

Satisfacerea criteriilor standardelor minimale pentru comisia de fizica

(Exclusiv din ISI-WEB – Clavier Analytics)

I. Activitate didactica si profesionala:

Nr. Crt	Tipul activităților	Indicatori / Punctaj minimal	Indicatori / Punctaj minimal	Materiale	Punctaj
1	Cărți în edituri internaționale recunoscute Web of Science în calitate de autor		$A_1 = \sum_i 4/n_i^{ef}$	[1]	$A_1 = 1.333$
2	Capitole de cărți în edituri internaționale recunoscute Web of Science în calitate de autor/Review-uri în reviste cotate ISI		$A_2 = \sum_i 1/n_i^{ef}$		
3	Cărți în edituri internaționale recunoscute Web of Science în calitate de editor		$A_3 = \sum_i 0.5/n_i^{ef}$		-
4	Cărți, manuale, îndrumare de laborator în edituri naționale sau alte edituri internaționale ca autor, note interne, prezentări susținute pentru aprobarea analizelor de date în cadrul colaborărilor mari		$A_4 = \sum_i 0.5/n_i^{ef}$		-
5	Capitole de cărți în edituri naționale sau alte edituri internaționale ca autor		$A_5 = \sum_i 0.2/n_i^{ef}$	[2,3]	$A_5 = 0.128$
6	Lucrări în extenso (cel puțin 3 pagini) publicate în Proceedings-uri indexate ISI		$A_6 = \sum_i 0.2/n_i^{ef}$	[4-15]	$A_6 = 0.565$
7	Brevete de invenție internaționale acordate		$A_7 = \sum_i 3/n_i^{ef}$		-
8	Brevete de invenție naționale acordate		$A_8 = \sum_i 0.5/n_i^{ef}$	[16,17]	$A_8 = 0.167$
9	Director/responsabil/coordonator pentru programe de studii, programe de formare continuă, proiecte educaționale și proiecte de infrastructură (proiectele de cercetare se exclud)		$A_8 = \sum_i 0.5$		-
10	Director/responsabil pentru proiecte de cercetare în valoare V_i euro câștigate prin competiție națională sau internațională		$A_8 = \sum_i V_i/100000$	[18-22]	$A_{10} = 9.73$
	TOTAL		$A = \sum_1^{10} A_i, >=2$		$A = 12.93$

2. Activitate de cercetare:

Nr. Crt	Tipul activităților	Indicatori / Punctaj minimal	Materiale	Punctaj
1	Articole științifice originale în extenso ca autor	$I = \sum_i AIS_i / n^{ef} \geq 4$	[23-59]	I = 4.535
2	Articole științifice originale în extenso ca prim autor sau autor corespondent, conform mențiunilor de pe articol.	$P = \sum_i AIS_i \geq 4$	[23-59]	P = 15.408

3. Recunoașterea impactului activității:

Nr. Crt	Tipul activităților	Indicatori	Materiale	Punctaj
1	Citări în reviste științifice cu factor de impact care se regăsesc în InCites Journal Citation Reports sau în cărți în edituri recunoscute Web of Science	$C = \sum_i c_i / n_i^{ef} \geq 20$	[23-60]	C = 83.209
2	Indicele Hirsch	h \geq 12	(ISI-WEB)	h = 13

4. Punctaj total:

	Indicator	Punctaj
Punctajul total CNATDCU	T = A + P/2 + I/2 + C/20 + h/5 \geq 12	T = 30.1

5. Baza de calcul

Nr Crt	Material	Titlu	Autori	Publicatie	AIS	A	I	P	C
1	Carte	Pulsed Laser Ablation of Solids	Mihai Stafe, Aurelian Marcu, Niculae N. Puscas	Springer Series in Surface Science 53, Springer-Verlag Berlin Heidelberg ISBN 978-3-642-40977-6, (2014)		$A_1=1.33$			
2	Capitol Carte	“DLC Thin Films and Carbon Nanocomposites Growth by Thermionic Vacuum Arc (TVA) Technology“ , in the book: “Diamond and Carbon Composites and Nanocomposites”	R. Vladoiu, C. Porosnicu, A. Mandes, I. Jepu, V. Dinca, A. Marcu, M. Lungu, G. Prodan, L. Avotina	NTECH, ISBN 978-953-51-2453-5, (2016)		$A_5=0.03$			
3	Capitol Carte	<i>Nanostructures Fabricated by Laser Techniques for Sensors Applications</i> , Book title: „Science and applications of tailored nanostructures”,	A. Marcu, C. Viespe	ISBN 978-1-910086-18-6, Editor Prof. Paolo Di Sia, One Central Press, Str. Northampton		$A_5=0.1$			

				road, Manchester M40 5BP, UK (OCP), (2016) pag. 29-38, (Ebook:ISBN-978-1-910086-19-3, HardBook: ISBN -978-1-910086-18-6)					
4	Proc. SPIE	Considerations about synchronization between IR and UV laser Beams	I.D.Chis, I.Ciura, D.Dragulinescu, C.Grigoriu and A.Marcu	SPIE , Vol 2461 (1994), pp 53-58		$A_6=0.04$			
5	Proc. SPIE	The Effect of Pulsed Laser Deposition Parameters on Plasma expansion studied by Fast-framing photography	Dana Miu, A.Marcu, T.Yukawa, C.Grigoriu, I.Chis and K.Yatsui	SPIE , Vol 3405 (1997), pp282-287		$A_6=0.036$			
6	Proc. SPIE	Syntesis of Nanosize Powders by Pulsed Laser Ablation and Related Plasma Diagnostics	C.Grigoriu, I.Chis, A.Marcu and D.Miu	SPIE, Vol 3405 (1997), pp 153-161		$A_6=0.05$			
7	Proc. SPIE	Discharge Aided Reactive Laser Ablation for Ultrafine Powder Production	I.Chis, A.Marcu, D.Miu, T.Yukawa, D.Dragulinescu, C.Grigoriu, W.Jiang and K.Yatsui	SPIE , Vol 3045 (1997), pp 188-198		$A_6=0.03$			

8	Proc. SPIE	Synthesis of nanosize powders by pulsed laser ablation and related plasma diagnostics	K.Yatsui, W.Jiang, T.Yukawa, C.Grigoriu, C.Grigoriu, I.Chis, A.Marcu and D.Miu	SPIE 3405 (1998), pp. 153-161		$A_6=0.03$			
9	Proc. SPIE	Plume Behaviour and thin Film Deposition by Laser Ablation Using an Hellicoidal Shadow Mask	A.Marcu, C.Grigoriu, W Jiang and K.Yatsui	SPIE, Vol. 4068 (1999), pp. 576-581		$A_6=0.05$			
10	Proc. SPIE	Plasma Analysis in the Process of Pulsed Laser Deposition of AlN and TiN Thin Films	A.Marcu, C.Grigoriu, W.Jiang, K.Yatsui C. Grigoriu, Ileana Apostol, Roxana Rizea, A. Marcu, D. Dragulinescu,	SPIE, Vol. 4068 (1999), pp. 226-231		$A_6=0.04$			
11	Proc. SPIE	Simplified Model for RMS Variation in Pulsed Laser Deposition	A.Marcu, C.Grigoriu and K.Yatsui,	SPIE, Vol. 4430 (2001), pp. 241-246		$A_6=0.066$			
12	Proc. SPIE	Plume Reflection in Pulsed Laser Deposition	A.Marcu, C.Grigoriu, W.Jiang, K.Yatsui	SPIE, Vol. 4762, (2001) pp. 210-214		$A_6=0.05$			
13	Proc. SPIE	Deposition parameters influence in pulsed laser deposition by plume	A.Marcu, C.Grigoriu, W.Jiang, K.Yatsui	SPIE, Vol. 5227 (2002), pp. 312-317		$A_6=0.05$			

		reflection							
14	Proc. SPIE	Ablation Plume Movement in a Pulsed Laser Deposition System	A.Marcu, C.Grigoriu and K.Yatsui	SPIE, Vol 5581, (2003) pp. 371-377		$A_6=0.066$			
15	Proc. SPIE	Laser Ablated Particles Behaviour in PLD	A.Marcu, C.Grigoriu and K.Yatsui	SPIE, Vol 5972 (2005), pp. 59720P		$A_6=0.066$			
16	Patent National	Sistem combinat Electric-Laser pentru controlul descarcarilor electrice	M.Ganciu-Petcu, O.S. Stoican, A.L.Groza, N.Pavel, G.Croitoru, A.Marcu	Nr 133688 / 27/11/2020		$A_b=0.09$			
17	Patent National	Procedeu de producere a unui strat nanometric din carbon si wolfram cu continut de nanoparticule de diamant sau fullerene prin utilizarea radiatiei laser de putere	C.P. Lungu, C.C. Porosnicu, I, Jepu, M. Lungu, R. Banici, A, Marcu, C.R. Luculescu, D,Ursescu	Nr. 131730 / 30/07/2021		$A_b=0.066$			
18	Contract	<i>Structuri de ecranare electromagnetica pentru siguranta biologica in cursul desfasurarii experinmentelor</i>	Finantator	Suma		$A_{10}=2.448$			
			Eli-RO, 2016 – 2019	1 200 000 Lei (Euro ~ 4.49)					

		<i>interactie laser tinta unitati laser PW /BioSafe</i>							
19	Contract	<i>Thrusters cu laser pentru deturnarea deșeurilor orbitale / LASERThrust</i>	Finantator	Suma		$A_{10}=1.754$			
			<i>ROSA-STAR 2017 – 2019</i>	<i>800 000 Lei (Euro ~ 4.56)</i>					
20	Contract	<i>Discriminarea pe baza de unde acustice a sorbtiei de gaze in ZnO in conditii ambientale variabile ZnO-SORBTION</i>	Finantator	Suma		$A_{10}=2.433$			
			<i>UEFISCDI PCE 2021–2023</i>	<i>1 198 032 Lei (Euro ~ 4.91)</i>					
21	Contract	<i>Tehnici de stocare si valorificare a rezultatelor cercetarilor stiintifice avansate SOVAREX</i>	Finantator	Suma		$A_{10}=1.64$			
			<i>UEFISCDI SECTORIAL 2017 – 2018</i>	<i>750 000 Lei (Euro ~ 4.56)</i>					
22	Contract	<i>Nanostructuri particulare de tip multistrat cu constanta dielectrica ridicata cu aplicatii pentru stocarea energiei si dispozitive nanoelectronice / HIGHkDEVICE</i>	Finantator	Suma		$A_{10}=1.48$			
			<i>UEFISCDI PCCF 2018 – 2022</i>	<i>675 000 Lei (Euro ~ 4.65)</i>					
23	Articol	<i>Pulsed Laser Deposition of YBCO</i>	A.Marcu, C.Grigoriu,	Thin Solid Films, 360	0.653 (2007)		$I=0.163$	$P=0.653$	$C=5.275$ $=23/4$

		<i>Thin Films in a Shadow Mask Configuration</i>	W.Jiang and K.Yatsui	(2000), pp.166-172					
24	Articol	Particles Interaction with Obstacles in Pulsed Laser Deposition	A.Marcu, C.Grigoriu and K.Yatsui	Applied Surface Science, Vol 248 (2005), pp. 466-469	0.517 (2007)		I=0.172	P=0.617	C=1.33 =4/3
25	Articol	Particles Movement and Surface Quality in PLD/PR systems	A.Marcu, C.Grigoriu and K.Yatsui	Applied Surface Science, Vol 252 (2006), pp. 4733	0.517 (2007)		I=0.172	P=0.517	C=0.2 =1/5
26	Articol	Transport Properties of ZnFe ₂ O ₄ Thin Films	A.Marcu, T.Yanagida, K.Nagashima, H.Tanaka and T.Kawai	Jurnal of Applied Physics, 102 , (2007) pp. 023713	0.974		I=0.195	P=0.974	C=2.4 =17/5
27	Articol	Effect of ablated particle flux on MgO nanowire growth by pulsed laser deposition	A.Marcu, T.Yanagida, K.Nagashima, H.Tanaka and T.Kawai	Journal of Applied Physics, 102 (2007) pp.016102	0.974		I=0.195	P=0.974	C=8.25 =33/4
28	Articol	Crucial Role of Inter-diffusion on Magnetic Properties of In-situ Formed MgO/Fe _{3-x} O ₄ Heterostructured Nanowires	A.Marcu, T.Yanagida, Kazuki Nagashima, Keisuke Oka, Hidekazu Tanaka and Tomoji Kawai	Appl. Phys. Lett. 92 (2008) pp. 173119.1 – 173119.3	1.398		I=0.215	P=1.398	C=8.49 =45/5.3

29	Articol	Enhancement of Oxide VLS Grow by Carbon on Substrate Surface	T. Yanagida, A.Marcu, H.Matsui, K.Nagashima, K.Oka, K.Yokota, M.Taniguchi and T.Kawai	J. Phys. Chem C 112 (2008) pp.18923 – 18926	1.149		I=0.176		C=6.5 =9/6
30	Articol	Surfactant-free emulsion polymerization of styrene in the presence of silylated montmorillonite	R.Ianchis, D.Donescu, C.Petcu, M.Ghiurea, D.F.Anghel, G.Stinga and A.Marcu,	Applied Clay Science 45 pp.164-170 (2009)	0.792		I=0.132		C=4.417 =25/5.66
31	Articol	Nanochannels Fabrication using Kikendal Effect	A.Marcu, T.Yanagida and T.Kawai	Solid State Science 12 pp.978-981 (2010)	0.581		I=0.194	P=0.581	C=0.33 =1/3
32	Articol	Simultaneouclescu Cs Carbon and Tungsten Thin Film Deposition Using Two Thermionic Vacuum Arcs	A. Marcu, C. M. Ticoș, C. Grigoriu, I. Jepu, C. Porosnicu, A. M. Lungu, C. P. Lungu	Thin Solid Films 519 pp.4074-4077 (2011)	0.596		I=0.099	P=0.596	C=2.826 =16/5.66
33	Articol	Ablation Particles Parameters Influences on VLS Oxide Nanowire Growing	A.Marcu, C. Grigoriu, C.P.Lungu, T.Yanagida and T.Kawai	Phys. E 44 , (2012) pp. 1071-1073, online 2010	0.420		I=0.084	P=0.084	C=0.6 =3/5
34	Articol	Catalyst Size	A.Marcu, L.	Thin. Solid	0.551		I=0.1	P=0.551	C=2.626

		Limitation in Vapor-Liquid-Solid ZnO Nanowire Growth using Pulsed Laser Deposition	Trupina, R.Zamani, J.Arbiol, C. Grigoriu and J. R. Morante	Films 520 (2012), pp. 4626 – 4631					=14/5.33
35	Articol	Terawatt laser system irradiation of carbon/tungsten bilayers	C. P. Lungu, A. Marcu, C. Porosnicu, I. Jepu, A. M. Lungu, P. Chiru, C. Luculescu, R. Banici, D. Ursescu, R. Dabu, I. D. Feraru, C. E. A. Grigorescu, G. Iacobescu, M. Osiac, J. Kovac, V. Nemanic, I. Hinkov, S. Farhat, A. Gicquel, and O. Brinza	Physica Status Solidi A 209 (2012), pp. 1732–1737	0.476		I=0.04		C=0.1 =1/10
36	Articol	Carbon-Tungsten Thin-Film Deposition by a Dual Thermionic Vacuum Arc	C.P.Lungu, A.Marcu, C.Porosnicu, I.Jepu and J.Kovac,	IEE Trans. on Plasma Sci., 40 (2012), pp. 3546-3551	0.363		I=0.073		C=1 =5/5
37	Articol	Magnetic Iron Oxide Nanoparticles as Drug Delivery System in Breast	A. Marcu, S. Pop, F. Dumitrache, M. Mocanu, C.M. Niculite,	App. Surf. Sci. 281 (2013), pp. 60–65	0.550		I=0.065	P=0.550	C=8.493 =62/7.3

		Cancer	M.Gherghiceanu, C.P. Lungu, C. Fleaca, R.Ianchis, A. Barbut, C.Grigoriu, I. Morjan						
38	Articol	High Repetition Rate Laser Ablation for Vapor-Liquid-Solid Nanowire Growth	A.Marcu, F.Stokker, R.R.Zamani, C.P.Lungu and C. Grigoriu	Current Applied Physics, 14 (2014), pp.614-620	0.474		I=0.095	P=0.474	C=0.2 =1/5
39	Articol	Periodic striations on beryllium and tungsten surfaces by indirect femtosecond laser irradiation	C. P. Lungu, C. M. Ticos, C. Porosnicu, I. Jepu, M. Lungu, A. Marcu, C. Luculescu, G. Cojocaru, D. Ursescu, R. Banici, and G. R. Ungureanu	Appl. Phys. Lett. 104 (2014), pp. 101604	1.125		I=0.14		C=0.714 =5/7
40	Articol	The behavior of W, Be and C layers in interaction with plasma produced by terawatt laser beam pulses	C.P. Lungu, C. Porosnicu, Jepu, M. Lungu, A. Marcu, C. Luculescu, C. Ticos, A. Marin, C.E.A. Grigorescu	Vacuum 110 (2014) pp. 207-212,	0.381		I=0.054		C=2.053 =13/6.33
41	Articol	Laser Irradiation of Carbon-Tungsten	A.Marcu, L.Avotina,	J. Phys. D: Appl. Phys. 47	0.817		I=0.102	P=0.817	C=0.142 =1/7

		Materials”	A.Marin, C.P.Lungu, C.E.A.Grigorescu, N.Demitri, D.Ursescu, C.Porosnicu, P.Osiceanu, G.Kizane and C.Grigoriu,	(2014), pp. 355305					
42	Articol	Laser-grown ZnO Nanowires for Room-temperature SAW-sensor Applications	A.Marcu and C. Viespe	Sensors & Actuators: B. Chemical, Sensors and Actuators, B: Chemical, 208 , (2015), pp. 1-6	0.772		I=0.386	P=0.772	C=8.5 =17/2
43	Articol	Glancing Angle Deposition in a Pulsed Laser Ablation / Vapor-Liquid-Solid Grow System	A.Marcu, F.Stocker, R.R. Zamani and C.P.Lungu	Appl. Surf. Sci, 327 (2015). pp 262–267	0.574		I=0.143	P=0.574	C=0.5 =2/4
44	Articol	Spatially Resolved Nanostructural Transformation in Graphite under Femtosecond Laser Irradiation”	A.Marcu, L.Avotina, C.Porosnicu, A.Marin, C.E.A.Grigorescu, D.Ursescu, M.Lungu, N.Demitri and C.P. Lungu	Appl. Surf. Sci. 355 (2015), pp. 477–483	0.574		I=0.082	P=0.574	C=0.158 =1/6,33

45	Articol	Active Surface Geometrical Control of Noise in Nanowire-SAW Sensors	A. Marcu, I. Nicolae and C. Viespe	Sensors & Actuators: B. Chemical 231 (2016), pp. 469-473,	0.786		I=0.262	P=0.786	C=4 =12/3
46	Articol	Surface Acoustic Wave Sensors for Hydrogen and Deuterium Detection	A. Marcu and C. Viespe	Sensors 17 (2017), pp. 1417-1427	0.517		I=0.258	P=0.517	C=12 =24/2
47	Articol	rradiation of nuclear materials with laser-plasma filaments produced in air and deuterium by terrawatt (TW) laser pulses	Liga Avotina, Mihail Lungu, Paul Dinca, Bogdan Butoi, Gabriel Cojocaru, Razvan Ungureanu, Aurelian Marcu*, Catalin Luculescu, Claudiu Hapenciuc, Paul C. Ganea, Aleksandrs Petjukevics, Cristian P. Lungu, Gunta Kizane, C.M.Ticos and Stefan Antohe	Journal of Physics D: Applied Physics 51 (2018), pp. 025302	0,701		I=0.07	P=0.701	C=0.2 =2/10
48	Articol	Radiofrequency EMF irradiation effects on pre-B lymphocytes	Elena Ionita, Aurelian Marcu, Mihaela Temelie,	Sci. Rep. 11 , (2021), pp.12651	1.207		I=0.219		C=0.181 =1/5.5

		undergoing somatic recombination	Diana Savu, Mihai Serbanescu and Mihai Ciubotaru						
49	Articol	Ageing studies of Multi-Strip Multi-Gap Resistive Plate Counters based on low resistivity glass electrodes in high irradiation dose	D. Bartos, C. Burducea, I. Burducea, G. Caragheorgheopo I, F. Constantin, L. Craciun, D. Dorobantu, M. Ghena, D. Iancu, A. Marcu, G. Mateescu, P. Mereuta, V. Moise, C. Negrila, D. Negut, M. Petris, M. Petrovici, L. Radulescu, V. Aprodu, L. Prodan, A. Radu and G. Stoian, “	Nuclear Inst. and Methods in Physics Research, A, 1024 (2022) 166122.	0.387		I=0.031		
50	Articol	Analyte discrimination by SAW sensor variable loop amplification probing	I. Nicolae, C. Viespe, D. Miu and A. Marcu	Sensors & Actuators: B. 358 (2022), 131480	0.940		I=0.235	P=0.940	C=0.25 =1/4
51	Articol	Photon energy transfer on titanium targets for laser thrusters	A. Marcu, M. Stafe, M. Barbuta, R. Ungureanu, M. Serbanescu, B.	igh Power Laser Science and Engineering,	1.021		I=0.17	P=1.021	

			Calin and N. Puscas,	pp. 1 – 14					
52	Articol	Characterisation of Pulsed Laser Deposition plasma using fast-framing photography and emission spectroscopy	Miu D., Marcu A, Grigoriu C, Yatsui K	Journal of Optoelectronics and Advanced Materials, 9 , pp. 2468 (2007)	0.161		I=0.04		C=0.25 =1/4
53	Articol	Luminescence tuning of Si/SiO ₂ nanoparticles in aqueous solutions	A.Marcu, C.Sima, C.Grigoriu, I.Enculescu and B.Iliescu	Journal of Optoelectronics and Advanced Materials, 10 (2008) pp. 3131 – 3134	0.113		I=0.023	P=0.113	
54	Articol	ZnO Nanowire Morphology Control in Pulsed Laser Deposition	A.Marcu, M.Goyat, T.Yanagida and T.Kawai	Journal of Optoelectronics and Advanced Materials 11 (2009), pp. 421-426	0.115		I=0.029	P=0.115	
55	Articol	Single Crystal ZnO Nanowire Luminescence Shifting by Nanostructured ZnO Layers	A.Marcu, I.Enculescu, S.Vizireanu, R.Barjega, C.Porosnicu	Digest Journal of Nanomaterials and Biostructure 8 (2013), p. 597 – 605	0.209		I=0.042	P=0.209	C=0.2 =1/5

56	Articol	Multi-Wavelength Laser Irradiation of Be-C-W Coatings	L. Avotina, A. Marcu*, C. Porosnicu, M. Lungu, A. Stancalie, A.G. Ilie, P. C.Ganea, D.Savastru, J. Kalnacs, C.P. Lungu, G. Kizane, S. Antohe	Digest Journal of Nanomaterials and Biostructure 11 (2016), p. 293 – 302	0.150		I=0.18	P=0.150	
57	Articol	Tribological Investigations on Laser Irradiated Composite Thin Films Prepared by TVA Technique	M. Lungu, I. Tiseanu, C. Porosnicu, C. Dobrea, I. Jepu, P. Dinca, A. Marcu, C. P. Lungu	Digest Journal of Nanomaterials and Biostructures, 11 (2016), pp. 401 – 410	0.150		I=0.023		C=0.461 =3/6.5
58	Articol	Power Density Influence on Laser-Induced Graphite Structural Modifications	L. Avotina, A. Marcu*, M. Lungu, A.Stancalie, C.A. Grigorescu, A.G. Ilie, C. Porosnicu, L.Mihai, D.Sporea, C. P. Lungu, S. Somacescu, G. Kizane, D. Savastru, S. Antohe	Digest Journal of Nanomaterials and Biostructure 11 (2016), p. 973 – 981	0.150		I=0.016	P=0.150	C=0.421 =49.5
59	Articol	Commissioning experiment on laser-	C. Diplasu, G. Giubega, R.	Rom. Rep. Phys. 73 ,	0.202		I=0.022		C=0.142 =1/7

		plasma electron acceleration in supersonic gas jet at CETAL-PW laser facility	Ungureanu, G. Cojocaru, M. Serbanescu, A. Marcu, E. Stancu, A. Achim, M. Zamfirescu	(2021), p. 401					
60	Proc.	Adaptive algorithm for detecting beam center in high-power laser transport lines	Barbuta Mihail-Gabriel, Aurelian, Slusanschi Emil-Ioan	IEEE Conference On Control Technology And Applications (CCTA), 115-120, (2018)					C=0.33 =1/3