

Lista lucrărilor publicate
Prof. univ. Dr. Rodica VLADOIU

A - TEZA DE DOCTORAT

A1. Anul 2004, conducator stiintific Dr MUSA GEAVIT, Universitatea din Bucuresti, Facultatea de Fizica, Titlu: "Contributii la folosirea metodei TVA (Thermionic Vacuum Arc) pentru depuneri de straturi subtiri de carbon".

B. CĂRȚI PUBLICATE

B1. R. Vladioiu, "Tehnologii cu plasma", Ovidius University Press 2007, 317 pagini, ISBN 978-973-614-390-8

B2. R. Vladioiu, M. Braic "Nanostructuri de carbon generate in plasma", Ovidius University Press, 2008, 221 pagini. ISBN 978-973-614

C. CAPITOLE PUBLICATE ÎN CĂRȚI

C1. R. Vlădoiu, A. Mandes, V. Dincă, M. Conțulov, V. Ciupină, C. P. Lungu, G. Musa "Investigation of DLC and multilayer coatings hydrophobic character for biomedical applications" **Capitolul in "New Industrial Plasma Technology" – Ed. Wiley -VCH, - 7 pagini, 2009**

C2. R. Vlădoiu, V. Ciupină, M. Conțulov, V. Dincă, A. Mandes, M. Prodan Capitolul 6 „DLC Thin Films Growth in Thermionic Vacuum Arc Technologies: TVA and GTVA” **capitol in cartea "Diamond-Like Carbon Films", Ed NOVA Science Publishers 9 pagini, (2012). pag 141-150, ISBN 978-1-61324-791-4.**

C3 R. Vladioiu, C. Porosnicu, A. Mandes, I. Jepu, V. Dinca, A. Marcu, M. Lungu, G. Prodan, L. Avotina – "DLC Thin Films and Carbon Nanocomposite Growth by Thermionic Vacuum Arc (TVA) Technology" Chapter in "Diamond and Carbon Composites and Nanocomposites" Ed. INTECH, 22 pagini ,Chapter 5, pag 107-129 (2016) ISBN 978-953-51-2453-5

D. LUCRARI DE LABORATOR

D1. R. Vladioiu, "Fizica plasmei si aplicatii" Ovidius University Press, 132 pagini , (2010), ISBN 978-973-614-536-0;

D2. R. Vladioiu A. Mandes "Spectroscopie si laseri", Ovidius University Press, 127 pagini (2016), ISBN 978-973-614-900-9

E. VOLUME PUBLICATE CA EDITOR

E1 VOL: 17th European Conference on Atomic and Molecular Physics of Ionized Gases in PLASMA SOURCES SCIENCE & TECHNOLOGY Vol: 14, Issue: 2, Published: MAY 2004

E2 GUEST EDITOR of Special Issue "Carbon-Refractory Metals Nanostructures: Synthesis, Characterization and Applications" in MATERIALS (IF =3.057), 2020 ISSN 1996-1944)

E3 GUEST EDITOR of Special Issue "Thin Film Coatings for Multifunctional Applications" in COATINGS (IF =2.436), 2020, ISSN 2079-6412
E4 GUEST EDITOR of Special Issue, 2022 NANOMATERIALS, IF 5.3

F – ARTICOLE IN REVISTE COTATE ISI CU FACTOR DE IMPACT

F.1 A. Mandes, **R. Vladoiu**, V. Dinca, P. Kudrna, M. Tichy, , S. Polosan, E. Matei *Bilayered metallic cathodes consisting of pure Mg and Zn:Al thin films optimized by Laser-induced Thermionic Vacuum Arc (LTVA) technology*, **Applied SURFACE SCIENCE ADVANCES** 28(2025)13100787, **Q1 IF 8.7**

F.2. V. Ciupina, R. Vladoiu, G. Prodan, C. Porosnicu, C. P. Lungu, V. Satulu, M., A. Mandes, V. Dinca, E. Andronescu, B. Vasile, V. Nicolescu, S. Polosan, E. Matei, *N-Doped C/Ti/C/Al/C/Si Multilayer And N-Doped C Plus Ti/C Plus Al/C Plus Si Composite Thin Films: Synthesis And Characterization*, **ROMANIAN REPORTS IN PHYSICS**, **77**, Issue **F 3**, (2025), DOI: 10.59277/RomRepPhys.2025.77.503, **Q2 IF 2.2, AIS 0.177**

R. Vladoiu, A. Mandes, V. Dinca, P. Kudrna, M. Tichy, , C. Ciobotaru, S. Polosan, *Versatile techniques based on the Thermionic Vacuum Arc (TVA) and laser-induced TVA methods for Mg/Mg:X thin films deposition - A review*, **J. of MAGN. & ALLOYS**. 12, 8 (2024), p. 3115-3134, **Q1 IF 13.7, AIS 2.97**

F.4 V. Dinca, A. Mandes, R. Vladoiu, G. Prodan, V. Ciupina, S. Polosan, *Microstructural and morphological characterization of the cobalt-nickel thin films deposited by the Laser-induced Thermionic Vacuum Arc method*, **COATINGS** 13 (2023) 13060984 **IF 2.9, AIS 0.57**

F.5 R. Vladoiu, A. Mandes, , V. Dinca, , E. Matei, S. Polosan, *Synthesis of cobalt-nickel aluminate spinels by LTVA method and thermal annealing processes*, **NANOMATERIALS**, 2022, Volume:12(21), article no 3895 2022, **Q1 IF 5.3, AIS 0.712**

F.6 R. Vladoiu, A. Mandes, V. Dinca, E. Matei, S. Polosan *The Synergistic Effect of the Laser Beam on the Thermionic Vacuum Arc Method for Titanium-Doped Chromium Thin Film Deposition*, **COATINGS** 12, Issue 4 (2022), **IF 3.4, AIS 0.439**

F.7 V. Ciupina, C. P. Lungu, R. Vladoiu, **G. Prodan**, C. Porosnicu, E Vasile, M. Prodan, V. Nicolescu, A. Mandes, V. Dinca, O. Cupsa, A. Velea, R. Manu, *Synthesis and characterization of some C-Ti based multilayer and composite nanostructure* **J. of Ovonic Research**, Vol 18, Issue 2, 2022, P 177-186 **IF 1.0, AIS 0.121**

F.8 S. Polosan, C. C. Ciobotaru, I. C. Ciobotaru, M. Enculescu , D. Iosub, A. Mandes, R. Vladoiu, *Electron Irradiation of Titanium-Doped Chromium Nanostructured Thin Films for Higher Conductive Electrodes”* **IEEE TRANSACTIONS ON NANOTECHNOLOGY** 21 (2022) 823-829. **IF 2.4, AIS 0.474**

F.9 Vladoiu, R.; Mandes, A; Dinca, V.; Kudrna, P.; Tichý, M.; Polosan, S. *Magnesium-silver cathodes for efficient charge-injection into Organic Light Emitting Diodes deposited by LTVA method*. **J. ALLOYS & COMP.** 2021 869 159364, **IF 6.371, AIS 0.700**

F.10 **R. VLADOIU**, M. Tichy, A. MANDES, V. DINCA, P. Kudna, *Thermionic Vacuum Arc (TVA), a versatile technology for thin film deposition and its applications*, 2020,

COATINGS, Volume: 10 Issue: 3 Article Number: 211, DOI: 10.3390/coatings10030211
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F.11 R. VLADOIU, A. MANDES, V. DINCA, B. Maria Soloviov D., Turchenko Vitaly, *Synthesis and characterization of the complex nanostructured thin films based on titanium for industrial applications* **MATERIALS**, 2020, Volume: 13, Issue: 2, 399 DOI: 10.3390/ma13020399 **IF 3.057**

F.12 S. Cozma, R. Vladoiu, A Mandes, VD Balan, G Prodan, V. Bursikova *Characterization of Platinum-Based Thin Films Deposited by Thermionic Vacuum Arc (TVA) Method*, **MATERIALS** 2020, Vol: 13 Issue: 7, Article Number: 1796, DOI: 10.3390/ma13071796 **IF 3.057**

F.13 V. Ciupina, C. P. Lungu, R. Vladoiu, C. Porosnicu, E Vasile, V. Nicolescu, A. Mandes, V. Dinca, O. Cupsa, *Carbon-Titanium Nanostructures: Synthesis and Characterization*, **PHYSICA SCRIPTA**, 2020 Vol.: 95, Issue: 4, Article Number: 044012 DOI: 10.1088/1402-4896/ab6d45 **IF 1.985**

F.14 R. Vladoiu, A. Mandes, V. Dinca, G. Prodan, P. Kudna, M. Tichy, *Plasma diagnostics and characterization of the Mg and Mg-Zn thin films deposited by TVA method*, **VACUUM**, 2019, vol 167, p 129-135, DOI: 10.1016/j.vacuum.2019.06.002 **IF 2.906**

F.15 R. Vladoiu, A. Mandes, V. Dinca-Balan, V. Bursikova, *Structural and Mechanical Properties of Nanostructured C-Ag Thin Films Synthesized by Thermionic Vacuum Arc Method* **JOURNAL OF NANOMATERIALS**, 2018, Volume 2018, Article ID 9632041, 10 pages, ISSN: 1687-4110

F.16 A. Mandes, R. Vladoiu, G. Prodan V., Dinca, , Porosnicu, C, Dinca, P, *The Properties of Binary and Ternary Ti Based Coatings Produced by Thermionic Vacuum Arc (TVA) Technology*, **COATINGS**, 2018, Volume: 8 Issue: 3 Article Number: 114 ISSN: 2079-6412 **IF 2.436**

F.17 Kichanov, S, Pantelica, A, Pantelica, D, Stolyar, S, Iskhakov, R Aranghel, D. Ionescu, R. Vladoiu M. Balasoiu, *Structural and compositional specifications on biogenic ferrihydrite nanoparticles production by klebsiella oxytoca*, **ROMANIAN REPORTS IN PHYSICS**, 2018, Volume: 70 Issue: 4 Article Number: 511, ISSN:1221-1451 **IF 2.147**

F.18 R. Vladoiu, A Mandes, VD Balan, V. Bursikova, *Structural and Mechanical Properties of Nanostructured C-Ag Thin Films Synthesized by Thermionic Vacuum Arc Method*, **JOURNAL OF NANOMATERIALS**, 2018, Article Number: 9632041, ISSN: 1687-4110 **IF 1.980**

F.19 Dinca-Balan, V, Vladoiu, R Mandes, A, Prodan, G , *Correlation study of nanocrystalline carbon doped thin films prepared by a thermionic vacuum arc deposition technique*, **JOURNAL OF PHYSICS D-APPLIED PHYSICS** 2017, Volume: 50 Issue: 43 Article Number: 435305, ISSN: 0022-3727 **IF 3.169**

F.20 R. Perekrestov, P Kudrna, S. Danis, M. Tichy, I Bieloshapka, R Vladoiu, *Application of microcracked columnar TiO₂ thin films deposited by DC hollow cathode plasma jet in*

dye-sensitized solar cells, **JOURNAL OF VACUUM SCIENCE & TECHNOLOGY A**, 2017
Volume: 35 Issue: 6 Article Number: 061307, ISSN: 0734-2101 **IF 2.166**

F.21 R. Vladoiu, A Mandes, VD Balan, G. Prodan, V Ciupina, *Synthesis of reinforced magnesium embedded in carbon matrix by using Thermionic Vacuum Arc (TVA) technology*, **ROMANIAN REPORTS IN PHYSICS**, 2016, Volume: 68 Issue: 3 Pages: 1076-1084, ISSN: 1221-1451 **IF 2.147**

F.22 R. Perekrestov, P. Kudrna, M. Tichy, I. Khalakhan, S. Danis, G. Prodan, **R. Vladoiu** *Crystalline structure and morphology of TiO₂ thin films deposited by means of hollow cathode plasma jet with supporting anode*, **SURFACE & COATINGS TECHNOLOGY**, 2016, Vol: 271, Pag: 123-129, ISSN: 0257-8972, **IF 3,784**

F.23 R. Vladoiu, A Mandes, VD Balan, G. Prodan, P Kudrna, M. Tichy, *Magnesium plasma diagnostics by heated probe and characterization of the Mg thin films deposited by thermionic vacuum arc technology* **PLASMA SOURCES SCIENCE & TECHNOLOGY** 2015, Vol: 24, Issue: 3, P: 35008-35008, ISSN: 0963-0252, **IF 3.591**

F.24 L. Petrasescu, V. Ciupina, S. G. Tutun, **R. Vladoiu**, G. Prodan, C. Porosnicu, E. Vasile, I. Prioteasa, R. Manu, *Carbon - platinum nanostructured catalysts for hydrogen fuel cells*, **J. OF OPTOEL. AND ADV. MATER** (2015) Vol 17, Issue 9-10, Pag.1464-1470, ISSN: 1454-4164, **IF 0.429**

F.25 SG. Tutun, L. Petrasescu, **R. Vladoiu**, G Prodan, CP Porosnicu, E. Vasile, I Prioteasa, R Manu, V Ciupina, *Application of some carbon-aluminium based nanostructures obtained by TVA method in divertors coating from fusion reactor* , **J. OF OPTOEL. AND ADV. MATER** (2015) Vol: 17, Issue: 7-8, P: 1064-1069, **IF 0.429**

F.26 A. Mandes, **R. Vladoiu**, V. Dinca, G. Prodan, *Binary C-Ag Plasma Breakdown and Structural Characterization of the Deposited Thin Films by Thermionic Vacuum Arc Method* **IEEE TRANSACTIONS ON PLASMA SCIENCE** (2014), Vol:42 , Issue: 10, 2806 – 2807, ISSN: 0093-3813, **IF 1.101**

F.27 C. Porosnicu, C. P. Lungu, I. Jepu, O.G. Pompilian , P. Dinca, C. Luculescu, G. Prodan, A. Marin, A. Vladescu, **R. Vladoiu** *Characterization of ternary C-Si-Al nanocomposite thin films obtained by TVA method* **DIGEST JOURNAL OF NANOMATERIALS AND BIOSTRUCTURES** (2014), Vol. 9, No. 2, p. 765 – 775 ISSN: 1842-3582, **IF 0.945**

F.28 V. Ciupina, C.P. Lungu, **R Vladoiu**, G Prodan, C Porosnicu, M Belc, IM Stanescu, E. Vasile, R. Rughinis *Silicon carbide multilayer protective coating on carbon obtained by Thermionic Vacuum Arc method*, **JOURNAL OF NANOPHOTONICS**, 2014Vol: 8, Article Number: 083996 DOI: 10.1117/1.JNP.8.083996, ISSN: 1934-2608, **IF 1.686**

F.29 V Ciupina, I Morjan, **R. Vladoiu**, CP. Lungu, C Porosnicu, I. Jepu, G Prodan, I.M. Stanescu, A. Mandes, M. Contulov, V. Dinca, M. Prodan, V. Nicolescu *Application of carbon-tungsten, carbon-beryllium and carbon-aluminium nanostructures in divertors coatings from fusion reactor*, **J. OF OPTOEL. AND ADV. MATER**, 2013, Vol: 15, Issue: 11-12, Pages: 1450-1456, ISSN: 1454-4164, **IF 0.563**

F.30 V. Ciupina, **R. Vladoiu**, C.P. Lungu, V. Dinca, M. Contulov, A. Mandes, P. Popov and G. Prodan, *Investigation of the SiC thin films synthesized by Thermionic Vacuum Arc method (TVA)*, **EUROPEAN PHYSICAL JOURNAL D**, 2012, Vol. 66, No. 4 p 89, ISSN: 1434-6060 , IF 1.513

F.31 R. Vladoiu, V. Ciupina , M. Contulov, V. Dinca, A. Mandes ,V. Bursikova, *Synthesis and Characterization of Nanostructured a-C:H Thin Films by Gaseous Thermionic Vacuum Arc (G-TVA) Deposition Technique*, **PLASMA CHEMISTRY PLASMA PROCESS**,2012 Vol 32, 2, pag. 219-229, ISSN: 0272-4324,IF 1,728

F.32 R Vladoiu, V. Ciupina, M Contulov, A Mandes, V. Dinca, M. Prodan, *HRTEM Images of a-C:H Thin Films Deposited by G-TVA Technique* **IEEE TRANSACTIONS ON PLASMA SCIENCE** (2011), vol 39 issue 11, pag 2802–2803, ISSN: 0093-3813, IF 1.174

F.33 V Ciupina, J Sullivan, S Saied, **R Vladoiu**, G Prodan, I.M. Oancea-Stanescu, A Mandes, M Contulov, V Dinca, M Prodan, D. Manole “*Synthesis and Characterization of Some Carbon Based Nano-structures*” **CONTRIBUTIONS TO PLASMA PHYSICS** (2011), Vol: 51 Issue: 6 Pages: 546-553, ISSN: 0863-1042, IF 1.108

F.34 A. Stoica, **R. Vladoiu**, G. Musa, V. Ciupina, M. Contulov, V. Bursikova, O .Blahova, *Mechanical properties of thin films deposited by TVA and G-TVA methods* **CHEMICKE LISTY** (2011) Vol:105 Special Issue: SI Supplement: 2 Pages: S132-S135 , ISSN: 0009-2770, IF 0.529

F.35 R. Vladoiu, V. Ciupina, A. Mandes, M. Contulov, V. Dinca, P. Popov, C. P. Lungu, *Tribological properties of carbon-tungsten nanocomposites synthesized by Thermionic Vacuum Arc (TVA) method* **ROMANIAN REPORTS OF PHYSICS** (2011), Vol: 63, Issue: 4 P: 1053-1060, ISSN: 1221-1451, IF 0.500

F.36 R. Vladoiu, V. Ciupina, A. Mandes, V. Dinca, M. Prodan, G. Musa *Growth and characteristics of tantalum oxide thin films deposited using thermionic vacuum arc technology* **JOURNAL OF APPLIED PHYSICS**, (2010) vol 108, Article number 093301 ISSN 0021-8979, IF 2.079

F.37 R. Vladoiu, M. Contulov, V. Ciupina, G. Musa “*Multiple M-Effect Signal in Noble Gases and Hydrogen Mixture Discharge*”, **CONTRIBUTIONS TO PLASMA PHYSICS** (2010), Vol.50, Issue 2, pag.177 – 181 ISSN: 0863-1042, IF 1.006

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F.39 G. Horvath J. D. Skalny J. Orszagh **R. Vladoiu** N. J. Mason “*Influence of the Outer Electrode Material on Ozone Generation in Corona Discharges*”, **PLASMA CHEMISTRY AND PLASMA PROCESSING** (2010) Vol 30, issue 1: pag 43–53, ISSN: 0272-4324, IF1.798

- F.40 R. Vladoiu**, M. Contulov, A. Mandes, G. Musa “*The double m-effect induced by noble gases activated with negative ions*” **EUROPEAN PHYSICAL JOURNAL D** (2009), vol 54, no 2, p 287-291, ISSN: 1434-6060, IF1.420
- F.41 R. Vladoiu**, V. Dinca, G. Musa “*Surface energy evaluation of unhydrogenated DLC thin film deposited by thermionic vacuum arc (TVA) method*” **EUROPEAN PHYSICAL JOURNAL D**, (2009),, vol 54, no2, p 433–437, ISSN: 1434-6060,IF 1,420
- F.42** G Horvath, J D Skalny, N J Mason, M Klas, M Zahoran, **R Vladoiu** and M Manole “*Corona discharge experiments in admixtures of N₂ and CH₄: a laboratory simulation of Titan’s atmosphere*” **PLASMA SOURCES SCIENCE & TECHNOLOGY** 2009, vol. 18, no3,article number 034016, ISSN: 0963-0252, IF 2,384
- F.43** N. Ekem, S.Korkmaz, S.Pat, M. Z. Balbag, N. E. Cetin, M. Ozmumcu, **R. Vladoiu**, G.Musa, *ZnO thin film preparation using RF sputtering at various oxygen contents*, , **J. OF OPTOEL. AND ADV. MATER** 2008, Vol.10, Issue: 12, P3279-3282, ISSN: 1454-4164, IF 0.577
- F.44** V. Ciupina, **R. Vladoiu**, A. Mandes, G. Musa, C. P. Lungu, *TEM investigation of the C-Me multilayer nanocomposites deposited by Thermionic Vacuum Arc (TVA) method*, , **J. OF OPTOEL. AND ADV. MATER** 2008, Vol.10, Issue: 11, P 2958-2962, ISSN: 1454-4164, IF 0.577
- F.45** J D Skalny, A Stoica, J Orszagh, **R Vladoiu**, N J Mason “*Positive and negative corona discharges in flowing carbon dioxide*”, **JOURNAL OF PHYSICS D-APPLIED PHYSICS** (2008) , Vol 41 , Issue 17, article number 175211, ISSN: 0022-3727, IF 2.104
- F.46** C. Surdu Bob, **R. Vladoiu**, M. Badulescu, G. Musa „*Control over the sp²/sp³ ratio by tuning plasma parameters of the thermionic Vacuum Arc*”, **DIAMOND AND RELATED MATERIALS** 2008 , Vol 17, Issues 7-10, 1625-1628, ISSN: 0925-9635, IF 2.092
- F.47** V. Kuncser, M. Valeanu, G. Scanteie, G. Filoti, I. Mustata, C. P. Lungu, A. Anghel, H. Chiriac, **R. Vladoiu**, J. Bartolomeu, “*Exchange Bias and spin valve systems with Fe-Mn antiferromagnetic priming layers, obtained by TVA method*”, **JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS** (2008), Vol 320, Issue 14, P 226-230, ISSN: 0304-8853, IF 1.283
- F.48** S. Pat, Z. Balbag, I. Cenik, N.Ekem, S. Okur, **R. Vladoiu**, G. Musa *Carbon deposition on the stainless steels substrates using pulsed plasma*, , **J. OF OPTOEL. AND ADV. MATER**, 2008, Vol.10, Issue: 3, P 663-664, ISSN: 1454-4164, IF 0.577
- F.49** N. Ekem, G.Musa, S. Pat, Z. Balbag, I. Cenik, **R. Vladoiu**, *Carbon thin film deposition by Thermionic Vacuum Arc (TVA)*, , **J. OF OPTOEL. AND ADV. MATER** 2008 Vol. 10, Issue: 3, P 672-674, ISSN: 1454-4164, IF 0.577
- F.50** M. Z. Balbag, S.Pat, I. Cenik, N. Ekem, T. Akan, B. Baksan, **R. Vladoiu**, G. Musa, *Titanium oxidation by pulsed oxygen plasma*, , **J. OF OPTOEL. AND ADV. MATER** 2008Vol.10, Issue: 3, P 680-682, ISSN: 1454-4164, IF 0.577

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F.52 G. Musa, R. Vladoiu, C. Surdu Bob, A. Mandes *The M-effect, a synergetic result of three body collisions and metastable/resonance radiation trapping*, **OPTOELECTRONICS AND ADVANCED MATERIALS-RAPID COMMUNICATIONS** (2008) Vol: 2, Issue: 3P: 176-177 , ISSN: 1842-6573, IF0.224

F.53 J. D Skalny, S Matejcik, J. Orszagh, R. Vladoiu, N. J. Mason, *A study of the physical and chemical processes active in corona discharges fed by carbon dioxide*, **OZONE-SCIENCE & ENGINEERING** (2008), Vol: 30, Issue: 2, P: 145-151, ISSN: 0191-9512, IF 0,981

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F.57 J. D. Skalny, J. Orszagh, G. Horvath, N. J. Mason, R. Vladoiu *The DC corona discharges in flowing dry and humid carbon dioxide* , **J. OF OPTOEL. AND ADV. MATER**, 2008,, Vol. 10, Issue: 1, P 117-123, ISSN: 1454-4164, IF 0.577

F.58 S. Pat, N. Ekem, Z. Balbag, M. Cenik, R. Vladoiu, G. Musa, *M-effect generating of two-spectral lines*, , **J. OF OPTOEL. AND ADV. MATER** 2008, Vol. 10, Issue: 1, P 229-231, IF 0.577

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F.61 C. Surdu-Bob, G. Musa, R. Vladoiu, C. P. Lungu, *The synthesis of DLC using a novel cathodic arc technique: Gas-TVA* , **J. OF OPTOEL. AND ADV. MATER**, 2007, Vol. 9, Issue: 8, P 2660-2662, ISSN: 1454-4164, IF0.827

F.62 R. Vladoiu, V. Ciupina, C. Surdu-Bob, C. P. Lungu, J. Janik, J. D. Skalny, V. Bursikova, J. Bursik, G. Musa *Properties of the carbon thin films deposited by thermionic*

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H. ARTICLE IN CONFERENCE PROCEEDINGS - WEB OF KNOWLEDGE

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J– BREVETE ACORDATE ÎN ÎNTREAGA ACTIVITATE

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10.10.2025

Semnătura

Prof dr Rodica Vlădoiu

