

Lista de lucrări publicate după susținerea tezei de doctorat

- Ionuț Cristian TOPALĂ-

Capitole de cărți

1. Ionuț Topala, Andrei Nastuta, " Helium atmospheric pressure plasma jet: diagnostics and application for burned wounds healing" (pp. 335-345) in "Plasma for bio-decontamination, medicine and food security" edited by Zdenko Machala, Karol Hensel, Yuri Akishev, NATO Science for Peace and Security Series, Springer Publishing, Heidelberg 2012, (499 pages) ISBN 978-94-007-2851-6
2. Nicoleta Dumitrascu, Ionuț Topala, "Medical applications of dielectric barrier discharge" (pp. 103-136) in "Biomaterials and Plasma Processing" edited by Nicoleta Dumitrașcu, Ionuț Topală, Alexandru Ioan Cuza University Press, Iasi, 2011 (328 pages) ISBN: 978-973-703-543-1

Articole ISI

1. Constantinos Lazarou, Alina Silvia Chiper, Charalambos Anastassiou, Ionuț Topala, Ilarion Mihaila, Valentin Pohoata, George Elias Georghiou, Numerical simulation of a capillary helium and helium-oxygen atmospheric pressure plasma jet: propagation dynamics and interaction with dielectric, J. Phys. D: Appl. Phys. 52 (2019) 195203 (22pp)
2. Ion Sava, Iuliana Stoica, Ilarion Mihaila, Valentin Pohoata, Ionuț Topala, George Stoian, Nicoleta Lupu, Nanoscale analysis of laser-induced surface relief gratings on azocopolyimide films before and after gold coating, Polymer Testing 72, 407–415 (2018)
3. Constantinos Lazarou, Charalambos Anastassiou, Ionuț Topala, Alina Silvia Chiper, Ilarion Mihaila, Valentin Pohoata, George Elias Georghiou, Numerical simulation of a capillary helium and helium-oxygen atmospheric pressure plasma jet: propagation dynamics and interaction with dielectric, Plasma Sources Science and Technology 27, 105007 (25pp) (2018)
4. Bogdan-George Rusu, Vladuț Postolache, Irina-Gabriela Cara, Valentin Pohoata, Ilarion Mihaila, Ionuț Topala, Gerard Jitareanu, Method of Fungal Wheat Seeds Disease Inhibition Using Direct Exposure to Air Cold Plasma, Romanian Journal of Physics 63, 905 (2018)
5. Bianca Hodoroaba, Ioana Cristina Gerber, Delia Ciubotaru, Ilarion Mihaila, Marius Dobromir, Valentin Pohoata, Ionuț Topala, Carbon 'fluffy' aggregates produced by helium–hydrocarbon high-pressure plasmas as analogues to interstellar dust, Monthly Notices of the Royal Astronomical Society, 481(2), 2841–2850 (2018)
6. Roxana Jijie, Alexandre Barras, Teodora Teslaru, Ionuț Topala, Valentin Pohoata, Marius Dobromir, Tetiana Dumych, Julie Boukaert, Sabine Szunerits, Nicoleta Dumitrascu, Rabah Boukherroub, Aqueous medium-induced micropore formation in plasma polymerized polystyrene: An effective route to inhibit bacteria adhesion, Journal of Materials Chemistry B, 6, 3674-3683 (2018)
7. A. V. Nastuta, V. Pohoata, I. Mihaila, I. Topala, Diagnosis of a short-pulse dielectric barrier discharge at atmospheric pressure in helium with hydrogen-methane admixtures, Physics of Plasmas 25, 043515 (2018)
8. Bianca Hodoroaba, Ioana Cristina Gerber, Delia Ciubotaru, Ilarion Mihaila, Marius Dobromir, Valentin Pohoata, Ionuț Topala, Carbon 'fluffy' aggregates produced by helium–hydrocarbon high-pressure plasmas as analogues to interstellar dust, Monthly Notices of the Royal Astronomical Society, 481(2), 2841–2850 (2018)

9. Ioana Cristina Gerber, Ilarion Mihaila, Dennis Hein, Andrei Vasile Nastuta, Roxana Jijie, Valentin Pohoata and Ionut Topala, Time Behaviour of Helium Atmospheric Pressure Plasma Jet Electrical and Optical Parameters, *Applied Sciences*, 7, 812 (2017)
10. A.V. Nastuta, I. Topala, V. Pohoata, I. Mihaila, C. Agheorghiesei, N. Dumitrascu, Atmospheric pressure plasma jets in inert gases: electrical, optical and mass spectrometry diagnosis, *Romanian Reports in Physics*, 69(1), 407, (2017)
11. Ilarion Mihaila, Valentin Pohoata, Roxana Jijie, Andrei Vasile Nastuta, Ioana Alexandra Rusu, Ionut Topala, Formation of positive ions in hydrocarbon containing dielectric barrier discharge plasmas, *Advances in Space Research*, 58(11), 2416–2423 (2016)
12. T. Teslaru, I. Topala, M. Dobromir, V. Pohoata, L. Curecheriu, N. Dumitrascu, Polythiophene films obtained by polymerization under atmospheric pressure plasma conditions, *Materials Chemistry and Physics*, 169, 120–127 (2016).
13. G. B. Rusu, I. Topala, C. Borcia, N. Dumitrascu, G. Borcia, Effects of Atmospheric-Pressure Plasma Treatment on the Processes Involved in Fabrics Dyeing, *Plasma Chemistry Plasma Processing*, 36, 341-354 (2016).
14. Karol Hensel, Katarina Kucerova, Barbora Tarabova, Mario Janda, Zdenko Machala, Kaori Sano, Cosmin Teodor Mihai, Mitica Ciorpac, Lucian Dragos Gorgan, Roxana Jijie, Valentin Pohoata, Ionut Topala, Effects of air transient spark discharge and helium plasma jet on water, bacteria, cells, and biomolecules, *Biointerphases*, 10(2), 029515 (2015).
15. C. Lazarou, D. Koukounis, A.S. Chiper, C. Costin, I. Topala, G.E. Georghiou, Numerical modeling of the effect of the level of nitrogen impurities in a helium parallel plate dielectric barrier discharge, *Plasma Sources Science and Technology*, 24, 035012 (13pp) (2015).
16. Ionut Topala, Masaaki Nagatsu, Capillary plasma jet: A low volume plasma source for life science applications, *Applied Physics Letters*, 106, 054105 (2015).
17. Ion Sava, Ada Burescu, Iuliana Stoica, Valentina Musteata, Mariana Cristea, Ilarion Mihaila, Valentin Pohoata and Ionut Topala, Properties of some azo-copolyimide thin films used in the formation of photoinduced surface relief gratings, *RSC Advances*, 5, 10125-10133 (2015).
18. Mihai Asandulesa, Ionut Topala, Yves-Marie Legrand, Stephanie Roualdes, Vincent Rouessac, Valeria Harabagiu, Chemical Investigation on Various Aromatic Compounds Polymerization in low Pressure Helium Plasma, *Plasma Chemistry and Plasma Processing*, 34(5), 1219-1232 (2014).
19. G.B. Rusu, M. Asandulesa, I. Topala, V. Pohoata, N. Dumitrascu, M. Barboiu, Atmospheric pressure plasma polymers for tuned QCM detection of protein adhesion, *Biosensors and Bioelectronics*, 53, 154–159, (2014).
20. Mihai Asandulesa, George Rusu, Ionut Topala, Valentin Pohoata, Marius Dobromir, Nicoleta Dumitrascu, Poly (Ethylene Glycol-Co-Styrene) Films Deposited by Plasma Polymerization Reactions at Atmospheric Pressure, *The Open Plasma Physics Journal*, 2013, 6, (Suppl 1: M3) 14-18, (2013).
21. Andrei V. Nastuta, Valentin Pohoata, Ionut Topala, Atmospheric pressure plasma jet - living tissue interface: electrical, optical and spectral characterization, *Journal of Applied Physics*, 113, 183302, (2013).
22. Mihai Asandulesa, Ionut Topala, Valentin Pohoata, Yves Marie Legrand, Marius Dobromir, Marian Totolin, Nicoleta Dumitrascu, Chemically polymerization mechanism of aromatic compounds under atmospheric pressure plasma conditions, *Plasma Processes and Polymers*, 10(5), 469–480, (2013).
23. Roxana Jijie, Valentin Pohoata, Ionut Topala, Thermal behavior of bovine serum albumin after exposure to barrier discharge helium plasma jet, *Applied Physics Letters*, 101, 144103, (2012).
24. Roxana Jijie, Cristina Luca, Valentin Pohoata, Ionut Topala, Effects of Atmospheric-Pressure Plasma Jet on Pepsin Structure and Function, *IEEE Transactions on Plasma Science*, 40(11), 2980 - 2985, (2012).

25. Ionut Topala, Nicoleta Dumitrascu, Dan-Gheorghe Dimitriu, Experimental and Theoretical Investigations of Dielectric-Barrier Plasma Jet in Helium, IEEE Transactions on Plasma Science, 40(11), 2811 - 2816, (2012).
26. Andrei V. Nastuta, Ionut Topala, Gheorghe Popa, ICCD Imaging Of Atmospheric Pressure Plasma Jet Behavior In Different Electrodes Configurations, IEEE Transactions on Plasma Science, 39(11), 2310 - 2311, (2011).
27. Jorge Gonzalez Vazquez, Mihai Asandulesa, Ionut Topala, Nicoleta Dumitrascu, Fast imaging study of polymerization plasmas at atmospheric pressure, IEEE Transactions on Plasma Science, 39(11), 2170 - 2171, (2011).
28. Ionut Topala, Nicoleta Dumitrascu, Evolution of bullets in helium atmospheric pressure plasma jet, IEEE Transactions on Plasma Science, 39(11), 2342 - 2343, (2011).
29. C. Grigoras, I. Topala, A.V. Nastuta, D. Jitaru, I. Florea, L. Badescu, D. Ungureanu, M. Badescu, N. Dumitrascu, Influence of atmospheric pressure plasma treatment on epithelial regeneration process, Romanian Journal of Physics, 56, 54-61 (2011).
30. Andrei Nastuta, Ionut Topala, Constantin Grigoras, Valentin Pohoata, Gheorghe Popa, Stimulation of wound healing by helium atmospheric pressure plasma treatment, Journal of Physics D: Applied Physics, 44(10), 105204 (9 pages) (2011)
31. Mihai Asandulesa, Ionut Topala, Valentin Pohoata, Nicoleta Dumitrascu, Influence of operational parameters on plasma polymerization process at atmospheric pressure, Journal of Applied Physics, 108, 093310 (6 pages) (2010)
32. Mihai Asandulesa, Ionut Topala, Nicoleta Dumitrascu, Effects of plasma treatments on the surface of wood samples, Holzforschung, 64(2), 223-227, (2010).
33. Ionut Topala, Mihai Asandulesa, Delia Spridon, Nicoleta Dumitrascu, Hydrophobic Coatings Obtained in Atmospheric Pressure Plasma, IEEE Transaction on Plasma Science, 37(6), 946-950, (2009).
34. Ionut Topala, Nicoleta Dumitrascu, Gheorghe Popa. Properties of the acrylic acid polymers obtained by atmospheric pressure plasma polymerization. Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms, 267(2), 442-445, (2009).

04.12.2019

lect.univ.dr. Ionut Topala

