. N. Morin-Crini, E. Lichtfouse, M. Fourmentin, A.R. Lado Ribeiro, C. Noutsopoulos, F. Mapelli, É. Fenyvesi, M. Gurgel Adeodato Vieira, L.A. Picos-Corrales, J.C. Moreno-Piraján, L. Giraldo, T. Sohajda, M. Mahmudul Huq, J. Soltan, G. Torri, M. Magureanu, C. Bradu, G. Crini, Remediation of Emerging Contaminants, in Emerging Contaminants Vol. 2. Environmental Chemistry for a Sustainable World 66, Editors N. Morin-Crini, É. Lichtfouse, G. Crini, Springer Nature, 2021

4. M. Magureanu, V.I. Parvulescu, Plasma in Liquids and Gas-Liquid Environments, in Encyclopedia of Plasma Technology, Taylor and Francis, 2016

3. V.I. Parvulescu, M. Magureanu, P. Lukes, Editors, Plasma Chemistry and Catalysis in Gases and Liquids, WILEY-VCH, 2012

2. M. Magureanu, VOC removal from air by plasma-assisted catalysis – experimental work, in Plasma Chemistry and Catalysis in Gases and Liquids, WILEY-VCH, 2012

1. M. Magureanu, V.I. Parvulescu, Plasma-assisted NOx abatement process: a new promising technique for lean conditions, in Studies in Surface Science and Catalysis 171, pp. 361-396, 2007

Invited lectures:

11. 23rd International Conference on Gas Discharges and their Applications (GD2023), 10-15 September 2023

10. Plasma treatment of polluted water, EEM2023 – 8th International Congress "Engineering, Environment and Materials in Process Industry", 20-23 March 2023, Jahorina, Bosnia and Herzegovina

9. Removal of Antibiotic Pollutants in Water by Non-Thermal Plasma, International Balkan Workshop on Applied Physics and Materials Science, 12-15 July 2022 Constanta, Romania

8. Promising research results on a few potential applications of non-thermal plasma, BPU11 Congress
11th International Conference of The Balkan Physical Union, 28 August – 1 September 2022, Belgrade, Serbia

7. Plasma degradation of antibiotic contaminants in water, CPPA 2021, 31 August-3 September 2021, Magurele, Romania

6. Plasma degradation of water contaminants – focus on antibiotics, 5th Asia-Pacific Conference on Plasma Physics, 26 Sept-1 Oct 2021, remote

5. Removal of pesticide residues in water by electrical discharges, CESPC-8 – Eighth Central European Symposium on Plasma Chemistry, 26-30 May 2019, Gozd Martuljek, Slovenia

4. Degradation of Pharmaceutical Pollutants in Water by Non Thermal Plasma, ICPL 2017 – International Conference on Plasma with Liquids, 5-9 March 2017, Prague, Czech Republic

3. Effect of non-thermal plasma on the germination and early growth of seeds, WAAPT 2016 - Workshop on Advanced Application of Plasma Technologies in Central European Agriculture, 17-21 April 2016, Ljubljana, Slovenia

2. Degradation of pharmaceutical compounds in water by non-thermal plasma treatment, XXII ESCAMPIG - Europhysics Conference on Atomic and Molecular Physics of Ionized Gases, 15-19 July 2014, Greifswald, Germany

1. Plasma-assisted catalysis for volatile organic compounds abatement, 10th NICE Workshop on „Non-Thermal Induction of Catalysis", 6-7 November 2003, Frankfurt, Germania

Research projects - coordinator:

10. Non-thermal plasma - a promising candidate for wastewater recovery and safe reuse, PN-III-P4-ID-PCE-2020-0335 (contract 143 / 2021, 2021-2023, 36 months)

9. Efficient removal of antibiotic pollutants in water by non-thermal plasma coupled with other advanced oxidation processes, PN-III-P3-3.1-PM-RO-FR-2019-0165 (contract 18BM/2019), http://brancusi18bm.inflpr.ro (2019-2020, 18 months)

8. Degradation mechanisms of persistent organic pollutants in water by non-thermal plasma and plasma-ozonation systems, PN-III-P4-ID-PCE-2016-0152 (contract 71/2016), http://pce71.inflpr.ro (2017-2019, 30 months)

7. Inovative technology for seed treatment with non-thermal plasma, PN-III-P2-2.1-PED-2016-1577 (contract 3PED/2017), https://www.usamv.ro/index.php/ro/463-tehnologie-inovativa-de-tratament-a-semintelor-cu-plasma-netermica (2017-2018, 18 months)

6. Degradation of pharmaceutical compounds in water by non-thermal plasma, PN-II-RU-TE-2011-3-0015 (contract 42/2011) (2011-2014, 36 months)

5. Plasma-catalytic system for the total oxidation of volatile organic compounds, IDEI-223 (contract 34/2007) (2007-2010, 36 months)

4. Innovative reactor combining plasma and structured catalysts for the destruction of industrial pollutants, SCOPES, FN 510879 (2005-2008, 36 months)

3. Innovative plasma-catalytic system for the removal of chlorinated organic pollutants, CEEX-3190/2005 (2005-2007, 24 months)

2. Development of an advanced system for the treatment of nitrogen-containing industrial wastewater, based on coupling of electrical discharges with heterogeneous catalysis and photocatalysis, CERES 4-137/2004 (2004-2006, 22 months)

1. A new concept for the total oxidation of volatile organic compounds: coupling of plasma with heterogeneous catalysis, CERES 3-120/2003 (2003-2005, 20 months)

Research projects – coordinator / partner leader:

11. PLASMEAU: Plasmas non-thermiques pour la dégradation des contaminants émergents dans l'eau, CNRS – IRP Project (2024-2028, 5 years)

10. Non-thermal plasma - a promising candidate for wastewater recovery and safe reuse, PN-III-P4-ID-PCE-2020-0335 (contract 143 / 2021, 2021-2023, 36 months)

9. Efficient removal of antibiotic pollutants in water by non-thermal plasma coupled with other advanced oxidation processes, PN-III-P3-3.1-PM-RO-FR-2019-0165 (contract 18BM/2019), http://brancusi18bm.inflpr.ro (2019-2020, 18 months)

8. Degradation mechanisms of persistent organic pollutants in water by non-thermal plasma and plasma-ozonation systems, PN-III-P4-ID-PCE-2016-0152 (contract 71/2016), http://pce71.inflpr.ro (2017-2019, 30 months)

7. Inovative technology for seed treatment with non-thermal plasma, PN-III-P2-2.1-PED-2016-1577 (contract 3PED/2017), https://www.usamv.ro/index.php/ro/463-tehnologie-inovativa-de-tratament-a-semintelor-cu-plasma-netermica (2017-2018, 18 months)

6. Degradation of pharmaceutical compounds in water by non-thermal plasma, PN-II-RU-TE-2011-3-0015 (contract 42/2011) (2011-2014, 36 months)

5. Plasma-catalytic system for the total oxidation of volatile organic compounds, IDEI-223 (contract 34/2007) (2007-2010, 36 months)

4. Innovative reactor combining plasma and structured catalysts for the destruction of industrial pollutants, SCOPES, FN 510879 (2005-2008, 36 months)

3. Innovative plasma-catalytic system for the removal of chlorinated organic pollutants, CEEX-3190/2005 (2005-2007, 24 months)

2. Development of an advanced system for the treatment of nitrogen-containing industrial wastewater, based on coupling of electrical discharges with heterogeneous catalysis and photocatalysis, CERES 4-137/2004 (2004-2006, 22 months)

1. A new concept for the total oxidation of volatile organic compounds: coupling of plasma with heterogeneous catalysis, CERES 3-120/2003 (2003-2005, 20 months)