

**I. ACTIVITATEA DE CERCETARE (70%)****1. Articole științifice publicate in extenso în reviste cotate Web of Science cu factor de impact**(60 puncte x factor de impact  
+ 25) / număr autori

Nr. Crt	Lucrare	FI	Nr. autori	Punctaj
1	M. Sanduloviciu, C. Borgia, G. Leu, Self-organization phenomena in current-carrying plasmas related to the nonlinearity of the current versus voltage characteristic. Physics Letters A 208, 136-142 (1995).	1.19	3	32.1333
2	M. Sanduloviciu, V. Melnig, C. Borgia, Spontaneously generated temporal patterns correlated with the dynamics of self-organized coherent space charge configurations formed in plasma. Physics Letters A 229, 354-361 (1997).	1.267	3	33.6733
3	C. Gherman, C. Borgia, E. Lozneau, M. Sanduloviciu, C. Gaman, Phenomena observed in laboratory plasmas relevant for the so-called anomalous transport observed in plasma devices. Acta Physica Slovaca 54, 205-211 (2004).	0.513	5	11.156
4	N. Dumitrascu, C. Borgia, Adhesion properties of polyamide-6 fibres treated by dielectric barrier discharge. Surface & Coatings Technology 201, 1117-1123 (2006).	1.559	2	59.27
5	N. Dumitrascu, C. Borgia, Determining the contact angle between liquids and cylindrical surfaces. Journal of Colloid and Interface Science 294, 418-422 (2006).	2.233	2	79.49
6	C. Borgia, G. Borgia, N. Dumitrascu, Plasma induced surface modification in relation to polymer characteristics. Journal of Optoelectronics and Advanced Materials 10, 675-679 (2008).	0.577	3	19.8733
7	C. Borgia, G. Borgia, N. Dumitrascu, Relating plasma surface modification to polymer characteristics. Applied Physics a-Materials Science & Processing 90, 507-515 (2008).	1.884	3	46.0133
8	N. Dumitrascu, C. Borgia, G. Borgia, Control of the Blood-Polymer Interface by Plasma Treatment. Journal of Biomedical Materials Research Part B-Applied Biomaterials 87B, 364-373 (2008).	2.03	3	48.9333
9	G. Borgia, C. Borgia, N. Dumitrascu, Temporal evolution of pulsed atmospheric pressure DBD in asymmetric configuration. Romanian Journal of Physics 54, 689-697 (2009).	0.279	3	13.9133
10	C. Borgia, G. Borgia, N. Dumitrascu, Atmospheric-Pressure Dielectric Barrier Discharge for Surface Processing of Polymer Films and Fibers. IEEE Transactions on Plasma Science 37, 941-945 (2009).	1.043	3	29.1933
11	G. Borgia, R. Cazan, C. Borgia, DBD Surface Modification of Polymers in Relation to the Spatial Distribution of Reactive Oxygen Species. Plasma Chemistry and Plasma Processing 31, 729-740 (2011)	1.602	3	40.3733
12	C. Borgia, G. Borgia, N. Dumitrascu, Surface treatment of polymers by plasma and UV radiation. Romanian Journal of Physics 56, 224-232 (2011).	0.414	3	16.6133

13	C. Borgia et al., Sorption of thallos ion from acidic aqueous solutions onto ETS-10 titanosilicate. Journal of Radioanalytical and Nuclear Chemistry 288, 25-30 (2011).	1.52	6	19.3667
14	C. Borgia, N. Dumitrascu, G. Borgia, Comparing the modification induced by plasma and UV radiation to polymer surfaces, Romanian Reports in Physics 64, 163-172 (2012).	1.123	3	30.7933
15	C. Borgia, I. L. Punga, G. Borgia, Surface properties and hydrophobic recovery of polymers treated by atmospheric-pressure plasma. Applied Surface Science 317, 103-110 (2014).	2.538	3	59.0933
16	C. Borgia, M. C. Teodor, M. Oprea, L. Gorgan, D. Mihailescu, IN VITRO STUDY OF RADIATION-INDUCED DNA DAMAGE. Romanian Reports in Physics 66, 16-21 (2014).	1.137	5	18.644
17	D. Mihailescu, C. Borgia, Monte Carlo simulation of the electron beams produced by a linear accelerator for intra-operative radiation therapy, Romanian Reports in Physics 66, 61-74 (2014).	1.137	2	46.61

**Total criteriu****605.143****2. Articole științifice publicate in extenso în reviste indexate Web of Science fără factor de impact**

20 puncte / număr autori

Nr. Crt	Lucrare		nr. autori	Punctaj
1	C. Borgia, D. Mihailescu, ARE WATER-EQUIVALENT MATERIALS USED IN ELECTRON BEAMS DOSIMETRY REALLY WATER EQUIVALENT? Romanian Journal of Physics 53, 851-863 (2008).	x	2	10
2	M. Oprea, C. Constantin, D. Mihailescu, C. Borgia, A MONTE CARLO INVESTIGATION OF THE INFLUENCE OF INITIAL ELECTRON BEAM CHARACTERISTICS ON THE ABSORBED DOSE DISTRIBUTIONS OBTAINED WITH A 9 MEV IORT ACCELERATOR. University Politehnica of Bucharest Scientific Bulletin-Series a-Applied Mathematics and Physics 74, 153-166 (2012).	x	4	5
3	Oprea, M. ; Mihailescu, D. ; Borgia, C. ; Dimova Malinovska, D. ; Nesheva, D. ; Pecheva, E. ; Petrov, A. G. ; Primatarowa, M. T, in 17th International School on Condensed Matter Physics (ISCMP) - Open Problems in Condensed Matter Physics, Biomedical Physics and their Applications. (Varna, BULGARIA, 2012), vol. 398.	x	3	6.66667
4	M. Sanduloviciu, V. Melnig, C. Borgia, Spontaneously generated temporal patterns of plasma device correlated with the dynamics of self-organized coherent space charge configurations. Icpp 96 Contributed Papers - Proceedings of the 1996 International Conference on Plasma Physics, Vols 1 and 2, 1614-1617 (1997).	x	3	6.66667

**Total criteriu****28.3333**

**4. Articole științifice publicate in extenso în volumele conferințelor**

Nr. Crt.	Lucrare	alte categorii: 5 puncte / număr autori		
1	Sanduloviciu, M., Borgia, C., Melnig, V. and Gherman, C., "Comparative studies performed on "fireballs" formed in direct current and high frequency discharges" XXIII International Conference Phenomena in Ionized Gases, 17-22 July 1997, Toulouse, France, Proceedings Contributed Papers II, editors M.C. Bordage and A. Gleizes, p. 172-173	5	4	1.25
2	C. Borgia, E. Lozneau, M. Sanduloviciu, Physical basis of anomalous transport observed in plasma devices, 27th EPS Conference on Contr. Fusion and Plasma Phys. Budapest, 12-16 June 2000 ECA Vol. 24B (2000), pag. 1056-1059	5	3	1.66667
3	C. Borgia, E. Lozneau, M. Sanduloviciu, Non-linear analysis of temporal patterns generated by self-organized structures formed in plasman, Proceedings of the Fourth General Conference of the Balkan Physical Union, Veliko Turnovo, 22-27 August 2000, pag. 435-438	5	3	1.66667
4	C. Borgia, M. Sanduloviciu, Experimental evidence of similarities between self-organized structures formed in D.C. and H.F. plasma, Proceedings of the Fourth General Conference of the Balkan Physical Union, Veliko Turnovo, 22-27 August 2000, pag. 479-482	5	2	2.5
5	Sanduloviciu, M. Borgia, C. Popescu, S. Lozneau, E., Origin of space charge configurations in plasmas, ICOPS 2000. IEEE Conference Record - Abstracts. 27th IEEE International Conference on Plasma Science, 4 - 7 Jun 2000, New Orleans, LA , USA	5	4	1.25
6	E. Lozneau, C. Borgia, S. Popescu, M. Sanduloviciu, C. Avram, D. Dimitriu, V. Ignatescu, R. Schrittwieser, On the origin of flicker-noise in various plasmas, 11th International Toki Conference on Plasma Physics and Controlled Nuclear Fusion, At Toki, Japan, J. Plasma Fusion Res. SERIES, Vol. 4 (2001) 331-334	5	8	0.625
7	C. Borgia, C. Gherman and M. Sanduloviciu, ON THE DYNAMICAL BEHAVIOR OF A HIGH-FREQUENCY PLASMOID, 28th EPS Conference on Controlled Fusion and Plasma Physics, 18-22 June 2001, ECA Vol. 25A (2001), pag. 889-892	5	3	1.66667
8	C. Borgia, C. Gherman and M. Sanduloviciu, "Experimental control of the proper dynamics of a H.F. plasmoid", Proceedings of XXVth ICPIG. Nagoya : ICPIG, 2001, p. 191-192, 21p15	5	3	1.66667
9	C. Gherman, C. Borgia, E. Lozneau, M. Sanduloviciu and C. Gaman, Phenomena observed in laboratory plasmas relevant for the so-called anomalous transport observed in plasma devices, Proceedings of the XIV-th Symposium of Application of Plasma Processes, 13-18 Jan. 2003, Lipovsky Mikulas, Slovakia, pag. 30-31	5	5	1

10	C. Borgia, N.M.D. Brown, Study of the Properties of DLC Films Etched in a RF Oxygen Plasma, XII-th Conference on Plasma Physics and Applications, Iasi, 2003, publicat in Analele Stiintifice ale Universitatii Alexandru Ioan Cuza din Iasi, tomul XLIX, Fizica, 2003, pag. 131-136	5	2	2.5
11	N. Dumitrascu, C. Borgia, G. Popa, Adhesion properties of polyamide-6 monofilaments treated by dielectric barrier discharge, Proceedings of XXVII International Conference on Phenomena in Ionized Gases, July 17-22, 2005, Eindhoven, The Netherlands, (10-165)	5	3	1.66667
12	C. Borgia, N. Dumitrascu, G. Popa, Cylindrical surfaces treated by atmospheric pressure plasma, 18-th Europhysics Conference on the Atomic and Molecular Physics of Ionized Gases, Lecce, Italia, 12-16 Iulie 2006, pag. 473-474	5	3	1.66667
13	N. Dumitrascu, G. Borgia, C. Borgia, "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 Abstracts and Full-Papers CD, edited by K. Tachibana, O. Takai. K. Ono, T. Shirafuji, published by International Plasma Chemistry Society, Abstracts, ISBN 978-4-9903773-2-8, 27P-97, p. 490, Full-Papers CD, ISBN 978-4-9903773-3-5, 27P-97, paper00229.pdf (4 pagini)	5	3	1.66667
14	C. Borgia, N. Dumitrascu, "Evaluation of surface energetic characteristics of fibers treated by DBD", 18th International Symposium on Plasma Chemistry (ISPC 18), August 26 – 31 2007, Kyoto University, Japan Abstracts and Full-Papers CD, edited by K. Tachibana, O. Takai. K. Ono, T. Shirafuji, published by International Plasma Chemistry Society, Abstracts, ISBN 978-4-9903773-2-8, 27P-96, p. 489, Full-Papers CD, ISBN 978-4-9903773-3-5, 27P-96, paper00214.pdf (4 pagini)	5	3	1.66667
15	C. Borgia, G. Borgia, N. Dumitrascu, Plasma surface modification in relation to polymer properties, Proceeings of the 28th ICPIG, July 15-20, 2007, Prague, Czech Republic, topic 13, 4 pag.	5	3	1.66667
16	C. Borgia, N. Dumitrascu, G. Borgia, "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 Full text abstracts (2 pp.) - paper no. 1-46	5	3	1.66667
17	G. Borgia, I. Rusu, C. Borgia, N. Dumitrascu, "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 Full text abstracts (2 pp.) - paper no. 3-38	5	3	1.66667
18	C. Borgia, G. Borgia, N. Dumitrascu, "Atmospheric pressure plasma for surface modification of polymers in film and fibre form", 8th International Conference on Physics of Advanced Materials (ICPAM-8), June 4-7, 2008, Iasi, Romania, Proceedings - Abstracts of Poster Papers P-I.12 (pp. 41-42).	5	3	1.66667

19	S. J. Talasman, C. Borgia, "The universal evolution criterion in the case of ionosphere plasma" 19th Europhysics Conference on the Atomic and Molecular Physics of Ionized Gases (19th ESCAMPIG), Granada, Spain, 15-19 July 2008 Full text abstracts (2 pp.) - paper no. 2-78	5	3	1.66667
20	Borgia G., Borgia C. and Dumitrascu N., Atmospheric pressure plasma for surface processing, Proceedings of the first i-SUP Conference - Innovation for Sustainable Production, April 22-25, 2008, Bruges, Belgium, pag. 35-39	5	3	1.66667
21	I.A. Popescu, A. Teodor, C. Borgia, A. Cucu, Monitoring the population by radon exposure - a preliminary study for the North-East region of Romania, Proceedings of the VII Hungarian Radon Forum and Radon in Environment Satellite Workshop, May 16-17, 2013, Veszprem, Hungary, pag. 13-18	5	4	1.25

**Total criteriu****33.7083****5. Cărți științifice publicate (doar prima ediție)**

edituri academice naționale:  
50 puncte la 100 pagini /  
număr autori

		nr. pagini	nr. aut.	punctaj
1	D. Mihăilescu, C. Borgia – "Interacțiunea radiațiilor ionizante cu substanța. Partea I: radiații încărcate electric", Ed. Sedcom Libris, Iași, 2007, ISBN 978-973-670-256-3.	251	2	62.75

**Total criteriu****62.75**

**9. Contracte de cercetare științifică în instituții academice (universități, institute ale Academiei Române, institute naționale de cercetare, institute de cercetare din străinătate, alte categorii de institute academice)**

**contracte internaționale – director: 100 puncte pentru fiecare 100.000 Euro**

	Contract	valoare contract (EUR)		punctaj
1	"ENVIREE - ENVIRONMENTALLY friendly and efficient methods for extraction of Rare Earth Elements from secondary sources", ERA-MIN Joint Call 2014.	192440		192.44
2	Proiect bilateral Romania-IUCN Dubna, Investigations of effects produced by heavy charged particles with different energy upon some cellular processes", nr. 46 Ordinul IUCN nr. 151 din 15.03.2011, tema 04-9-1077-2009/2011 "Research of biological action of heavy charged particles with different energy"	2000		2

3	Proiect bilateral Romania-IUCN Dubna, Investigation of the impact of heavy charged particle beams on some polymers with environmental and biomedical applications, tema 04-9-1077-2009/2014 Research on the Biological Effect of Heavy Charged Particles with Different Energies	1500		1.5
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**Total criteriu****195.94****contracte naționale – director: 50 puncte pentru fiecare 500.000 lei**

	Contract	valoare (lei)		punctaj
	STUDIUL DINAMICII UNOR STRUCTURI DE SARCINA SPATIALA AUTO-ORGANIZATE FORMATE IN PLASMA; METODE DE EXPERIMENTALE DE CONTROL, Proiect CNCIS tip AT, TEMA NR. 11, COD CNCIS 36, 2001-2002	3100		0.31

**Total criteriu****0.31****contracte naționale – membru: 50 puncte pentru fiecare 500.000 lei /numărul membrilor echipei de cercetare**

	Contract	valoare (lei)	nr. membri	punctaj
1	Contract PNCDI tip INFRAS nr. 210/4.10.2004, director de proiect prof.dr. Raluca Mocanu, "Crearea unei infrastructuri pentru monitorizarea si biomonitorizarea compusilor toxici prezenti in mediu si pentru urmarirea efectului acestora asupra organismelor vii. Acreditarea unui laborator de analiza metalelor grele si a poluantilor organici persistenti (POPs)"	25000	15	0.16667
2	Grant CNCIS tip A, nr. contract 27693/2005, cod CNCIS 1461, "Imobilizarea de specii biologic active pe suprafața unor implanturi prin tratamente cu plasmă", director conf. dr. Nicoleta Dumitrascu	20000	8	0.25
3	Programul Cercetare de Excelenta – CEEEX, Proiecte de Cercetare - Dezvoltare Complexe, Cod MEC PC-D01-PT04-175, Nr. 10/2005, VIASAN "Arhitecturi inovative degradabile, biocompatibile și bioactive pe bază de polimeri naturali și sintetici", responsabil UAIC conf. dr. N. Dumitrascu	90000	4	2.25
4	Programul Cercetare de Excelenta – CEEEX, Proiecte de Cercetare - Dezvoltare Complexe, Cod MEC PC-D01-PT11-345, Nr. 19 – VIASAN, "Cercetări de diagnoză preventivă și reducerea efectelor radiațiilor ionizante asupra țesuturilor sănătoase", director lect. dr. D. Mihailescu	62500	3	2.08333
5	Contract CEEEX nr. 61/2006 (Biotech), "Studiul și realizarea de tehnologii inovative bazate pe utilizarea plasmei la presiune atmosferică" (TRATPLAS), responsabil contract conf. dr. G. Borgia, finanțat prin Centrul Național de Management Programe	390000	6	6.5
6	PN-II-PT-PCCA-2013-4-0325, contract de finanțare nr. 254/2014, „Adeziune și stabilitate controlată a țesăturilor tratate în plasmă pentru aplicații industriale” (CASPIA), director proiect Gabriela Borgia	750000	7	10.7143

7	Plaformă CNCIS, "Platformă de formare și cercetare interdisciplinară în domeniul arheologiei" (ARHEOINVEST), cod CNCIS 36/2006, director proiect prof. dr. V. Spinei	4400000	99	4.44444
8	Membru în echipă, platformă CNCIS, "Platformă integrată pentru studii avansate în nanotehnologii moleculare" (AMON), cod CNCIS 31/2006, director proiect prof. dr. A. Stancu	4050000	145	2.7931

**Total criteriu****29.2018****12. Citări și recenzii ale lucrărilor științifice**

reviste de specialitate din străinătate: (10 + 20 x factor de impact) / număr autori, pentru fiecare citare

reviste de specialitate din țară: (5 + 10 x factor de impact) / număr autori, pentru fiecare citare

monografii academice din străinătate: 50 puncte / număr autori, pentru fiecare citare

1	<b>M. Sanduloviciu, C. Borgia, G. Leu, SELF-ORGANIZATION PHENOMENA IN CURRENT-CARRYING PLASMAS RELATED TO THE NONLINEARITY OF THE CURRENT VERSUS VOLTAGE CHARACTERISTIC. Physics Letters A 208, 136-142 (1995).</b>			
		FI	nr. aut.	punctaj
1	M. Agop, D. Alexandroaie, A. Cerepaniuc, S. Bacaita, El Naschie's epsilon((infinity)) space-time and patterns in plasma discharge. Chaos Solitons & Fractals 30, 470-489 (2006).	2.042	3	16.9467
2	M. Agop, M. Strat, G. Strat, P. Nica, Cantorian epsilon((infinity)) structures in discharge plasma double layers. Theoretical and experimental aspects of basic processes. Chaos Solitons & Fractals 13, 1541-1569 (2002).	0.872	3	9.14667
3	C. Avram, R. Schrittwieser, M. Sanduloviciu, Current jumps and hysteresis in a single-ended Q-machine in connection with the electrostatic ion-cyclotron instability. Contributions to Plasma Physics 39, 223-233 (1999).	1.008	3	10.0533
4	C. Avram, R. Schrittwieser, M. Sanduloviciu, Nonlinear effects in the current-voltage characteristic of a low-density Q-machine plasma: I. Related to the potential relaxation instability. Journal of Physics D-Applied Physics 32, 2750-2757 (1999).	1.188	3	11.2533
5	C. Avram, R. Schrittwieser, M. Sanduloviciu, Nonlinear effects in the current-voltage characteristic of a low-density Q-machine plasma: II. Related to the electrostatic ion-cyclotron instability. Journal of Physics D-Applied Physics 32, 2758-2762 (1999).	1.188	3	11.2533
6	C. Avram, R. Schrittwieser, M. Sanduloviciu, Possible excitation and ionisation processes in a "collisionless" alkaline plasma. International Journal of Mass Spectrometry 184, 129-143 (1999).	2.086	3	17.24

7	S. D. Baalrud, B. Longmier, N. Hershkowitz, Equilibrium states of anodic double layers. Plasma Sources Science & Technology 18, (2009).	2.384	3	19.2267
8	D. L. Bayliss et al., Complex Responses of Microorganisms as a Community to a Flowing Atmospheric Plasma. Plasma Processes and Polymers 9, (2012).	3.37	3	25.8
10	S. Chiriac, E. Lozneau, M. Sanduloviciu, Self-organization as physical basis of the hysteresis phenomena. Journal of Optoelectronics and Advanced Materials 8, 132-134 (2006).	1.106	3	5.35333
12	D. G. Dimitriu, Plasma fusion torus as a complex space charge structure. Journal of Optoelectronics and Advanced Materials 8, 128-131 (2006).	1.106	3	5.35333
13	D. G. Dimitriu et al., Simple experimental methods to control chaos in a double plasma machine. Acta Physica Slovaca 54, 89-96 (2004).	0.513	3	6.75333
14	S. Gurlui et al., Some experimental and theoretical results on the anodic patterns in plasma discharge. Physics of Plasmas 13, (2006).	2.258	3	18.3867
15	T. Gyergyek, Experimental study of the nonlinear dynamics of a harmonically forced double layer. Plasma Physics and Controlled Fusion 41, 175-190 (1999).	2.858	3	22.3867
16	T. Gyergyek et al., Experimental study of the creation of a fire-rod II: Emissive probe measurements. Contributions to Plasma Physics 43, 11-24 (2003).	0.863	3	9.08667
17	T. Gyergyek, M. Cercek, R. Schrittwieser, C. Winkler, D. Strele, Nonlinear dynamics of a harmonically forced double layer in a discharge plasma. Progress of Theoretical Physics Supplement, 353-362 (2000).	1.599	3	13.9933
18	M. Hahn, T. S. Pedersen, P. W. Brenner, Q. Marksteiner, Confinement jumps in a non-neutral plasma. Physics of Plasmas 16, (2009).	2.475	3	19.8333
19	Y. Kondoh, A paradigm shift from stationary stability to dynamically evolving stability required from experimental fusion plasmas. Physics of Plasmas 16, (2009).	2.475	3	19.8333
20	Y. Kondoh, T. Fukasawa, Dynamically stable, self-similarly evolving, and self-organized states of high beta tokamak and reversed pinch plasmas and advanced active control. Physics of Plasmas 16, (2009).	2.475	3	19.8333
21	E. Lozneau et al., Self-organization as the cause of different states of dc and hf discharge plasmas. Acta Physica Slovaca 54, 1-6 (2004).	0.513	3	6.75333
22	E. Lozneau, S. Popescu, M. Sanduloviciu, Physical origin of current filaments in DC gas discharges. Ieee Transactions on Plasma Science 30, 32-33 (2002).	1.17	3	11.1333
23	E. Lozneau, V. Popescu, M. Sanduloviciu, Negative differential resistance related to self-organization phenomena in a dc gas discharge. Journal of Applied Physics 92, 1195-1199 (2002).	2.281	3	18.54
24	E. Lozneau, M. Sanduloviciu, Minimal-cell system created in laboratory by self-organization. Chaos Solitons & Fractals 18, 335-343 (2003).	1.064	3	10.4267



25	E. Lozneanu, M. Sanduloviciu, Self-organization scenario acting as physical basis of intelligent complex systems created in laboratory. Chaos Solitons & Fractals 30, 125-132 (2006).	2.042	3	16.9467
26	E. Lozneanu, M. Sanduloviciu, Cell-like space charge configurations formed by self-organization in laboratory. A. Minai, Y. BarYam, Eds., Unifying Themes in Complex Systems Iv (2008), pp. 31-38.		3	16.6667
27	V. Melnig, D. Romanescu, V. Buchete, P. T. Frangopol, Dynamic analysis possibilities of an electrochemical interface. The Ni/H <sub>2</sub> SO <sub>4</sub> system. Revue Roumaine De Chimie 42, 659-668 (1997).	0.217	3	2.39
29	O. Niculescu et al., Experimental and theoretical investigations of a plasma fireball dynamics. Physics of Plasmas 17, (2010).	2.32	3	18.8
30	M. Nurujjaman, R. Narayanan, A. N. S. Iyengar, Parametric investigation of nonlinear fluctuations in a dc glow discharge plasma. Chaos 17, (2007).	2.188	3	17.92
31	B. Oprescu, S. Popescu, Experimental investigation of a complex structure formed in a gas after local electron acceleration. Journal of Physics D-Applied Physics 33, 2284-2287 (2000).	1.179	3	11.1933
32	Y.-S. Park, Y. Lee, K.-J. Chung, Y. S. Hwang, Characterization of plasma ion source utilizing anode spot with positively biased electrode for stable and high-current ion beam extraction. Review of Scientific Instruments 82, (2011).	1.367	3	12.4467
34	C. Popa et al., Theoretical and Experimental Results on the Charge Transport in Plasma Structures Through Spontaneously Symmetry Breaking. New Transport Mechanisms in Composite Materials. Materiale Plastice 46, 144-	0	3	1.66667
35	S. Popescu, Turing structures in dc gas discharges. Europhysics Letters 73, 190-196 (2006).	2.229	3	18.1933
36	S. Popescu, E. Lozneanu, M. Sanduloviciu, Self-organized complex space charge configurations at the origin of flicker noise. Chaos Solitons & Fractals 17, 203-207 (2003).	1.064	3	10.4267
37	M. Sanduloviciu et al., Self-organization scenario relevant for nanoscale science and technology. Journal of Optoelectronics and Advanced Materials 7, 845-851 (2005).	1.138	3	5.46
38	M. Sanduloviciu, E. Lozneanu, Ball lightning as a self-organization phenomenon. Journal of Geophysical Research-Atmospheres 105, 4719-4727 (2000).	2.68	3	21.2
39	M. Sanduloviciu, E. Lozneanu, S. Popescu, On the physical basis of pattern formation in nonlinear systems. Chaos Solitons & Fractals 17, 183-188 (2003).	1.064	3	10.4267
40	R. Schrittwieser et al., New insights into the formation of nonlinear space charge structures in various plasmas. Physica Scripta T84, 122-127 (2000).	0.578	3	7.18667
41	L. Sirghi, K. Ohe, G. Popa, Interactions between ionization waves and potential structure formed at a constriction of the dc He positive column. Journal of Physics D-Applied Physics 30, 2431-2440 (1997).	1.09	3	10.6
42	D. L. Tang, P. K. Chu, Anode double layer in magnetized radio frequency inductively coupled hydrogen plasma. Journal of Applied Physics 94, 1390-1395 (2003).	2.171	3	17.8067

**507.917**

2	M. Sanduloviciu, V. Melnig, C. Borgia, Spontaneously generated temporal patterns correlated with the dynamics of self-organized coherent space charge configurations formed in plasma. Physics Letters A 229, 354-361 (1997).			
		FI	nr. aut.	punctaj
1	M. Agop, C. Murgulet, Ball lightning as a self-organizing process of a plasma-plasma interface and El Naschie's epsilon((infinity)) space-time. Chaos Solitons & Fractals 33, 754-769 (2007).	3.025	3	23.5
2	M. Agop, I. Rusu, El Naschie's self-organization of the patterns in a plasma discharge: Experimental and theoretical results. Chaos Solitons & Fractals 34, 172-186 (2007).	3.025	3	23.5
3	C. Avram, R. Schrittwieser, M. Sanduloviciu, Nonlinear effects in the current-voltage characteristic of a low-density Q-machine plasma: I. Related to the potential relaxation instability. Journal of Physics D-Applied Physics 32, 2750-2757 (1999).	1.008	3	10.0533
4	C. Avram, R. Schrittwieser, M. Sanduloviciu, Possible excitation and ionisation processes in a "collisionless" alkaline plasma. International Journal of Mass Spectrometry 184, 129-143 (1999).	2.086	3	17.24
5	C. P. Cristescu, C. Stan, D. Alexandroaei, Dynamic control by sinusoidal perturbation and by Gaussian noise of a system of two nonlinear oscillators: Computation and experimental results. Physical Review E 70, (2004).	2.352	3	19.0133
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<b>11</b>	<b>C. Borgia, G. Borgia, N. Dumitrascu, SURFACE TREATMENT OF POLYMERS BY PLASMA AND UV RADIATION. Romanian Journal of Physics 56, 224-232 (2011).</b>			
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1	G. Broasca, G. Borgia, N. Dumitrascu, N. Vrinceanu, Characterization of ZnO coated polyester fabrics for UV protection. Applied Surface Science 279, 272-278 (2013).	2.538	3	20.2533
2	R. P. dos Santos, M. S. de Oliveira Junior, E. d. C. Mattos, M. F. Diniz, R. d. C. Lazzarini Dutra, FT-IR Techniques (PAS, UATR and Objective ATR) Applied to the Characterization of Plasma-Modified Surface of EPDM. Polimeros-Ciencia E Tecnologia 24, 411-416 (2014).	0.632	3	7.54667
3	H. Gu, J. Zhang, S. Faucher, S. Zhu, Novel Polymeric Surfadditives Synthesized via Atom Transfer Radical Polymerization and Their Surface Migration Properties. Macromolecular Reaction Engineering 5, (2011).	1.848	3	15.6533
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2	C. Pavel, K. Popa, Investigations on the ion exchange process of Cs <sup>+</sup> and Sr <sup>2+</sup> cations by ETS materials. Chemical Engineering Journal 245, 288-294 (2014).	4.058	6	15.1933
3	Popa, Sorption of uranium on lead hydroxyapatite. Journal of Radioanalytical and Nuclear Chemistry 298, 1527-1532 (2013).	1.415	6	6.38333
4	Popa, C. C. Pavel, Radioactive wastewaters purification using titanosilicates materials: State of the art and perspectives. Desalination 293, 78-86 (2012).	3.041	6	11.8033
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3	W. H. Tay, S. S. Kausik, S. L. Yap, C. S. Wong, Role of secondary emission on discharge dynamics in an atmospheric pressure dielectric barrier discharge. Physics of Plasmas 21, (2014).	2.249	3	18.3267

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1	Y. Asakawa, H. Takahashi, N. Iwasaki, M. Kobayashi, Effect of ultraviolet light irradiation period on bond strengths be	0.943	3	9.62

**9.62****Total criteriu****2498.24****19. Participări la manifestări științifice****Internationale****președinte comitet organizare/consiliu științific**

25 puncte pentru fiecare activitate;

		functia	punctaj
1	V-th Four-Seas-Conference IASI (Romania ), 29 May to 3 June 2007	presedinte comitet org.	25

**Total criteriu****25****membru comitet organizare/consiliu științific,**

15 puncte pentru fiecare activitate

		functia	punctaj
	12th INTERNATIONAL CONFERENCE ON PLASMA PHYSICS AND APPLICATIONS, Iasi, 2003	membru	15
	13th INTERNATIONAL CONFERENCE ON PLASMA PHYSICS AND APPLICATIONS, Iasi, 26-29 Oct. 2005	membru	15
	15th INTERNATIONAL CONFERENCE ON PLASMA PHYSICS AND APPLICATIONS, Iasi, 1-4 July 2010	membru	15

**Total criteriu****45****TOTAL ACTIVITATE DE CERCETARE****3523.63**

**II. ACTIVITATEA DIDACTICĂ (30%)****1. Tratatate și manuale universitare**30 puncte la 100 pagini /  
număr de autori

	Denumire manual	nr. Pagini	punctaj
1	C. Borgia, Surse de radiatii ionizante si protectia radiologica, Editura Universitatii Alexandru Ioan Cuza, 2003	287	86.1
2	G. Borgia (cordonator), Alina Chiper, Catalin Borgia, Ionut Topala, Lucrari de laborator - Fizica atomului si moleculei, Editura Universității „Alexandru Ioan Cuza”, 2014, ISBN: 978-606-714-090-3	229	17.175

**Total criteriu****103.275****2. Proiecte didactice (înființare/dotare laboratoare licență, master, săli workshop, biblioteci proprii facultăților, departamentelor, laboratoarelor și grupurilor de cercetare)**40 puncte pentru fiecare  
activitate

	Denumire proiect		punctaj
	Dotare laborator Fizica nucleara		40
	Infintare laborator spectrometrie cu scintilator lichid		40

**Total criteriu****80****3. Materiale suport curs, seminar, lucrări practice și programe analitice detaliate**10 puncte pentru fiecare  
activitate

	Denumire curs	tip activitate	punctaj
1	Surse de radiatii ionizante si protectia radiologica - licenta, anul III, specializarea Fizica Medicala	programa analitica	10
2	Fizica nucleului si a particulelor elementare, anul III, specializarile Fizica, Fizica informatica si Fizica tehnologica	programa analitica	10
3	Asigurarea calitatii in practica fizicianului medical - anul II, Master, Specializarea Fizica Medicala	programa analitica suport curs	10
4	Interactiunea radiatiilor ionizante cu substanta - anul I, Master, specializarea Fizica Medicala	programa analitica suport curs	10
5	Radiologie si imagistica medicala - anul III, licenta, specializarea Fizica Medicala	programa analitica suport curs	10

6	Elemente de imagistica medicala - anul II, Master, specializarea Metode fizice aplicate în kinetoterapie si recuperare medicala.	programa analitica suport curs	10
7	Radioecologie - anul II, Master, Specializarea Fizica si protectia mediului	programa analitica suport curs	10
8	Metode radiometrice si radiochimice in criminalistica, anul II, Master, Specializarea Criminalistica, Facultatea de Drept	programa analitica suport curs	10
9	Securitate radiologică și nucleară - anul II, Master, specializarea Teoria riscurilor, Facultatea de Matematica	programa analitica suport curs	10
10	Risc și securitate în fizica medicală - anul II, Master, specializarea Teoria riscurilor, Facultatea de Matematica	programa analitica suport curs	10

**Total criteriu****100****TOTAL ACTIVITATE DIDACTICA****283.275****TOTAL AUTOEVALUARE****3806.91**