

# Plasma Processes, Materials and Surfaces, Publications list (2000 to present)

**2017**

## Papers published in ISI journals

L. Wang, **G. Dinescu**, X. Deng, **E.R. Ionita**, C. Leys, A. Nikiforov, *Mechanisms of sustaining a radio-frequency atmospheric pressure planar discharge*, Plasma Sources Sci. Technol. 00 (2017) 000000 (manuscript PSST-1017069pp) (accepted)

M. Bazavan, **M. Teodorescu**, **G. Dinescu**, *Confirmation of OH as good thermometric species for gas temperature determination in an atmospheric pressure argon plasma jet*, Plasma Sources Sci. Technol. **26** (2017) 075001

**S. Vizireanu**, **M.D. Ionita**, **E.R. Ionita**, **S.D. Stoica**, C.M. T Teodorescu, M.A. Husanu, N.G. Apostol, M. Baibarac, D. Panaitescu, **G. Dinescu**, *Aging phenomena and wettability control of plasma deposited carbon nanowall layers*, Plasma Process Polym. (2017); e1700023, <https://doi.org/10.1002/ppap.201700023>

**T. Acsente**, R.F. Negrea, L.C. Nistor, E. Matei, C. Grisolia, R. Birjega, **G. Dinescu**, *Tungsten nanoparticles with controlled shape and crystallinity obtained by magnetron sputtering and gas aggregation*, Materials Letters **200** (2017) 121–124

**V. Satulu**, **B. Mitu**, V.A. Altynov, N.E. Lizunov, L. Kravets, **G. Dinescu**, *Synthesis and characterization of porous composite membranes with hydrophilic/hydrophobic sides*, Thin Solid Films **630** (2017) 92-99; DOI: 10.1016/j.tsf.2016.08.052

H. Achour, A. Achour, **S. Vizireanu**, M. Islam, A. Arman, A. Ahmadpourian, **G. Dinescu**, *Plasma Surface Functionalization of Boron Nitride Nano-Sheets*, Diamond and Related Materials, accepted 2017

L. Rusen, S. Brajnicov, P. Neacsu, **V. Marascu**, A. Bonciu, M. Dinescu, V. Dinca, A. Cimpean, *Novel degradable biointerfacing nanocomposite coatings for modulating the osteoblast response*, Surface and Coatings Technology, in press

Z. Ben Cheikh, F. El Kamel, O. Gallot-Lavallée, M.A. Soussou, **S. Vizireanu**, A. Achour, K. Khirouni, *Hydrogen doped BaTiO<sub>3</sub> films as solid-state electrolyte for micro-supercapacitor applications*, Journal of Alloys and Compounds **721** (2017) 276-284

**B. Mitu**, A. Matei, M. Filipescu, A. Palla Papavlu, A. Bercea, T. Lippert, M. Dinescu, *Ferrocene pixels by laser-induced forward transfer: towards flexible microelectrode printing*, J. Phys. D: Appl. Phys. **50** (2017) 115601

### **Invited lectures**

G. Dinescu, E.R. Ionita, M.D. Ionita, M. Teodorescu, V. Marascu, A. Lazea-Stoyanova, *Radiofrequency Cold Plasma Jets Generated at Atmospheric Pressure: from Principles to Applications*, International Conference on Metallurgical Coatings and Thin Films (ICMCTF), April 24-28, 2017 San Diego, California, USA (INVITED, Session G5: Atmospheric Plasma Applications);

B. Mitu, S.D. Stoica, S. Vizireanu, G. Dinescu, *Process diagnostics during nanocarbon growth by RF plasma jet*, 17<sup>th</sup> International Conference on Plasma Physics and Applications (17<sup>th</sup> CPPA), June 15-20, Magurele, ROMANIA;

## **2016**

### **Papers published in ISI journals**

**C. Stancu**, D. Alegre, **E.R. Ionita**, **B. Mitu**, C. Grisolia, F.L. Tabares, **G. Dinescu**, *Cleaning of carbon materials from flat surfaces and castellation gaps by an atmospheric pressure plasma jet*, Fusion Engineering and Design **103** (2016) 38–44

**V. Mărăscu**, **S. Vizireanu**, **S.D. Stoica**, V. Barna, **A. Lazea-Stoyanova**, **G. Dinescu**, *FTIR investigation of the ageing process of carbon nanowalls*, Romanian Reports in Physics, **68** 3 (2016) PDF

**M.D. Ionita**, **S. Vizireanu**, **S.D. Stoica**, M. Ionita, A.M. Pandele, A. Cucu, I. Stamatina, L.C. Nistor, **G. Dinescu**, *Functionalization of carbon nanowalls by plasma jet in liquid treatment*, Eur. Phys. J. D. (2016) 70:31 DOI:10.1140/epjd/e2016-60499-8

**T. Acsente**, **M.D. Ionita**, **M. Teodorescu**, **V. Marascu**, **G. Dinescu**, *Surface modification of polymethylmethacrylate foils using an atmospheric pressure plasma jet in presence of water vapors*, Thin Solid Films **614** (2016) 25-30

C. Constantinescu, **S. Vizireanu**, V. Ion, G. Aldica, **S.D. Stoica**, **A. Lazea-Stoyanova**, A.-P. Alloncle, P. Delaporte, **G. Dinescu**, *Laser-induced forward transfer of carbon nanowalls for soft electrodes fabrication*, Applied Surface Science, **374** (2016) 49-55

R. Ion, **S. Vizireanu**, C. Luculescu, A. Cimpean, **G. Dinescu**, *Vertically, interconnected graphene carbon nanowalls as biocompatible scaffolds for osteoblast cells*, J. Phys D: Appl. Phys. **49** (2016) 274004 (6pp)

A.Y. Nikiforov, **E.R. Ionita**, **G. Dinescu**, C. Leys, *Characterization of a planar 8 mm atmospheric pressure wide radiofrequency plasma source by spectroscopy techniques*, Plasma Physics and Controlled Fusion **58** (1) (2016) 14013

D. Pantelica, P. Ionescu, H. Petrascu, M.D. Dracea, M. Statescu, E. Matei, O. Rasoga, **C. Stancu**, **V. Marascu**, V. Ion, **T. Acsente**, **G. Dinescu**, *Characterization of hydrogenated and deuterated silicon carbide films codeposited by magnetron sputtering*, Nuclear Instruments and Methods in Physics Research B, **371** (2016) 322-326

R. Ion, S. Vizireanu, C. Luculescu, A. Cimpean, G. Dinescu, *Vertically interconnected carbon nanowalls as biocompatible scaffolds for osteoblast cells*, Journal of Physics D: Applied Physics **49** (2016) 274004

**V. Satulu**, **B. Mitu**, V.A. Altynov, N.E. Lizunov, L. Kravets, **G. Dinescu**, *Synthesis and characterization of porous hydrophilic/hydrophobic composite membranes*, Thin Solid Films (2016)

**V. Satulu**, **M.D. Ionita**, **S. Vizireanu**, **B. Mitu**, **G. Dinescu**, *Plasma processing with fluorine chemistry for modification of surface wettability*, Molecules, 21, 12, 1711, (2016)

## 2015

### **Papers published in ISI journals:**

R. Ion, **S. Vizireanu**, **C.E. Stancu**, A. Cimpean, C. Luculescu, A. Cimpean, **G. Dinescu**, *Surface plasma functionalization influences macrophage behavior on carbon nanowalls*, Materials Science and Engineering C, **48**, 118–125, 2015

C. Grisolia, E. Hodille, J. Chêne, S. Garcia-Argote, G. Pieters, A. El-Kharbachi, L. Marchetti, F. Martin, F. Miserque, D. Vrel, M. Redolfi, V. Malard, **G. Dinescu**, **T. Acsente**, F. Gensdarmes, S. Peillon, B. Pegourié and B. Rousseau, *Tritium absorption and desorption in ITER relevant materials: comparative study of tungsten dust and massive samples*, Journal of Nuclear Materials, 11/2014; DOI:10.1016/j.jnucmat.2014.10.089

M. Mozetic, A. Vesel, **S.D. Stoica**, **S. Vizireanu**, **G. Dinescu**, R. Zaplotnik, *Oxygen atom loss coefficient of carbon nanowalls*, Applied Surface Science, **333**, 207–213, 2015

**A. Lazea Stoyanova**, A. Vlad, A.M. Vlaicu, V.S. Teodorescu, **G. Dinescu**, *Synthesis of Copper Particles by Non-thermal Atmospheric Pressure Plasma Jet*, Plasma Processes and Polymers, DOI: 10.1002/ppap.201400197

**M. Teodorescu**, **E.R. Ionita**, M. Bazavan, **G. Dinescu**, *Characteristics of a long and stable filamentary argon plasma jet generated in ambient atmosphere*, Plasma Sources Science and Technology, doi:10.1088/issn.0963-0252

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 & Emerging Technologies, In Press, doi:10.1016/j.ifset.2015.02.006

### **Invited lectures**

**G. Dinescu**, **A. Lazea-Stoyanova**, **T. Acsente**, V.S. Teodorescu, **V. Marascu**, Growth of particles in plasma at low and atmospheric pressure starting from metallic targets Proceedings of the 75<sup>th</sup> IUUSTA Workshop on Sheath Phenomena in Plasma Processing of Advanced Materials, 19<sup>th</sup>-23<sup>rd</sup> January 2015, Cerklje, Slovenia

### **Contributions presented as posters and oral presentations, published in Book of Abstracts of International Conferences**

**S. Vizireanu**, **M.D. Ionita**, **S.D. Stoica**, **M. Ionita**, **G. Dinescu**, *Modification of carbon nanowalls/water suspension by submerged plasma jets*, 2<sup>nd</sup> Annual Meeting Barcelona - COST TD1208 - Electrical discharges with liquids for future applications, Barcelona, 23-26 february 2015, Spain

L.I. Kravets, M.Tu. Yablokov, A.B. Gilman, **B. Mitu**, **G. Dinescu**, *Properties of track membranes modified by plasma not polymerize gases*, Institute of Physical Chemistry and Electrochemistry named after AN Frumkin of the Russian Academy of Sciences of the 6th All-Russian seminar Physical chemistry of surfaces and nanostructures Moscow, 3 - 4 February 2015

L.I. Kravets, R.G. Ibragimov, **G. Dinescu**, *Micro- and nano fluid diodes based on polyethylene terephthalate track membranes*, Institute of Physical Chemistry and Electrochemistry named after AN Frumkin of the Russian Academy of Sciences of the 6th All-Russian seminar Physical chemistry of surfaces and nanostructures Moscow, 3 - 4 February 2015

**2014**

**Papers published in ISI journals:**

**T. Acseste**, R.F. Negrea, **A. Lazea-Stoyanova**, L.C. Nistor, **G. Dinescu**, *Microstructure of the a-C:H/W layers deposited by plasma assisted sequential deposition method*, Digest Journal of Nanomaterials and Biostructures, **9**, 2, 443 - 450, 2014

**E.C. Stancu**, A.-M. Stanciuc, **S. Vizireanu**, C. Luculescu, L. Moldovan, A. Achour, **G. Dinescu**, *Plasma functionalization of carbon nanowalls and its effect on attachment of fibroblast-like cells*, Journal of Physics D Applied Physics, **47**, 265203, 2014

A. Matei, C. Constantinescu, V. Ion, **B. Mitu**, **I. Ionita**, M. Dinescu, C. Vasiliu, A. Emandi, *Ferrocene, an old molecule with a bright future: Thin films grown by matrix-assisted pulsed laser evaporation for nonlinear optical applications*, Journal of Organometallic Chemistry, **638**, 36923, 2014

R. Pascu, S. Somacescu, G. Epurescu, M. Filipescu, C. Luculescu, D. Colceag, P. Osiceanu, R. Birjega, **B. Mitu**, *Pulsed laser deposition of yttria stabilized zirconia based heterostructure*, Thin Solid Films, **98**, 46784, 2014

C. Constantinescu, A. Matei, V. Ion, **B. Mitu**, **I. Ionita**, M. Dinescu, C.R. Luculescu, C. Vasiliu, A. Emandi, *Ferrocene carboxaldehyde thin films grown by matrix-assisted pulsed laser evaporation for non linear optical applications*, Applied Surface Science, **83**, 2014

A. Vlad, R. Birjega, A. Matei, C. Luculescu, **B. Mitu**, M. Dinescu, R. Zavoianu, O.D. Pavel, *Retention of heavy metals on layered double hydroxides thin films deposited by pulsed laser deposition*, Applied Surface Science, **99**, 2014

L. Rusen, V. Dinca, **B. Mitu**, C. Mustaciosu, M. Dinescu, *Temperature responsive functional polymeric thin films obtained by matrix assisted pulsed laser evaporation for cells attachment-detachment study*, Applied Surface Science, **134**, 2014

L.I. Kravets, S.N. Dmitriev, V. Satulu, B. Mitu, G. Dinescu, *Formation of composite polymer 'diode-like' membranes*, Romanian Reports in Physics, **66**, 4, 1165-1179, 2014

P. Pantelica, P. Ionescu, H. Petrascu, C.R. Nita, E. Matei, O. Rasoga, **T. Acseste**, **G. Dinescu**, *Characterization of hydrogenated and deuterated thin carbon films deposited by magnetron sputtering*, Nuclear Instruments & Methods in Physics Research Section B-beam Interactions with Materials and Atoms, **331**, 121-124, 2014

T.M. Dinh, A. Achour, **S. Vizireanu**, **G. Dinescu**, L. Nistor, K. Armstrong, D. Guay, D. Pech, *Hydrous RuO<sub>2</sub>/carbon nanowalls hierarchical structures for all-solid-state ultrahigh-energy-density micro-supercapacitors*, Nano Energy, **10**, 288–294, 2014

**A. Lazea-Stoyanova**, M. Enculescu, **S. Vizireanu**, **V. Marascu**, **G. Dinescu**, *Effects of process parameters on growth of metal particles by atmospheric pressure plasma jet*, Digest Journal of Nanomaterials and Biostructures, **9**, 3, 1241 - 1247, 2014

D.L. Cursaru, **S. Vizireanu**, S. Mihai, D. Ghiță, **S.D. Stoica**, **G. Dinescu**, *Friction and wear properties of carbon nanowalls coatings*, Digest Journal of Nanomaterials and Biostructures, **9**, 1105-1114, 2014

### **International Patents**

I. Junkar, M. Modic, A. Vesel, G. Dinescu, S.I. Vizireanu, S.D. Stoica, K.S. Kleinschek, M. Mozetic, *Method of growing carbon nanowalls on a substrate*, registration number 1418056.6 from 13/10/2014, Great Britain

### **Contributions presented as posters and oral presentations, published in Book of Abstracts of International Conferences**

V. Satulu, B. Mitu, V. Ion, I. Sarbu, D. Pelinescu, G. Dinescu, *Polyethylene glycol-silver nanocomposite material for antimicrobial applications*, E-MRS 2014 SPRING MEETING, 26-30 Mai 2014, Lille, France, cod G.PII. 25

V. Satulu, B. Mitu, S. Somacescu, I. Sarbu, D. Pelinescu, G. Dinescu, *PLASMA BASED PROCESSES FOR SYNTHESIS OF METAL-POLYMER, NANOCOMPOSITES*, The 14<sup>th</sup> International Balkan Workshop on Applied Physics and Materials Science, 2-4 Iulie 2014, Constanta, Romania, cod S2 OP01

S. Vizireanu, A. Lazea, T. Acsente, B. Mitu, G. Dinescu, *Carbon nanowalls and metallic particles: synthesis by plasma and applications*, 1<sup>st</sup> International Symposium on Nanoparticles/Nanomaterials and Applications, 20-22 January 2014, Caparica, Portugal, cod O27B

G. Dinescu, S. Vizireanu, T. Acsente, B. Mitu, A. Lazea, D. Stoica, V. Marascu, *Plasma Synthesis and Processing of Carbon Nanowalls and Submicron Metallic Particles*, 27<sup>th</sup> International Symposium on the Physics of Ionized Gases (SPIG 2014), 26-29 August 2014, Belgrad, Serbia

G. Dinescu, *Control of application-related properties carbon nanowalls synthesized by a plasma jet*, Conference iPLasmaNano-V, 28 Septembrie - 2 octombrie 2014, Torremolinos, Malaga, Spania cod M4-2

L.I. Kravets, A.B. Gilman, M.Yu. Yablokov, V. Satulu, B. Mitu, G. Dinescu, *Nanofluidic diodes based on the track membranes modified by plasma*, Proceedings of

the IX International Conference "Vacuum Equipment, Materials and Technology", 15-17 Aprilie 2014, Moscova, Rusia, Pag. 195-199

T. Acsente, R. Negrea, L.C. Nistor, G. Dinescu, C. Grisolia, *Synthesis of tungsten clusters using magnetron sputtering gas aggregation source*, 14<sup>th</sup> International Conference on Plasma Surface Engineering, 15 - 19 Septembrie 2014, Garmisch-Partenkirchen, Germania, cod PO4049

E.R. Ionita, M. Teodorescu, M. Bazavan, G. Dinescu, *Comparative study of two similar form factor atmospheric plasma jet sources with and without dielectric barriers*, 14<sup>th</sup> International Conference on Plasma Surface Engineering, 15 - 19 Septembrie 2014, Garmisch-Partenkirchen, Germania, cod PO3025

D. Kontziampasis, M.D. Ionita, M. Filipescu, A. Lazea-Stoyanova, B. Mitu, E. Gogolides, G. Dinescu, *Fabrication of nanostructured silicon surfaces by combining atmospheric pressure plasma etching and nanosphere lithography*, 14<sup>th</sup> International Conference on Plasma Surface Engineering, 15 - 19 Septembrie 2014, Garmisch-Partenkirchen, Germania, cod OR0303

S. Vizireanu, S.D. Stoica, M.D. Ionita, A. Lazea, G. Dinescu, *Modification of carbon nanowalls by plasma jets submerged in liquids*, COST TD1208 Annual meeting, "Electrical discharges with liquids for future applications", 10-13 Martie 2014, Lisabona, Portugalia, WG4-3

S.D. Stoica, S. Vizireanu, C.R. Luculescu, B. Mitu, G. Dinescu, *Influence of nozzle geometry on the properties of CNW synthesized in a plasma jet*, E-MRS 2014 Spring Meeting, 26-30 Mai 2014, Lille, Franta, cod G.PII. 24

S. Vizireanu, E.C. Stancu, D. Ionita, C. Luculescu, A.M. Stanciuc, L. Moldovan, G. Dinescu, *Response of fibroblast cells on plasma modified nanostructured carbon surfaces*, BiomMedD'2014, 17-20 Septembrie 2014, Constanta, Romania, cod P112

T. Acsente, G. Dinescu, R. Negrea, L.C. Nistor, E. Matei, C. Grisolia, *Properties of clusters obtained by condensation of tungsten sputtered atoms in an argon gas flow*, The XXII Europhysics Conference on Atomic and Molecular Physics of Ionized Gases (ESCAMPIG), 15-19 Iulie 2014, Greifswald, Germania, cod P3-07-03

M. Teodorescu, E. R. Ionita, M. Bazavan, G. Dinescu, *Electrical characterization of a stable monofilamentary plasma jet*, The XXII Europhysics Conference on Atomic and Molecular Physics of Ionized Gases (ESCAMPIG), 15-19 Iulie 2014, Greifswald, Germania, cod P3-05-20

A. Lazea-Stoyanova, M. Enculescu, V. Marascu, G. Dinescu, *Synthesis and properties of metallic particles obtained by a RF plasma jet operating from low to atmospheric pressure*, The XXII Europhysics Conference on Atomic and Molecular Physics of Ionized Gases (ESCAMPIG), 15-19 Iulie 2014, Greifswald, Germania, cod P3-07-01

C. Grisolia, E. Hodille, J. Chene, S. Garcia-Argote, G. Pieters, L. Marchetti, F. Martin, F. Miserque, D. Vrel, M. Redolfi, V. Mallard, G. Dinescu, T. Acsente, F. Gensdarmes, S. Peillon, *Tritium absorption and desorption in ITER relevant materials: comparative*

*study of tungsten dust and massive samples*, 21<sup>st</sup> International Conference on Plasma Surface Interactions, 26-30 Mai 2014, Ongaku-do, Kanazawa Ishikawa, Japonia, cod P1-022

V. Mărăscu, E.S. Barna, S.D. Stoica, M.D. Ioniță, A. Stoyanova-Lazea, G. Dinescu, *Surface analysis of 2D nanomaterials obtained in RF plasma jet discharge*, The 4<sup>th</sup> International Colloquium "Physics of Materials" (PM-4), 13-14, noiembrie, 2014, Universitatea "Politehnica" Bucuresti, Romania; cod P-13

M. Teodorescu, E.R. Ionita, C.E. Stancu, C. Stancu, G. Dinescu, *Atmospheric plasma sources operated in radiofrequency for biomedical applications*, JSPP2014 COST MP11011-Workshop, 19-23 Ianuarie 2014, Bohinjjska, Bistrica, Slovenia

L. Kravets, A. Gilman, M. Yablokov, V. Satulu, B. Mitu, G. Dinescu, *Modification of Track membranes in Plasma for Producing Micro- and Nanofluidic diodes*, Int. Conf. Phys. Of Low. Temp. Plasma, ICLTP 2014, May 20 - 23, 2014, Kazan

L. Kravets, A. Gilman, M. Yablokov, V. Satulu, B. Mitu, G. Dinescu, *Modification of Track membranes in Plasma for Producing Micro- and Nanofluidic diodes*, Proceeding of Int. Conf. Phys. Of Low. Temp. Plasma, ICLTP 2014, May 20 - 23, 2014, Kazan, pages 256-260

L.I. Kravets, S.N. Dmitriev, V. Satulu, B. Mitu, G. Dinescu, *Structure and electrochemical properties of track membranes with, a polymer layer obtained by plasma polymerization of acetylene*, Journal of Physics: Conference Series 516 (2014) 012006, doi:10.1088/1742-6596/516/1/012006

## **2013**

### **Papers published in ISI journals:**

L.I. Kravets, A.B. Gilman, M.Yu. Yablokov, V.M. Elinson, B. Mitu, G. Dinescu, *Surface and electrochemical properties of polypropylene track membrane modified by plasma of non-polymerizing gases*, Russian Journal of Electrochemistry, **49**, 7, 680-692, 2013

A. Matei, J. Schou, S. Canulescu, M. Zamfirescu, C. Albu, B. Mitu, E.C. Buruiana, T. Buruiana, C. Mustaciosu, I. Petcu, M. Dinescu, *Functionalized ormosil scaffolds processed by direct laser polymerization for application in tissue engineering*, Applied Surface Science, **278**, 357-361, 2013

A. Achour, B. Belkerk, K. A. Aissa, S. Vizireanu, E. Gautron, M. Carette, P-Y. Jouan, G. Dinescu, L. Le Brizoual, Y. Scudeller, M-A. Djouadi, "Thermal properties of carbon nanowalls layers measured by pulsed photothermal technique", Applied Physics Letters, 102, 061903, 2013



**S. Vizireanu, G. Dinescu**, L.C. Nistor, M. Baibarac, G. Ruxanda, M. Stancu, D.M. Ciuparu, "*Stability of carbon nanowalls against chemical attack with acid solutions*", *Physica E: Low-Dimensional Systems and Nanostructures*, **47**, 59, 2013

A. Achour, **S. Vizireanu, G. Dinescu**, Le Brizoual, M-A. Djouadi and M. Boujtita, "*Electrochemical anodic oxidation of nitrogen doped carbon nanowall films*", *Applied Surface Science*, **accepted**, 2013

A. Achour, B. Belkerk, K. A. Aissa, **S. Vizireanu**, E. Gautron, M. Carette, P-Y. Jouan, **G. Dinescu**, L. Le Brizoual, Y. Scudeller, M-A. Djouadi, "*Thermal properties of carbon nanowalls layers measured by pulsed photothermal technique*", *Applied Physics Letters*, **102**, 061903, 2013

L. Kravets, A. Gilman, M. Yablokov, V. Elinson, **B. Mitu, G. Dinescu**, "*Surface and Electrochemical Properties of Plasma-Treated Polypropylene Track Membrane*", *Plasma Processes and Polymers*, **accepted**, 2013

## 2012

### **Papers published in ISI journals:**

**S. Vizireanu, M. D. Ionita, G. Dinescu**, I. Enculescu, M. Baibarac, I. Baltog, "*Post-synthesis carbon nanowalls transformation under hydrogen, oxygen, nitrogen, tetrafluoroethane and sulfur hexafluoride plasma treatments*", *Plasma Processes and Polymers*, **9**, 363-370, 2012

Stokker-Cheregi, **T. Acsente**, I. Enculescu, C. Grisolia, **G. Dinescu**, "*Tungsten and aluminium nanoparticles synthesized by laser ablation in liquids*", *Digest Journal of Nanomaterials and Biostructures*, **7**, 4, 1569-1576, 2012

**V. Satulu, C. Stancu**, V. Ion, M. Filipescu, **B. Mitu, G. Dinescu**, "*Sequential PECVD/PVD technique used for the synthesis of copperpolypyrrole nanocomposites with surface plasmon resonance effect*", *Romanian Reports in Physics*, **64**, 1345–1353, 2012

**M. Teodorescu**, M. Bazavan, **E. R. Ionita, G. Dinescu**, "*Characterization of an argon radiofrequency plasma jet discharge continuously passing from low to atmospheric pressure*", *Plasma Sources Science & Technology*, **21**, 5, 055010, 2012

Y. Garino, T. Teraji, **A. Lazea**, S. Koizumi, "*Forward Tunneling Current in {111}-oriented homoepitaxial diamond p-n junction*", *Diamond and Related Materials*, **21**, 33-36, 2012

**A. Lazea**, Y. Garino, T. Teraji, S. Koizumi, "*High quality of p-type chemical vapor deposited {111}-oriented diamonds: growth and fabrication of related electrical devices*", *Physica Status Solidi (a)*, **208**, 10, 1978-1981, 2012

**S. Vizireanu, B. Mitu**, C.R. Luculescu, L.C. Nistor, **G. Dinescu**, "*PECVD synthesis of 2D nanostructured carbon material*", Surface and Coatings Technology, **211**, 2, 2012

Z. Gonzalez, **S. Vizireanu, G. Dinescu**, C. Blanco, R. Santamaria, "*Carbon Nanowalls thin films as nanostructured electrode materials in Vanadium Redox Flow Batteries*", Nano Energy, 1, 833, 2012

S. Somacescu, R. Scurtu, G. Epurescu, R. Pascu, **B. Mitu**, P. Osiceanu, M. Dinescu, "*Thin films of SnO<sub>2</sub> –CeO<sub>2</sub> binary oxides obtained by pulsed laser deposition for sensing application*", Applied Surface Science, **in press**, <http://dx.doi.org/10.1016/j.apsusc.2012.11.007>, Available online 16 November 2012

A. Matei, J. Schou, S. Canulescu, M. Zamfirescu, C. Albu, **B. Mitu**, E.C. Buruiana, T. Buruiana, C. Mustaciosu, I. Petcu, M. Dinescu, "*Functionalized ormosil scaffolds processed by direct laser polymerization for application in tissue engineering*", Applied Surface Science, <http://dx.doi.org/10.1016/j.apsusc.2012.10.104>, Available online 26 October 2012

C.M. Ticos, **S.D. Stoica** and G.L. Delzanno, "*Generation of dust projectiles passing over an obstacle in the plasma sheath*", Phys. Plasmas, **19**, 083701, 2012

#### **Invited lectures:**

B. Mitu, S.D. Stoica, S. Vizireanu, "*Plasma deposition of carbon-based materials: diagnostic studies*", XXI Europhysics Conference on Atomic and Molecular Physics of Ionized Gases (ESCAMPIG), Viana do Castelo, Portugal, July 10-14, 2012

#### **Contributions presented and published in Book of Abstracts of International Conferences**

**S. Vizireanu, S.D. Stoica, E.C. Stancu, B. Mitu, G. Dinescu**, "*Modifications of Carbon nanowalls by Plasma Treatment*", The 8<sup>th</sup> General Conference of Balkan Physical Union, Constanta, Romania, July 5–7, 2012

**S.D. Stoica, S. Vizireanu, B. Mitu, G. Dinescu**, "*Characterization of a low pressure expanding RF plasma jet generated in Ar/H<sub>2</sub>/C<sub>2</sub>H<sub>2</sub> admixture used for carbon nanowalls synthesis*", International Student Conference on Photonics – ISCP 2012, Sinaia, Romania, May 8-12, 2012

**S. Vizireanu, S.D. Stoica, E.C. Stancu, B. Mitu, G. Dinescu**, "*Carbon nanowalls: plasma synthesis, properties and application*", Diaspora in Cercetarea Stiintifica si Invatamantul Superior din Romania", Bucuresti, September 25-28, 2012

**E.C. Stancu, S. Vizireanu, A.M. Stanciuc, L. Moldovan, G. Dinescu**, “*Cells adhesion on plasma prepared nanostructured surfaces*”, Emerging Analytical Tools to Investigate Nitro-Oxidative Stress, Bucuresti, July 24-26, 2012

**Z. Gonzalez, S. Vizireanu, G. Dinescu, S. Roldan, C. Blanco, R. Santamaria**, “*Carbon Nanowalls as active electrode materials in Vanadium Redox Flow Batteries Carbon for Energy Storage*”, Carbon 2012, Krakowia, Polonia, June 17-22, 2012

**A. Achour, B. Belkerk, K, S. Vizireanu, J-F. Colomer, M. Carrette, P-Y. Jouan, G. Dinescu, L. Le Brizoual, Y. Scudeller and M-A. Djouadi**, “*Hybrid Nanostructures Based on Aluminium Nitride and CNTs /CNWs as Thermal Interface Materials Carbon-based Composites and Nanocomposites*”, Carbon 2012, Krakowia, Polonia, June 17-22, 2012

**L.I. Kravets, S.N. Dmitriev, V. Satulu, B. Mitu, G. Dinescu**, “*Structure and electrochemical properties of track -etched membranes with a plasma polymer top layer*”, 12<sup>th</sup> EUROPEAN PLASMA CONFERENCE, Bologna, Italy, June 24-29, 2012

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Kravets L.I., Dmitriev S.N., Goryacheva T.A., **Satulu V.**, **Mitu B.**, **Dinescu G.**, “*Structure and electrochemical properties of track membranes modified by plasma of tetrafluoroethane*”, Russian Conference Membranes, Moscow, Russia, October 4-8, 2010

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**G. Dinescu, E.R. Ionita, M. Teodorescu, C. Stancu, T. Acsente, M. Bazavan**, „*Radiofrequency expanding plasma sources at atmospheric pressure. Applications*”, Invited lecture, Proceedings of 4th International Congress on Cold Atmospheric Pressure Plasmas: Sources and Applications (CAPPSSA 2009) June 22-24 2009, Ghent, pag. 17-23

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**M. Teodorescu, C. Stancu, E.R. Ionita, M. D. Ionita, M. Bazavan, G. Dinescu**, „*Atmospheric pressure RF plasma jets generated by dielectric barrier discharges of various configurations*”, presented at International Colloquium on Plasma Processes (CIP 2009), June 22-26, 2009, Marseille, France (Book of Abstracts, page 115)

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**G. Dinescu**, “*Plasma Diagnostics: Basics of Plasma Spectroscopy*”, invited lecture at European Summer School “Low Temperature Plasma Physics: Basics and Applications”, October 4 -9, 2008

**G. Dinescu**, “*Radiofrequency plasma sources at low and atmospheric pressure and their applications: deposition, modification and cleaning of carbon based materials*”, October 24, 2008, seminar presented at Paul Scherer Institute, Villigen, Switzerland (group of Prof. T. Lippert)

**G. Dinescu, C. Stancu, E. R. Ionita, A. C. Galca**, “*Plasma cleaning of organic residuals from inside narrow channels*”, invited lecture, presented at National Conference of Physics, September 10-13, Magurele-Bucharest, Romania

### **International Conferences (Extended Proceedings):**

**C. Stancu, A. C. Galca, G. Dinescu**, “*Removal of carbon residuals from narrow spaces by RF discharges*”, 35<sup>th</sup> European Physical Conference (35<sup>th</sup> EPS), Conference on Plasma Physics June 9-13, Hersonissos, Greece, Proceedings on CD, 4 pages

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