

## conf. univ. dr. habil. Gabriela Borcia - Listă de lucrări

### a) Lista lucrărilor cele mai relevante pentru realizările profesionale proprii

1. Rusu, G. B.; Topala, I.; Borcia, C.; Dumitrascu, N.; **Borcia, G.**, Effects of Atmospheric-Pressure Plasma Treatment on the Processes Involved in Fabrics Dyeing. *Plasma Chemistry and Plasma Processing* 2016, 36 (1), 341-354.
2. Borcia, C.; Punga, I. L.; **Borcia, G.**, Surface properties and hydrophobic recovery of polymers treated by atmospheric-pressure plasma. *Applied Surface Science* 2014, 317, 103-110.
3. Broasca, G.; **Borcia, G.**; Dumitrascu, N.; Vranceanu, N., Characterization of ZnO coated polyester fabrics for UV protection. *Applied Surface Science* 2013, 279, 272-278.
4. **Borcia, G.**; Cazan, R.; Popa, G., Investigation of Oxygen Metastable Distribution in Atmospheric-Pressure DBD Using TDLAS. *Ieee Transactions on Plasma Science* 2011, 39 (11), 2102-2103.
5. Borcia, C.; **Borcia, G.**; Dumitrascu, N., Relating plasma surface modification to polymer characteristics. *Applied Physics a-Materials Science & Processing* 2008, 90 (3), 507-515.
6. **Borcia, G.**; Brown, N. M. D., Hydrophobic coatings on selected polymers in an atmospheric pressure dielectric barrier discharge. *Journal of Physics D-Applied Physics* 2007, 40 (7), 1927-1936.
7. **Borcia, G.**; Anderson, C. A.; Brown, N. M. D., Surface treatment of natural and synthetic textiles using a dielectric barrier discharge. *Surface & Coatings Technology* 2006, 201 (6), 3074-3081.
8. **Borcia, G.**; Anderson, C. A.; Brown, N. M. D., Dielectric barrier discharge for surface treatment: application to selected polymers in film and fibre form. *Plasma Sources Science & Technology* 2003, 12 (3), 335-344.

### b) Teza de doctorat

„Caracterizarea plasmelor departe de echilibru în amestec gazos He-O<sub>2</sub> și interacțiunea acestora cu materiale polimere”, Universitatea Paris XI, Franța, susținută pe 19 septembrie 1997

### d) Cărți și capitole în cărți

#### d.1) Cărți, manuale, îndrumare de laborator în edituri naționale sau edituri internaționale ca autor

1. **Borcia, G.**, Fizica atomului și moleculei, 2014, 187 pp., Editura Sedcom Libris, Iași, ISBN 978-973-670-136-8.
2. **Borcia, G.**, coordonator volum, Lucrări de laborator - Fizica atomului și moleculei, autori Chiper, A.; Borcia, C.; Topală, I.; **Borcia, G.**, 2014, 231 pp., autor lucrări III, IV, V, VI, VIII, IX, X, XI, XIII, XIV, XV (132 pagini); Editura Universității „Alexandru Ioan Cuza” Iași, ISBN 978-606-714-090-3.

3. **Borcia, G.**, Introducere în teoria cuantică a atomului și moleculei, 2006, 318 pp., Editura Sedcom Libris, Iași, ISBN 978-973-670-183-2.
4. **Borcia, G.**, Fizica atomului și moleculei: note de curs și aplicații, 2006, 293 pp., Editura Sedcom Libris, Iași, ISBN 978-973-670-182-5.

#### **d.2) Capitoare de cărți în edituri naționale sau edituri internaționale ca autor**

1. **Borcia, G.**, Chap. 3 X-ray photoelectron spectroscopy of polymers, in Surface properties of polymers, Vasile, C.; Pascu, M. C., Eds., 2007, pp. 91-129, Research Signpost, Kerala, India , ISBN 978-81-308-0142-1.
2. **Borcia, G.**, Dumitrascu, N., Cap. VI Tratamentele cu plasmă ale polimerilor naturali și/sau sintetici. Importanță și aplicații în domeniul medical, în Polimeri degradabili și biocompatibili, Editori: Vasile, C.; Chiriac, A. P.; Niță, L. E.; 2006, pp. 151-175, Tehnopress, Iași, ISBN 978-973-702-378-0.

#### **e) Articole publicate *in extenso* în reviste din circuitul științific internațional**

##### **e.1) Articole publicate în reviste indexate ISI**

1. Rusu, G. B.; Topala, I.; Borcia, C.; Dumitrascu, N.; **Borcia, G.**, Effects of Atmospheric-Pressure Plasma Treatment on the Processes Involved in Fabrics Dyeing. *Plasma Chemistry and Plasma Processing* 2016, 36 (1), 341-354.
2. Borcia, C.; Punga, I. L.; **Borcia, G.**, Surface properties and hydrophobic recovery of polymers treated by atmospheric-pressure plasma. *Applied Surface Science* 2014, 317, 103-110.
3. Broasca, G.; **Borcia, G.**; Dumitrascu, N.; Vranceanu, N., Characterization of ZnO coated polyester fabrics for UV protection. *Applied Surface Science* 2013, 279, 272-278.
4. Chipper, A.; **Borcia, G.**, Argon Versus Helium Dielectric Barrier Discharge for Surface Modification of Polypropylene and Poly(methyl methacrylate) Films. *Plasma Chemistry and Plasma Processing* 2013, 33 (3), 553-568.
5. Borcia, C.; Dumitrascu, N.; **Borcia, G.**, COMPARING THE MODIFICATION INDUCED BY PLASMA AND UV RADIATION TO POLYMER SURFACES. *Romanian Reports in Physics* 2012, 64 (1), 163-172.
6. **Borcia, G.**; Cazan, R.; Popa, G., Investigation of Oxygen Metastable Distribution in Atmospheric-Pressure DBD Using TDLAS. *Ieee Transactions on Plasma Science* 2011, 39 (11), 2102-2103.
7. **Borcia, G.**; Cazan, R.; Borcia, C., DBD Surface Modification of Polymers in Relation to the Spatial Distribution of Reactive Oxygen Species. *Plasma Chemistry and Plasma Processing* 2011, 31 (5), 729-740.
8. Borcia, C.; **Borcia, G.**; Dumitrascu, N., SURFACE TREATMENT OF POLYMERS BY PLASMA AND UV RADIATION. *Romanian Journal of Physics* 2011, 56 (1-2), 224-232.
9. **Borcia, G.**; Borcia, C.; Dumitrascu, N., TEMPORAL EVOLUTION OF PULSED ATMOSPHERIC PRESSURE DBD IN ASYMMETRIC CONFIGURATION. *Romanian*

*Journal of Physics* 2009, 54 (7-8), 689-697.

10. Borcia, C.; **Borcía, G.**; Dumitrascu, N., Atmospheric-Pressure Dielectric Barrier Discharge for Surface Processing of Polymer Films and Fibers. *Ieee Transactions on Plasma Science* 2009, 37 (6), 941-945.
11. Dumitrascu, N.; Borcia, C.; **Borcía, G.**, Control of the Blood-Polymer Interface by Plasma Treatment. *Journal of Biomedical Materials Research Part B-Applied Biomaterials* 2008, 87B (2), 364-373.
12. Cazan, R.; **Borcía, G.**; Chiper, A.; Popa, G., Time-space resolved distribution of oxygen metastable atoms in an axially symmetrical atmospheric pressure barrier discharge. *Plasma Sources Science & Technology* 2008, 17 (3).
13. Borcia, C.; **Borcía, G.**; Dumitrascu, N., Plasma induced surface modification in relation to polymer characteristics. *Journal of Optoelectronics and Advanced Materials* 2008, 10 (3), 675-679.
14. Rusu, I. A.; **Borcía, G.**; Sayed, S. O.; Sullivan, J. L., Polymer surfaces treated by argon rf plasma. *Journal of Optoelectronics and Advanced Materials* 2008, 10 (3), 668-671.
15. Borcia, C.; **Borcía, G.**; Dumitrascu, N., Relating plasma surface modification to polymer characteristics. *Applied Physics a-Materials Science & Processing* 2008, 90 (3), 507-515.
16. **Borcía, G.**; Brown, N. M. D., Hydrophobic coatings on selected polymers in an atmospheric pressure dielectric barrier discharge. *Journal of Physics D-Applied Physics* 2007, 40 (7), 1927-1936.
17. **Borcía, G.**; Anderson, C. A.; Brown, N. M. D., Surface treatment of natural and synthetic textiles using a dielectric barrier discharge. *Surface & Coatings Technology* 2006, 201 (6), 3074-3081.
18. **Borcía, G.**; Chiper, A.; Rusu, I., Using a He+N-2 dielectric barrier discharge for the modification of polymer surface properties. *Plasma Sources Science & Technology* 2006, 15 (4), 849-857.
19. **Borcía, G.**; Rusu, I.; Popa, G., Surface modification of polymethylmetacrylate films using dielectric barrier discharge. *Journal of Optoelectronics and Advanced Materials* 2006, 8 (3), 1048-1052.
20. **Borcía, G.**; Dumitrascu, N.; Popa, G., Influence of dielectric barrier discharge treatments on the surface properties of polyamide-6 films. *Journal of Optoelectronics and Advanced Materials* 2005, 7 (5), 2535-2538.
21. **Borcía, G.**; Anderson, C. A.; Brown, N. M. D., Using a nitrogen dielectric barrier discharge for surface treatment. *Plasma Sources Science & Technology* 2005, 14 (2), 259-267.
22. **Borcía, G.**; Dumitrascu, N.; Popa, G., Influence of helium-dielectric barrier discharge treatments on the adhesion properties of polyamide-6 surfaces. *Surface & Coatings Technology* 2005, 197 (2-3), 316-321.
23. **Borcía, G.**; Anderson, C. A.; Brown, N. M. D., The surface oxidation of selected polymers using an atmospheric pressure air dielectric barrier discharge. Part II. *Applied Surface Science* 2004, 225 (1-4), 186-197.

24. **Borcia, G.**; Brown, N. M. D.; Dixon, D.; McIlhagger, R., The effect of an air-dielectric barrier discharge on the surface properties and peel strength of medical packaging materials. *Surface & Coatings Technology* 2004, **179** (1), 70-77.
25. **Borcia, G.**; Anderson, C. A.; Brown, N. M. D., The surface oxidation of selected polymers using an atmospheric pressure air dielectric barrier discharge. Part I. *Applied Surface Science* 2004, **221** (1-4), 203-214.
26. Viville, P.; Lazzaroni, R.; Pollet, E.; Alexandre, M.; Dubois, P.; **Borcia, G.**; Pireaux, J. J., Surface characterization of poly(epsilon-caprolactone)-based nanocomposites. *Langmuir* 2003, **19** (22), 9425-9433.
27. **Borcia, G.**; Anderson, C. A.; Brown, N. M. D., Dielectric barrier discharge for surface treatment: application to selected polymers in film and fibre form. *Plasma Sources Science & Technology* 2003, **12** (3), 335-344.
28. Viville, P.; Lazzaroni, R.; Dubois, P.; Kotzev, A.; Geerts, Y.; **Borcia, G.**; Pireaux, J. J., Impact of silicone-based block copolymer surfactants on the surface and bulk microscopic organization of a biodegradable polymer, poly(epsilon-caprolactone). *Biomacromolecules* 2003, **4** (3), 696-703.
29. Dumitrascu, N.; **Borcia, G.**; Apetroaei, N.; Popa, G., Immobilization of biologically active species on PA-6 foils treated by a dielectric barrier discharge. *Journal of Applied Polymer Science* 2003, **90** (7), 1985-1990.
30. Dumitrascu, N.; **Borcia, G.**; Apetroaei, N.; Popa, G., Roughness modification of surfaces treated by a pulsed dielectric barrier discharge. *Plasma Sources Science & Technology* 2002, **11** (2), 127-134.
31. Dumitrascu, N.; **Borcia, G.**; Popa, G., Corona discharge treatments of plastified PVC samples used in biological environment. *Journal of Applied Polymer Science* 2001, **81** (10), 2419-2425.
32. Arefi-Khonsari, F.; **Placinta, G.**; Amouroux, J.; Popa, G., Study of plasmas in He-O-2 mixtures and their role on the stability of the surface properties of polymers. *European Physical Journal-Applied Physics* 1998, **4** (2), 193-201.
33. **Placinta, G.**; ArefiKhonsari, F.; Gheorghiu, M.; Amouroux, J.; Popa, G., Surface properties and the stability of poly(ethylene terephthalate) films treated in plasmas of helium-oxygen mixtures. *Journal of Applied Polymer Science* 1997, **66** (7), 1367-1375.
34. Gheorghiu, M.; Arefi, F.; Amouroux, J.; **Placinta, G.**; Popa, G.; Tatoulian, M., Surface cross linking and functionalization of poly(ethylene terephthalate) in a helium discharge. *Plasma Sources Science & Technology* 1997, **6** (1), 8-19.

## e.2) **Articole publicate în reviste neindexate ISI**

1. Punga, I.-L.; **Borcia, G.**, Surface modification and stability of polymers treated by atmospheric-pressure helium plasma. *Journal of Advanced Research in Physics*, **4**(1) (2013) 011305 (5 pp.), "Alexandru Ioan Cuza" University Press, ISSN 2067-0451.
2. Chipper, A.S.; **Borcia, G.**; Dobromir, M.; Popa, G., He and Ar dielectric barrier discharge

for surface modification of polymers. *Journal of Advanced Research in Physics*, 2 (2) 021104 (2011), “Alexandru Ioan Cuza” University Press, ISSN 2067-0451.

3. **Borcia, G.**; Dumitrascu, N., Interaction of biological liquids with polyamide-6 films treated by dielectric barrier discharge, *Romanian Journal of Biophysics* 2005, 15 (1-4) 147-154. ISSN 1220-515X, Editura Academiei Române.

4. **Borcia, G.**; Brown, N. M. D.; Anderson, C. A., Plasma processing at atmospheric pressure using a dielectric barrier discharge (DBD). *DWI Reports* 2003, 126, 424-428. ISSN: 0942-301X, Publisher: Deutsches Wollforschungsinstitut (German Wool Research Institute).

5. **Placinta, G.**; Arefi-Khonsari, F.; Gheorghiu, M.; Amouroux, J.; Popa, G., Surface properties and the stability of poly(ethylene terephthalate) (PET) films treated in plasmas of He-O<sub>2</sub> mixtures. *Vide: Science, Technique et Applications* 1997, 53 (284) (Supp. 1) 105-108. ISSN 1266-0167, Publisher: Société Française du Vide.

6. **Placinta, G.**; Popa, G.; Arefi-Khonsari, F.; Amouroux, J., Properties of the assymetrical low frequency (70 kHz) discharge in helium-oxygen mixtures. *Romanian Reports in Physics* 1997, 49 (5-6-7) 507 – 521. ISSN 1221-1451, Editura Academiei Române.

7. Dumitrascu, N.; **Placinta, G.**; Surdu, S.; Verdes, D.; Popa, G., Some properties of nylon-6 treated by corona discharge in helium. *Romanian Reports in Physics* 1997, 48 (9-10) 291 – 295. ISSN 1221-1451, Editura Academiei Române.

#### **f) Articole publicate *in extenso* în volumele conferințelor internaționale de specialitate**

##### **f.1) Articole *in extenso* publicate în Proceedings-uri indexate ISI**

1. Broasca, G.; **Borcia, G.** ; Dumitrascu, N.; Cioca, M.; Coman, D.; Ourfelli, N.; Fundamental and practical aspects concerning the characterization of smart textiles, Edited by: Bondrea, I.; Simion, C.; Inta, M.; Book Series: MATEC Web of Conferences; Volume: 121; Article Number: UNSP 01001; Published: 2017; 8th International Conference on Manufacturing Science and Education (MSE) - Trends in New Industrial Revolution; Sibiu, Romania

##### **f.2) Articole *in extenso* publicate în Proceedings-uri neindexate ISI**

1. Rusu, G., B.; Topala, I.; Borcia, C.; Dumitrascu, N.; **Borcia, G.**, Plasma treatment effects on the processes involved in fabrics dyeing. XXXII International Conference on Phenomena in Ionized Gases (XXXII ICPIG), Iasi, Romania, 26-31 July 2015, 4 pp. format electronic in “ICPIG 2015”.

2. Dorneanu, M.E.; Dobromir, M.; Talasman, C.M.; Buteică, D.; **Borcia, G.**; Chiper, A.S.; Surface modification of natural and synthetic polymers induced by pulsed atmospheric pressure plasma. XXXII International Conference on Phenomena in Ionized Gases (XXXII ICPIG), Iasi, Romania, 26-31 July 2015, 3 pp. format electronic “ICPIG 2015”.

3. **Borcia, G.**, Atmospheric pressure plasma reactors for fibers processing. 22nd International Symposium on Plasma Chemistry (ISPC 22), 5-10 July 2015, Antwerp, Belgium, 5 pp. format electronic in “ISPC2015\_proceedings”.

4. Borcia, C.; Punga, I.; **Borcias, G.**, Post-treatment stability of aromatic polymers modified by helium atmospheric-pressure plasma. 22nd International Symposium on Plasma Chemistry (ISPC 22), 5-10 July 2015, Antwerp, Belgium, 5 pp. format electronic in "ISPC2015\_proceedings".
5. **Borcias, G.**; Chiper, A. S.; Mihaila, I.; Vitelaru, C.; Popa, G., Atmospheric-pressure dielectric barrier discharge in He and He+O<sub>2</sub> for surface modification of polymers. XXX International Conference on Phenomena in Ionized Gases (30<sup>th</sup> ICPIG), August 28<sup>th</sup> – September 2<sup>nd</sup> 2011, Belfast, Northern Ireland, UK, 4 pp. on web site.
6. **Borcias, G.**; Rusu, I.; Borcia, C.; Dumitrascu, N., Temporal behaviour of pulsed atmospheric pressure asymmetric dielectric barrier discharge. 19th Europhysics Conference on the Atomic and Molecular Physics of Ionized Gases (19th ESCAMPIG), Granada, Spain, 15-19 July 2008, 2 pp. on CD-ROM - Published by: European Physical Society, Volume number: 32 A, ISBN 2-914771-04-5.
7. Borcia, C.; Dumitrascu, N.; **Borcias, G.**, Atmospheric pressure plasma processing of cylindrical surfaces. 19th Europhysics Conference on the Atomic and Molecular Physics of Ionized Gases (19th ESCAMPIG), Granada, Spain, 15-19 July 2008, 2 pp. on CD-ROM - Published by: European Physical Society, Volume number: 32 A, ISBN 2-914771-04-5.
8. Topala, I.; Asandulesa, M.; **Borcias, G.**; Dumitrascu, N., Application of natural polymers DBD treatment to painting. 19th Europhysics Conference on the Atomic and Molecular Physics of Ionized Gases (19th ESCAMPIG), Granada, Spain, 15-19 July 2008, 2 pp. on CD-ROM - Published by: European Physical Society, Volume number: 32 A, ISBN 2-914771-04-5.
9. **Borcias, G.**; Borcia, C.; Dumitrascu, N., Atmospheric pressure plasma for surface processing. i-SUP 2008, Innovation for Sustainable Production - Bruges 22-25 April 2008, Proceedings of the first i-SUP conference, pp. 35-39.
10. Cazan, R.; **Borcias, G.**; Popa, G., Radial mapping of atmospheric pressure barrier discharge for surface processing. i-SUP 2008, Innovation for Sustainable Production - Bruges 22-25 April 2008, Proceedings of the first i-SUP conference, pp. 40-44.
11. Topala, I.; Asandulesa, M.; Dumitrascu, N.; **Borcias, G.**; Popa, G., Polymerization reactions in plasma at atmospheric pressure. Proceedings of the 6th International Conference on Global Research and Education - Inter-Academia 2007 (iA) & Inter-Academia for Young Researchers Workshop (iAY), September 26-30, 2007, Hamamatsu, Japan, Vol. II, pp. 1334-1342.
12. Dumitrascu, N.; **Borcias, G.**; Borcia, C., Control of the blood-polymer materials interface by plasma treatments. 18th International Symposium on Plasma Chemistry (ISPC 18), August 26 – 31 2007, Kyoto University, Japan, Full-Papers CD, paper00229.pdf (4 pp.), ISBN 978-4-9903773-3-5.
13. Cazan, R.; Chiper, A.; **Borcias, G.**; Popa, G., Influence of the spatial distribution of reactive species on the surface modification of polymers by DBD. 18th International Symposium on Plasma Chemistry (ISPC 18), August 26 – 31 2007, Kyoto University, Japan, Full-Papers CD, paper00230.pdf (4 pp.), ISBN 978-4-9903773-3-5.

14. Borcia, C.; **Borcia, G.**; Dumitrascu, N., Plasma surface modification in relation to polymer properties. XXVIII International Conference on Phenomena in Ionized Gases (ICPIG), July 15-20, 2007, Prague, Czech Republic, paper in extenso on CD - Proceedings of XXVIII ICPIG, published by Institute of Plasma Physics AS CR, pp. 700-703, ISBN 978-80-87026-01-4.
15. Rusu, I.A.; **Borcia, G.**; Sayed, S. O.; Sullivan, J. L., Ar rf plasma effect on polymer surfaces. XXVIII International Conference on Phenomena in Ionized Gases (ICPIG), July 15-20, 2007, Prague, Czech Republic, paper in extenso on CD - Proceedings of XXVIII ICPIG, published by Institute of Plasma Physics AS CR, pp. 704-707, ISBN 978-80-87026-01-4.
16. Topala, I.; **Borcia, G.**; Dumitrascu, N.; Popa, G., Surface modification of polymers used in medicine by dielectric barrier discharge treatments. Conference on European Research in Cold Plasma Applications, 12-13 February, 2007, Iasi, Romania, pp. 87-98, ISBN 978-973-0-04933-6.
17. Topala, I.; **Borcia, G.**; Dumitrascu, N.; Popa, G.; Surface modification of polymers used in medicine by dielectric barrier discharge treatments. Proceedings of the 5th International Conference on Global Research and Education - Inter-Academia 2006, 25 - 28 September, 2006, Iasi, Romania, Analele Stiintifice ale Universitatii "Al. I. Cuza", Supliment 2006, pp. 267-274, ISSN 1453-0759.
18. Dumitrascu, N.; **Borcia, G.**; Pohoata, V.; Topala, I.; Asandulesa, M., Wood treatment by DBD plasma. 18<sup>th</sup> Europhysics Conference on Atomic and Molecular Physics of Ionized Gases (ESCAMPIG), July 12-16, 2006, Lecce, Italy, Europhysics Conference Abstracts, Volume 30 G, pp. 475-476, published by European Physical Society, ISBN 2-914771-38-X.
19. **Borcia, G.**; Rusu, I.; Chiper, A.; Popa, G.; Surface modification of polymers using He+N<sub>2</sub> DBD. Proceedings of XXVII International Conference on Phenomena in Ionized Gases, July 17-22, 2005, Eindhoven, The Netherlands, 4 pp. on suport CD, ISSN 0963-0252.
20. **Borcia, G.**; Dumitrascu, N.; Popa, G., Interaction of biological liquids with medical polymer films treated by dielectric barrier discharge. Proceedings of XXVII International Conference on Phenomena in Ionized Gases, July 17-22, 2005, Eindhoven, The Netherlands, 4 pp. on suport CD, ISSN 0963-0252.
21. **Borcia, G.**; Dumitrascu, N.; Popa, G., Dielectric Barrier Discharge for Physico-Chemical Modification of PA-6 Films. Proceedings of the XV<sup>th</sup> International Symposium on Gas Discharges and their Applications, September 5-10, 2004, Toulouse, France, pp. 271-274.
22. **Borcia, G.**; Dumitrascu, N.; Popa, G., Influence of DBD treatments on the surface properties of PA-6 films. Proceedings of the 17<sup>th</sup> Europhysics Conference on Atomic & Molecular Physics of Ionized Gases (ESCAMPIG), September 1-5, 2004, Constanta, Romania, pp. 267-268, ISSN 0963-0252.
23. **Borcia, G.**; Brown, N. M. D.; Anderson, C. A., Plasma processing at atmospheric pressure using a dielectric barrier discharge (DBD). Proceedings of the 16<sup>th</sup> International Symposium on Plasma Chemistry, June 22-27, 2003, Taormina, Italy, 6 pp. on suport CD, ISSN 1093-3611.
24. **Borcia, G.**; Dumitrascu, N.; Apetroaei, N.; Popa, G., Physico-chemical modifications of DBD treatments on polymer surfaces. Proceedings of the 16<sup>th</sup> Europhysics Conference on

Atomic & Molecular Physics of Ionized Gases (ESCAMPIG), Grenoble, France, July 14-18, 2002, pp. 153-154, ISSN 0963-0252.

25. Dumitrascu, N.; **Borcia, G.**; Apetroaei, N.; Popa, G., Immobilization of biological active species on polymer samples treated by DBD. Proceedings of 15<sup>th</sup> International Symposium on Plasma Chemistry, July 9-13, 2001, Orleans, France, vol. VI, pp. 2361 - 2366, ISSN 0033-4545.

26. Dumitrascu, N.; **Borcia, G.**; Morariu, M.; Popa, G., AFM analysis of the roughness of some thin film materials enhanced by dielectric barrier discharge. XV<sup>th</sup> ESCAMPIG, August 26-30, 2000, Miskolc, Hungary, pp. 406 – 407, ISSN 0963-0252.

27. **Borcia, G.**; Arefi-Khonsari, F.; Amouroux, J.; Popa, G., Study of a helium plasma with low oxygen content applied to the surface treatment of poly(ethylene terephthalate). Proceedings of 14<sup>th</sup> International Symposium on Plasma Chemistry, August 2-6 1999, Prague, Czech Republic, vol. IV, pp. 1815 – 1820, ISSN 0033-4545.

28. Dumitrascu, N.; **Borcia, G.**; Pohoata, V.; Popa, G., Corona discharge treatments of PVC films used in medical applications. Proceedings of 14<sup>th</sup> International Symposium on Plasma Chemistry, August 2-6 1999, Prague, Czech Republic, vol. IV, pp. 1831 – 1836, ISSN 0033-4545.

29. **Placinta, G.**; Arefi-Khonsari, F.; Amouroux, J.; Popa, G., Study of plasmas in He-O<sub>2</sub> mixtures and their role on the stability of the surface properties. Proceedings of ISPC 13 – IUPAC 1997, August 1997, Pekin, China, pp. 1269 – 1274, ISSN 0272-4324.

30. **Placinta, G.**; Verdes, D.; Popa, G., Surface modifications of He-O<sub>2</sub> corona treated poly(ethylene terephthalate) (PET). Proceedings of the XXIII ICPIG, July 1997, Toulouse, France, vol. IV, pp. 242 – 243.

31. **Placinta, G.**; Arefi-Khonsari, F.; Gheorghiu, M.; Amouroux, J.; Popa, G., Surface properties and the stability of PET films treated in plasmas of He-O<sub>2</sub> mixtures. Proceeding of 11<sup>th</sup> International Colloquium on Plasma Processes, CIP '97, Le Mans, Mai 1997, pp. 105 – 108.

32. **Placinta, G.**; Toma, M., About a self-organization phenomenon in a magnetized plasma. Proceedings of the International Conference of Physics Students (ICPS), August 1991, Viena, Austria, pp. 86-88.

## **g) Alte lucrări și contribuții științifice**

### **g.1) Articole publicate în reviste din țară**

1. Baida, D.; **Borcia, G.**; Spectrul electronic de absorbție al al moleculei de clorofilă în prezența diferiților solvenți. Revista “V. Adamachi”, vol. XVII, Nr. 1 (2008), pp. 82-85, ISSN 12219363.

2. Onciu, A.; **Borcia, G.**; Spectrele de linii ale atomilor. Revista “V. Adamachi”, vol. XVII, Nr. 1 (2008), pp. 72-75, ISSN 12219363.

3. Burghilea, I.; Spridon, D.; Dumitrascu, N.; **Borcia, G.**, Analysis of polymeric materials degradation. Revista “V. Adamachi”, vol. XVII, Nr. 1 (2008), pp. 79-81, ISSN 12219363.

4. Topala, I.; **Borcia, G.**; Dumitrascu, N.; Popa, G., Surface modification of polymers used



in medicine by dielectric barrier discharge treatments. *Analele Stiintifice ale Universitatii "Al. I. Cuza", Supliment 2006*, pp. 267-274, ISSN 1453-0759.

5. Bors, S.; **Borcia, G.**; Dumitrascu, N., Interaction of biological liquids with polyamide-6 films treated by dielectric barrier discharge. *Rev. Med.-Chir. Soc. Med. Nat. Iasi*, Vol. 109, Supliment nr. 1, pp. 39-40, Mai 2005, ISSN 0048-7848.

6. **Borcia, G.**; Arefi-Khonsari, F.; Amouroux, J.; Popa, G., Study on the stability of surface properties of poly(ethylene terephthalate) films treated in plasmas of He-O<sub>2</sub> mixtures. *An. St. Univ. A. I. Cuza Iasi*, Tomul XLVI, Plasma Physics (2000) 201 - 204, ISSN 0379-7864.

7. Gheorghiu, M.; Amouroux, J.; **Placinta, G.**; Popa, G., Surface cross linking and functionalization of poly(ethylene terephthalate) in a helium discharge. *An. St. Univ. A. I. Cuza Iasi*, Tomul XL-XLII, Fizica Plasmei, 1994-1996, p. 125 – 143, ISSN 0379-7864.

#### g.2) **Lucrări prezente la conferințe internaționale și publicate în rezumat**

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