



## FIȘĂ DE AUTOEVALUARE ȘI DE VERIFICARE A ÎNDEPLINIRII STANDARDELOR UNIVERSITĂȚII „VASILE ALECSANDRI” DIN BACĂU PENTRU OCUPAREA POSTURILOR DIDACTICE

Nume prenume candidat: **RUSU Dragoș-Ioan**

Post (Nr./Grad didactic): **Șef lucrări**

Domeniul postului scos la concurs: **Fizică**

Departament: **IMMF**

Facultate: **Inginerie**

Nr. crt.	STANDARD	Autoevaluare candidat	Verificare comisie
		Îndeplinire/ Punctaj	Îndeplinire/ Punctaj
<b>1.</b>	<b>Deținerea diplomei de doctor în domeniul postului scos la concurs</b>	<b>DA / 5,64</b>	
1.	Contribuții la studiul proprietăților electrice și optice ale straturilor subțiri de ZnO	5,64	
<b>2.</b>	<ul style="list-style-type: none"> <li>• <b>5 articole publicate în reviste indexate BDI, din care minim 3 ca autor principal (definit conform reglementărilor în vigoare);</b></li> <li><b>Lista articolelor:</b></li> <li>• <b>1 articol publicat într-o revistă cotate ISI (article/review/proceedingspaper/bookreview);</b></li> <li>• <b>3 prezentări la conferințe internaționale.</b></li> </ul> <i>Lista activităților</i>	<b>DA / 35,48</b>	
	<b>Lucrări cotate ISI</b>	<b>18,64</b>	
2.1	<b>D.I. Rusu, G.G. Rusu, D. Luca, Structural Characteristics and Optical Properties of Thermally Oxidized Zinc Films, Acta Physica Polonica A, 119 (6), (2011) 850. (I.F. 0,53)</b>	4	
2.2	<b>E. Cuculescu, I. Evtodiev, I. Caraman, L. Leontie, V. Nedeff, D.I. Rusu, Transport and generation–recombination mechanisms of nonequilibrium charge carriers in ZnO/In2O3/InSe: Cd heterojunctions, Thin Solid Films, 519 (2011) 7356–7359. (I.F. 1,76)</b>	3,33	
2.3	<b>I. Evtodiev, I. Caraman, L. Leontie, D.I. Rusu, A. Dafinei, Recombination luminescence and trap levels in undoped and Al-doped ZnO thin films on quartz and GaSe (0 0 0 1) substrates, Materials Research Bulletin, 47 (3), 2012, 794-797. (I.F. 2,29)</b>	5	
2.4	<b>I. Caraman, D. Untilă, I. Evtodiev, V. Canțer, N.Spălatu, D.I. Rusu, E. Luchian, I. Rotaru, Analysis Of Optical Properties And Structure Of GaTe-CdTe Nanocomposite, Chalcogenide Letters, Vol. 12, No. 12, 2015. (I.F. 0,91)</b>	1,75	
2.5	<b>M. Stamate, G. Lazăr, V. Nedeff, I. Lazăr, I. Caraman, I. Rusu, D.I. Rusu, The influence of Reactive Gaseous Flow Rate and Composition on the Optical Properties of TiO<sub>2</sub> Thin Films Deposited by DC Magnetron, Acta Physica Polonica A, vol. 115 (3) (2009), 757. (I.F. 0,43)</b>	1,71	
2.6	<b>I. Caraman, E. Cuculescu, M. Stamate, G. Lazăr, V. Nedeff, I. Lazăr, D.I.</b>	2,85	

Nr. crt.	STANDARD	Autoevaluare candidat	Verificare comisie
		Îndeplinire/ Punctaj	Îndeplinire/ Punctaj
	<b>Rusu, Transport Mechanism Analysis of Non-Equilibrium Charge Carrier in Heterojunctions with GaS-CdTe:Mn Thin Films, Thin Solid Films 517 (2009), 2399-2402. (I.F. 1,72)</b>		
	<b>Proceedings ISI</b>	<b>8,74</b>	
2.7	I. Caraman, I. Lazăr, M. Caraman, <b>D.I. Rusu</b> , <i>Surface structure of CdS layer at the interface of Cds-SnO<sub>2</sub> junction and the diagram of surface states</i> , Advanced Topics in Optoelectronics, Microelectronics and Nanotechnologies, Proc. SPIE, vol. 7297, 2009.	1,75	
2.8	I. Caraman, G. Lazăr, L. Bibire, I. Lazăr, M. Stamate, <b>D.I. Rusu</b> , <i>The optical properties of Cd<sub>1-x</sub>Mn<sub>x</sub>Te (0&lt;x&lt;0,55) solid solutions in monocrystals and thin polycrystalline films</i> , Physica Status Solidi C, vol. 6, No.5, 1203-1206 (2009).	1,16	
2.9	<b>D.I. Rusu</b> , I.I. Rusu, <i>Optical transmission and absorption of ZnO thin films</i> , Romanian Journal of Physics, vol. 43(1-2), 589, 1998.	3,5	
2.10	I.I. Rusu, M. Caraman, <b>D.I. Rusu</b> , <i>Reflexion in the <math>\hbar\omega &lt;&lt; E_g</math> range for ZnO reactive sputtered films in planar magnetron</i> , Romanian Journal of Physics, 43(1-2), 153, 1998.	2,33	
	<b>BDI</b>	<b>4,60</b>	
2.11	<b>D.I. Rusu</b> , I. Evtodiev, I. Caraman, G. Rusu, <i>Optical and Photoluminescence Characteristics of Polycrystalline Zinc Oxide Thin Films</i> , Journal of Optoelectronics and Biomedical Materials, Vol.6, Issue 3, 2014.	1	
2.12	I. Caraman, <b>D.I. Rusu</b> , E.R. Ardeleanu, I. Evtodiev, <i>The Detectors of UV and X Radiation Based on Ga<sub>2</sub>S<sub>3</sub> and GaSe Semiconductors Intercalated with Cd</i> , Journal of Optoelectronics and Biomedical Materials, Vol.7, Nr.1, January-March 2015, p.27-32.	1	
2.13	E. Moşneguţu, V. Nedeff, N. Bârsan, A. Chiţimuş, <b>D.I. Rusu</b> , <i>Influence of screening block supporting way on the behaviour of a solid particle on an oscillating surface</i> , Journal of Engineering Studies and Research, vol. 21(2015), no. 3, p. 51-58	0,8	
2.14	H. Mangeda, V. Nedeff, N. Bârsan, E. Moşneguţu, D. Chiţimuş, <b>D.I. Rusu</b> , <i>Aspects Regarding The Kinshasa Urban Landfills Assessment And Proposals For Sustainable Development</i> , Journal of Engineering Studies and Research, vol. 2, no. 1, p.46-54.	0,66	
2.15	E. Moşneguţu, V. Nedeff, M. Panaite, N. Bârsan, D. Chiţimuş, <b>D.I. Rusu</b> , O. Bontaş, <i>The Influence Of The Inclination Angle Of Working Surface Over Behavior Of A Solid Particles On A Flat Surface Oscillating</i> , Proceedings of the 6th International Conference On Energy Efficiency And Agricultural Engineering, 11-12 Noiembrie, 2015 Ruse, Bulgaria, ISSN-1311-9974, p. 609-619	0,57	
2.16	I Evtodiev, E Vatavu, <b>D.I. Rusu</b> , I Caraman, G Lazar, M Stamate, A Dafinei, <i>The optical properties of ZnO: Al films deposited on the (0001) surface of ε-GaSe single crystals</i> , Moldavian Journal of the Physical Sciences; v. 10(2), Apr-Jun 2011, p. 201-207	0,57	
	<b>Participări conferinţe</b>	<b>3,5</b>	
2.17	<b>D.I. Rusu</b> , I.I. Rusu, <i>Asupra mecanismului conducţiei electrice în straturi</i>	0,5	

Nr. crt.	STANDARD	Autoevaluare candidat	Verificare comisie
		Îndeplinire/ Punctaj	Îndeplinire/ Punctaj
	<i>subțiri semiconductoare de ZnO</i> , Sesiunea Științifică, Universitatea Bacău, 1996.		
2.18	I.I. Rusu, <b>D.I. Rusu</b> , <i>Influența tratamentului termic asupra conductivității electrice a straturilor subțiri de ZnO</i> , Colocviul Național de Fizica și Tehnologia Materialelor Amorfe, Iași, 8-11 Iunie, 2000.	0.5	
2.19	<b>D.I. Rusu</b> , I. Caraman, <i>On the structural and optical characteristics of polycrystalline ZnO thin films</i> , OPROTEH 2015, Bacău, June 4-6.	0.5	
2.20	I.I. Rusu, <b>D.I. Rusu</b> , <i>On the optical properties of ZnO films prepared by DC magnetron sputtering</i> , 7th International Conference of Advanced Materials, Iași, Iunie 2004.	0.5	
2.21	<b>D.I. Rusu</b> , I. Caraman, <i>On the structural and optical characteristics of polycrystalline ZnO thin films</i> , OPROTEH 2015, Bacău, June 4-6.	0.5	
2.22	<b>D.I. Rusu</b> , G.G. Rusu, D. Luca, <i>Some correlations between structural, morphological and optical properties of ZnO thin films obtained by thermally oxidized metallic zinc films</i> , ICPAM-9, 20-23 Sept. 2012, Iași, Romania.	0.5	
2.23	<b>D.I. Rusu</b> , I.I.Rusu, <i>On the thermoelectric properties of zinc oxide films prepared by D.C.magnetron sputtering</i> , OPROTEH 2007, Bacău, 1-3 Noiembrie.	0.5	
3.	Cel puțin un material didactic pentru uzul studenților în domeniul postului scos la concurs (monografii, cărți, note de curs, caiet de seminar, caiet de laborator, îndrumar de practică). Lista materialelor publicate:	<b>DA / 8.44</b>	
3.1	<b>D.I. Rusu</b> , <i>Fizica atmosferei, Curs și lucrări practice</i> , Editura ALMA-MATER, Bacău, 2007, ISBN 978-973-8392-80-9.	8.44	
4.	<b>Alte criterii relevante considerate de candidat</b>	<b>129.03</b>	
4.1	<b>Contracte de cercetare:</b>		
A	Contract CEEEX nr. 89/2006, <i>Prepararea și caracterizarea unor straturi subțiri semiconductoare nanostructurale utilizate la confecționarea modulelor fotovoltaice</i> . (Membru)	2,5	
B	Contract GAR nr. 36/2007, Academia Română, <i>Obținerea, caracterizarea și utilizarea nanostructurilor pe bază de carbon</i> . (Membru)	0,97	
C	Contract GAR nr. 44/2007, Academia Română, <i>Studiul efectelor de dimensiune asupra proprietăților optice, electrice și dielectrice la pelicule de TiO<sub>2</sub></i> . (Membru)	0,56	
4.2	<b>Recunoașterea națională și internațională (citări, prezența în echipe editoriale, de evaluare etc.)</b>	<b>125</b>	
A	I. Evtodiev, I. Caraman, L. Leontie, <b>D.I. Rusu</b> , A. Dafinei, <i>Recombination luminescence and trap levels in undoped and Al-doped ZnO thin films on quartz and GaSe (0 0 0 1) substrates</i> , Materials Research Bulletin, 47 (3), 2012, 794-797. (I.F. 2,29)	<b>10</b>	
a.1	M.M El-Nahass, I. T. Zedan, A.A Atta, <i>Preparation and characterization of Au/n-GaSe4/p-Si/Al Schottky-type thin film heterojunctions</i> European Physical Journal - Applied Physics, Volume 59, Issue 2, Article Number 20101, 2012	10	
<b>B</b>	<b>D.I. Rusu</b> , G.G. Rusu, D. Luca, <i>Structural Characteristics and Optical Properties of Thermally Oxidized Zinc Films</i> , Acta Physica Polonica A,	<b>95</b>	

Nr. crt.	STANDARD	Autoevaluare candidat	Verificare comisie
		Îndeplinire/ Punctaj	Îndeplinire/ Punctaj
	119 (6), (2011) 850. (I.F. 0,53)		
b.1	Chand, Prakash; Gaur, Anurag; Kumar, Ashavani, <i>Effect of NaOH molar concentration on optical and ferroelectric properties of ZnO nanostructures</i> , Applied Surface Science, Volume: 356 Pages: 438-446 Published: NOV 30 2015.	10	
b.2	Purohit, Anuradha; Chander, S.; Sharma, Anshu, <i>Impact of low temperature annealing on structural, optical, electrical and morphological properties of ZnO thin films grown by RF sputtering for photovoltaic applications</i> , Optical Materials, Volume: 49, Pages: 51-58, Published: NOV 2015	5	
b.3	Sugumaran, Sathish; Bin Ahmad, Mohd Noor; Jamlos, Mohd Faizal, <i>Transparent with wide band gap InZnO nano thin film: Preparation and characterizations</i> , OPTICAL MATERIALS, Volume: 49, Pages: 348-356 Published: NOV 2015	5	
b.4	Al-Ghamdi, Ahmed A.; Farag, A. A. M.; Hendi, A. A, <i>Nanocrystalline Cu2O/p-Si solar light-responsive Schottky photodiode</i> , APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING, Volume: 121 Issue: 1, Pages: 29-37, Published: OCT 2015	10	
b.5	Viezbicke, Brian D.; Patel, Shane; Davis, Benjamin E., <i>Evaluation of the Tauc method for optical absorption edge determination: ZnO thin films as a model system</i> , PHYSICA STATUS SOLIDI, B-BASIC SOLID STATE PHYSICS, Volume: 252, Issue: 8, Pages: 1700 - 1710, Published: AUG 2015	10	
b.6	Murugan, R.; Vijayaprasath, G.; Mahalingam, T., <i>Effect of rf power on the properties of magnetron sputtered CeO2 thin films</i> , JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, Volume: 26, Issue: 5, Pages: 2800-2809, Published: MAY 2015	10	
b.7	Kumar, Rajesh; Kumar, Girish; Al-Dossary, O., <i>ZnO nanostructured thin films: Depositions, properties and applications-A review</i> , MATERIALS EXPRESS Volume: 5 Issue: 1 Pages: 3-23 Published: FEB 2015	5	
b.8	Ivanova, T.; Harizanova, A.; Koutzarova, T., <i>Facile deposition of ZnO:Cu films: Structural and optical characterization</i> , MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING Volume: 30 Pages: 561-570 Published: FEB 2015	10	
b.9	Sathish, S.; Shekar, B. Chandar; Kannan, S. Chandru, <i>Wide Band Gap Transparent Polymer-Inorganic Composite Thin Films by Dip-Coating Method: Preparation and Characterizations</i> , INTERNATIONAL JOURNAL OF POLYMER ANALYSIS AND CHARACTERIZATION Volume: 20 Issue: 1 Pages: 29-41 Published: JAN 2 2015	10	
b.10	Djouadi, D.; Meddouri, M.; Chelouche, A., <i>Structural and optical characterizations of ZnO aerogel nanopowder synthesized from zinc acetate ethanolic solution</i> , OPTICAL MATERIALS Volume: 37 Pages: 567-571 Published: NOV 2014	5	
b.11	Mihailova, I.; Gerbreders, V.; Tamanis, E., <i>Synthesis of ZnO nanoneedles by thermal oxidation of Zn thin films</i> , Conference: 18th International Symposium on Non-Oxide and New Optical Glasses Location: Saint	5	

Nr. crt.	STANDARD	Autoevaluare candidat	Verificare comisie
		Îndeplinire/ Punctaj	Îndeplinire/ Punctaj
	Malo, FRANCE, Date: JUL 01-05, 2012, JOURNAL OF NON-CRYSTALLINE SOLIDS Volume: 377 Special Issue: SI Pages: 212-216 Published: OCT 1 2013		
b.12	Lee, Yueh-Lin; Huang, Tzu-Hsuan; Ho, Chong-Lung, <i>The Sandwich Structure of Ga-Doped ZnO Thin Films Grown via H<sub>2</sub>O-, O-2-, and O-3-Based Atomic Layer Deposition</i> ECS JOURNAL OF SOLID STATE SCIENCE AND TECHNOLOGY Volume: 2 Issue: 9 Pages: Q182-Q186 Published: 2013	10	
C	E. Cuculescu, I. Evtodiev, I. Caraman, L. Leontie, V. Nedeff, <b>D.I. Rusu</b> , <i>Transport and generation–recombination mechanisms of nonequilibrium charge carriers in ZnO/In<sub>2</sub>O<sub>3</sub>/InSe: Cd heterojunctions</i> , Thin Solid Films, 519 (2011) 7356–7359. (I.F. 1,76)	10	
c.1.	Zou, Zhijun; Xie, Changsheng; Zhang, Shasha, <i>Extraordinarily enhanced gas phase photoelectric response of CdS/TiO<sub>2</sub> nanocomposite photoelectrode: CdS as a sensitizer and a hole capturer</i> , JOURNAL OF NANOPARTICLE RESEARCH, Volume: 15, Issue: 6, Article Number: 1734 Published: JUN 2013	10	
D	I. Caraman, I. Lazăr, M. Caraman, <b>D.I. Rusu</b> , <i>Surface structure of CdS layer at the interface of CdS-SnO<sub>2</sub> junction and the diagram of surface states</i> , Advanced Topics in Optoelectronics, Microelectronics and Nanotechnologies, Proc. SPIE, vol. 7297, 2009.	5	
d.1	Cho, Shin Haeng; Kim, Sang Su; Park, Min Hyuk, <i>Surface treatment of the window layer in CdS/CdTe solar cells</i> , JOURNAL OF THE KOREAN PHYSICAL SOCIETY Volume: 65 Issue: 10 Pages: 1590-1593 Published:NOV 2014	5	
E	I. Caraman, E. Cuculescu, M. Stamate, G. Lazăr, V. Nedeff, I. Lazăr, <b>D.I. Rusu</b> , <i>Transport Mechanism Analysis of Non-Equilibrium Charge Carrier in Heterojunctions with GaS-CdTe:Mn Thin Films</i> , Thin Solid Films 517 (2009), 2399-2402. (I.F. 1,72)	5	
e.1	Chen, Mei; Wang, Zhihua; Han, Dongmei, <i>High-sensitivity NO<sub>2</sub> gas sensors based on flower-like and tube-like ZnO nanomaterials</i> , SENSORS AND ACTUATORS B-CHEMICAL, Volume: 157, Issue: 2, Pages: 565-574, Published: OCT 20, 2011	5	
<b>PUNCTAJ TOTAL</b>		<b>178.59</b>	

Declar pe proprie răspundere că informațiile prezentate în această fișă de autoevaluare sunt veridice.

Data completării

Semnătura

05.01.2016

**Comisia de concurs**

**Președinte**

**Prof. dr. ing. Valentin ZICHIL**

.....

**Membri**

.....

.....

.....

.....

.....

.....

.....

.....