

Universitatea Transilvania din Braşov  
Facultatea Design de Produs şi Mediu  
Departamentul Design de Produs, Mecatronică şi Mediu

Poz. postului 25  
Disciplinele postului: materiale  
speciale; analiza şi sinteza proceselor  
tehnologice; chimie

**FIŞA DE VERIFICARE A ÎNDEPLINIRII STANDARDELOR UNIVERSITĂŢII  
pentru postul de Profesor universitar poziţia 25**

publicat în Monitorul Oficial al României nr. 662 din data de 24.XI.2014

Candidat: **Isac Luminiţa Anișoara** Data naşterii: 14.02.1969  
Funcţia actuală: conferenţiar universitar Instituţia: Universitatea Transilvania din Braşov

**1. Studii universitare (licenţă şi masterat)**

Nr. crt.	Instituţia de învăţământ superior şi facultatea	Domeniul	Perioada	Titlul acordat
1.	Universitatea Bucureşti, Facultatea de Chimie	Chimie	1988-1993	diplomă de licenţă
2.	Universitatea Transilvania Braşov, Facultatea de Ştiinţa şi Ingineria Materialelor	Chimie aplicată în mediu şi industrie (în limba engleză)	2004-2006	diplomă de master

**2. Studii de doctorat**

Nr. crt.	Instituţia organizatoare de doctorat	Domeniul	Perioada	Titlul ştiinţific acordat
1.	Universitatea Bucureşti	Chimie	1998-2006	doctor în chimie

**3. Studii şi burse postdoctorale (stagii de cel puţin 6 luni)**

Nr. crt.	Instituţia	Domeniul/ Specializarea	Perioada	Tipul de bursă
-	-	-	-	-

**4. Realizările profesional-ştiinţifice**

Calitatea activităţilor didactice/ profesionale	<p><i>Activitatea didactică este concretizată în ore de curs la disciplinele de Materiale speciale (ID), Analiza şi sinteza proceselor tehnologice (IPMI), Chimie (IC, CCIA, CFDP, MTC, ET, MT, OPTO, IMED) şi ore de laborator şi proiect la disciplinele de Chimie (MTC, CCIA), Materiale speciale (ID), Analiza şi sinteza proceselor tehnologice (IPMI), Materiale avansate pentru design de produs / Advanced Materials for Design (DPDD) şi Ingineria proceselor de depoluare (IPMI).</i></p> <p>Consiliul Departamentului DMM apreciază activitatea didactică a conf. dr. ISAC Luminiţa drept adecvată cerinţelor impuse şi nivelului de pregătire al studenţilor de la programele de studii enumerate mai sus, demonstrând preocupare</p>
---	---

	<p>pentru înnoirea anuală a conținutului disciplinelor predate prin:</p> <ul style="list-style-type: none"> <li>✓ contribuția la implementarea de noi discipline (curs și laborator): materiale speciale/special materials, analiza și sinteza proceselor tehnologice, tehnici de caracterizare a materialelor solide/solid state characterization techniques</li> <li>✓ implicarea ca membru într-un proiect internațional de tip Leonardo da Vinci, în domeniul reciclării deșeurilor și a dezvoltării durabile în instituții de profil din Olanda;</li> <li>✓ implicarea ca membru în comisiile de licență și de doctorat, precum și în activitățile de ăregatire a acreditării programelor de studiu (profil Ingineria Mediului) coordonate de colectivul nostru;</li> <li>✓ implicarea în partea administrativă a activității didactice, în calitate de tutore al anului III, specializarea Ingineria și Protecția Mediului în Industrie, dar și de responsabil cu orarul și cu organizarea cercurilor științifice studențești pentru programele de studiu coordonate de colectivul nostru;</li> </ul> <p><b>Activitățile de cercetare științifică</b> vizează două direcții actuale prioritare la nivel național și european: energie și mediu.</p> <ul style="list-style-type: none"> <li>✓ în domeniul <i>energiei</i>, activitatea de cercetare cuprinde aspecte fundamentale și aplicative ale sintezei și caracterizării materialelor nanostructurate (sulfuri binare, oxizi), cu proprietăți controlate, pentru sisteme active în procesele de conversie a energiei solare (fotocatalizatori, straturi absorbante pentru colectoarele solar termice și pentru celule solare în stare solidă), sub formă de straturi subțiri sau sisteme disperse;</li> <li>✓ în domeniul <i>mediului</i>, cercetarile desfășurate au ca obiectiv principal tratarea apelor uzate prin procese de fotocataliză, utilizând fotocatalizatori pe bază de sulfuri de cupru (<math>\text{Cu}_x\text{S}</math>) și nanocompozite <math>\text{Cu}_x\text{S}/\text{TiO}_2</math>;</li> <li>✓ <i>implicarea în granturi și contracte naționale</i>, derulate sau în derulare (<b>14</b>, dintre care 3 de tip CNCISIS, 3 de tip CEEX, 6 de tip PARTENERIATE și 2 de tip IDEI), și <i>internaționale</i> (2 proiecte de tip SFERA-II);</li> <li>✓ experiența în managementul cercetării și în coordonarea de grupuri de cercetare a fost/este dovedită prin coordonarea unui proiect IDEI ca director (<i>Conceperea, optimizarea și modelarea straturilor subțiri de <math>\text{Cu}_x\text{S}</math> cu morfologie controlată utilizate în celule solare</i></li> </ul>
--	--

	<p>în stare solidă, PN-II-PCE-ID 763/2008, 2009) și a unui proiect PARTENERIATE în calitate de responsabil științific (<i>Sistem inovativ sustenabil pentru auto-decontaminarea fotocatalitică a echipamentelor de protecție CBRN – CB-PhotoDeg - PNII PT-PCCA-2013-4-0747, 2014-2016</i>);</p> <ul style="list-style-type: none"> <li>✓ rezultatele activității de cercetare științifice sunt publicate în jurnale cotate ISI (25 articole reprezentative) și indexate în baze de date internaționale (10 articole reprezentative);</li> <li>✓ recunoașterea națională și internațională a activității de cercetare științifică prin: <ul style="list-style-type: none"> <li>- 158 de citări ale articolelor in Scopus (excluzând citările proprii); indice <i>h</i>: 7</li> <li>- calitatea de recenzor pentru 7 reviste cotate ISI: Journal of the American Chemical Society, Chemistry of Materials, Journal of Alloys and Compounds, The Journal of Physical Chemistry, Applied Surface Science, Thin Solid Films, Environmental Engineering and Management Journal</li> </ul> </li> </ul>
Lucrări publicate în reviste de specialitate recunoscute național/internațional	<ol style="list-style-type: none"> <li>1. Enesca, A., <b>Isac, L.</b>, Duta, A., <i>Charge carriers injection in tandem semiconductors for dyes mineralization</i>, Applied Catalysis B: Environmental 162, <b>2015</b>, 353-362 (FI = 6,007)</li> <li>2. György, E., Pérez Del Pino, A., Logofatu, C., Duta, A., <b>Isac, L.</b>, <i>Effect of nitrogen doping on wetting and photoactive properties of laser processed zinc oxide-graphene oxide nanocomposite layers</i>, Journal of Applied Physics 116 (2), <b>2014</b>, 024906 (FI = 2,185)</li> <li>3. Enesca, A., <b>Isac, L.</b>, Andronic, L., Perniu, D., Duta, A., <i>Tuning SnO<sub>2</sub>-TiO<sub>2</sub> tandem systems for dyes mineralization</i>, Applied Catalysis B: Environmental 14, <b>2014</b>, 175-184 (FI = 6,007)</li> <li>4. Duta, A., <b>Isac, L.</b>, Milea, A., Ienei, E., Perniu, D., <i>Coloured solar-thermal absorbers - A comparative analysis of cermet structures</i>, Energy Procedia 48, <b>2014</b>, 543-553 (ISI Proceedings)</li> <li>5. Enesca, A., <b>Isac, L.</b>, Duta, A., <i>Hybrid structure comprised of SnO<sub>2</sub>, ZnO and Cu<sub>2</sub>S thin film semiconductors with controlled optoelectric and photocatalytic properties</i>, Thin Solid Films 542, <b>2013</b>, 31-37 (FI = 1,864)</li> <li>6. <b>Isac, L.</b>, Andronic, L., Enesca, A., Duta, A., <i>Copper sulfide films obtained by spray pyrolysis for dyes photodegradation under visible light irradiation</i>, Journal of Photochemistry and Photobiology A:</li> </ol>

- Chemistry 252, **2013**, 53– 59 (FI = 2,291)
7. Dudita, M., **Isac, L.**, Duta, A., *Influence of solvents on properties of solar selective coatings obtained by spray pyrolysis*, Bulletin of Materials Science 35, **2012**, 997-1002, FI = 0,584 (2012)
  8. Visa, M., **Isac, L.**, Duta, A., *Fly ash adsorbents for multi-cation wastewater treatment*, Applied Surface Science 258(17), **2012**, 6345-6352, FI = 2,112 (2012)
  9. **Isac, L.**, Popovici, I., Duta, A., *Tailoring chemically sprayed  $Cu_xS$  films crystallinity*, Revue Roumaine de Chimie 56(12), **2011**, 1107-1112, FI = 0,418 (2011)
  10. Andronic L., **Isac L.**, Duta A., *Photochemical synthesis of Copper sulphide/Titanium oxide photocatalyst*, Journal of Photochemistry and Photobiology A: Chemistry 221, **2011**, 30-37, FI = 2,421 (2011)
  11. Popovici, I., Perniu, D., **Isac, L.**, Cioc R., Duță A., *Surfactant Assisted Control over Morphology and Surface Properties of Sprayed  $TiO_2$  Thin Films*, Revue Roumaine de Chimie, Vol. 56, Issue 10-11, **2011**, Pag 1075-1080, FI= 0,418 (2011)
  12. **Isac, L.**, Popovici, I., Enesca, A., Duta, A., *Copper sulfides thin films with controlled properties for photovoltaic cells*, Environmental Engineering and Management Journal 10(9), **2011**, 1235-1241, FI = 1,004 (2011)
  13. **Isac, L.**, Popovici, I., Enesca, A., Duta, A., *Copper sulfide ( $Cu_xS$ ) thin films as possible p-type absorbers in 3D solar cells*, Energy Procedia 2(1), **2010**, 71-78 (ISI Proceedings)
  14. Ienei, E., **Isac, L.**, Cazan, C., Duta, A., *Characterization of  $Al/Al_2O_3/NiO_x$  solar absorber obtained by spray pyrolysis*, Solid State Sciences 12, **2010**, 1894-1897, FI = 1,828 (2010)
  15. Ienei, E., **Isac, L.**, Duta, A., *Synthesis of alumina thin films by spray pyrolysis*, Revue Roumaine de Chimie 55(3), **2010**, 161-165, FI = 0,693 (2010)
  16. Visa, M., **Isac, L.**, Duta, A., *Fly ash - Activated carbon powder composites for dyes and heavy metals removal*, Advanced Materials Research 79-82, **2009**, 243-246 (ISI Proceedings)
  17. **Isac, L.**, Duta, A., Purghele, E., Chitanu, G.C., Mitrea, S., Pelin, I., *Tailoring alumina thin film properties using hydrophilic/hydrophobic*

	<p><i>copolymer additives</i>, Physica Status Solidi (A) Applications and Materials Science 205(10), <b>2008</b>, 2413-2416, FI = 1,205 (2008)</p> <p><b>18.</b>Purghel, E., Voinea, M., <b>Isac, L.</b>, Duta, A., <i>Optical properties of Ni/NiO<sub>x</sub> as infiltration agent in cermet solar Ir absorber</i>, Revista de Chimie 59(4), <b>2008</b>, 469-471, FI = 0,389 (2008)</p> <p><b>19.</b><b>Isac, L.A.</b>, Duta, A., Nanu, M., Schoonman, J., <i>Tailoring copper sulfide thin films morphology using spray pyrolysis deposition technique</i>, Journal of Optoelectronics and Advanced Materials 9(10), <b>2007</b>, 3072-3075, FI = 0,827 (2007)</p> <p><b>20.</b><b>Isac, L.</b>, Duta, A., Kriza, A., Manolache, S., Nanu, M., <i>Copper sulfides obtained by spray pyrolysis - Possible absorbers in solid-state solar cells</i>, Thin Solid Films 515(15), <b>2007</b>, 5755-5758, FI = 1,693 (2007)</p> <p><b>21.</b><b>Isac, L.A.</b>, Duta, A., Kriza, A., Nanu, M., Schoonman, J., <i>Crystal order in Cu<sub>2</sub>S thin films obtained by spray pyrolysis</i>, Journal of Optoelectronics and Advanced Materials 9 (5), <b>2007</b>, 1265-1268, FI = 0,827 (2007)</p> <p><b>22.</b><b>Isac, L.A.</b>, Duta, A., Kriza A., Enesca, A., Nanu M., <i>The growth of CuS thin films by Spray Pyrolysis</i>, Journal of Physics: Conference Series 61, <b>2007</b>, 477-481 (ISI Proceedings)</p> <p><b>23.</b>Enesca, A., Duta, A., <b>Isac, L.</b>, Manolache, S., Schoonman, J., <i>The influence of the annealing process on the properties of WO<sub>3</sub> photoelectrode used in a photoelectrochemical cell (PECC)</i>, Journal of Physics: Conference Series 61, <b>2007</b>, 472-476 (ISI Proceedings)</p> <p><b>24.</b>Manolache, S., Duta, A., <b>Isac, L.</b>, Nanu, M., Goossens, A., Schoonman, J., <i>The influence of the precursor concentration on CuSbS<sub>2</sub> thin films deposited from aqueous solutions</i>, Thin Solid Films 515(15), <b>2007</b>, 5957-5960, FI = 1,693 (2007)</p> <p><b>25.</b>Manolache, S.A., <b>Isac, L.A.</b>, Duta, A., Kriza, A., Nanu, M., <i>Metal based sulfides, p-type semiconductors in solid state solar cells</i>, Proceedings of the International Semiconductor Conference, CAS 1, <b>2006</b>, 141-144 (ISI Proceedings)</p> <p><b>26.</b><b>Isac, L.</b>, Duta, A., Kriza, A., Nanu, M., Dumitrescu, L., <i>Influence of the Cu-precursor on the morphology and composition of Cu<sub>2-x</sub>S thin films obtained by chemical spray pyrolysis</i>, Analele Universitatii Ovidius seria:</p>
--	---

	<p>Chimie/Ovidius University annals of Chemistry, Volume 7, <b>2006</b>, 83-86</p> <p><b>27. Isac, L.</b>, Kriza, A., Duta, A., Dumitrescu, L., Manciualea, I.,: <i>Cu<sub>2-x</sub>S as possible absorbers and/or p-type semiconductors in photovoltaic cells</i>, Analele Universitatii Ovidius seria: Chimie/Ovidius University annals of Chemistry, Volume 7, November 1, <b>2006</b>, 87-90</p> <p><b>28. Patachia, S., Rinja, M., Isac, L.</b>, <i>Some methods for doping poly(vinyl alcohol) hydrogels [PVA-HG]</i>, Romanian Journal of Physics Vol 51 , Nr. 1-2, <b>2006</b>, 253-262</p> <p><b>29. Patachia, S., Isac, L., Rinja, M.</b>, <i>New methods for copper and sulphide ions retaining from wastewater</i>, Environmental Engineering and Management Journal, December <b>2004</b>, Vol.3, No.4, 661-667</p> <p><b>30. Dumitrescu, L., Manciualea, I., Isac, L., Tica, R.</b>, <i>Reducing the environmental Pollution by waste composting</i>, Environmental Engineering and Management Journal, December <b>2005</b>, Vol.4, No.2, 161-168</p> <p><b>31. Contineanu, M., Isac, L.</b>, <i>Cinetica dispariției termice a speciilor radicalice formate la radioliza acidului selenios</i>, Revista de Chimie 49 (4), <b>1998</b>, 274-278, ISSN: 0034-7752</p>
<p>Lucrări prezentate la conferințe naționale/internaționale în profilul postului</p>	<p><b>1. Enesca, A., Isac, L., Duta, A.</b>, <i>The influence of the SnO<sub>2</sub> substrate on the TiO<sub>2</sub> and WO<sub>3</sub> photoelectric properties</i>, Proceedings of 25th European Photovoltaic Solar Energy Conference and Exhibition, 6-10 September 2010, Valencia, Spain, 595-598</p> <p><b>2. Duta A., Perniu D., Isac L., Enesca A.</b>, <i>Solar Energy Materials Obtained by Spray Pyrolysis Deposition</i>, Academia Romana, A 9-a editie a Seminarului National de nanostiinta si nanotehnologie, 2010</p> <p><b>3. Popovici, I., Perniu, D., Isac, L., Enesca, A., Duta, A.</b>, <i>The influence of different n-type semiconductors on solid state solar cells with cuins<sub>2</sub> p-type absorber</i>, Proceedings of 24th European Photovoltaic Solar Energy Conference and Exhibition, 21-25 September 2009, Hamburg, Germany, 3020-3023</p> <p><b>4. Isac, L., Popovici, I., Perniu, D., Enesca, A., Duta, A.</b>, <i>The influence of the n-type semiconductor layer on the photovoltaic response in the 3D solar cells with Cu<sub>x</sub>S as p-type absorber</i>, Proceedings of 24th European Photovoltaic Solar Energy Conference and Exhibition, 21-25 September 2009, Hamburg, Germany, 2953-2956</p>

5. **Isac, L.** Perniu, D., Nanu, M., Duta, A., *Thin films of  $In_2S_3$  as alternatives to CdS layers in solar cells*, Journal of Optoelectronics and Advanced Materials - Symposia, Vol. 1, No. 6, 2009, 986 – 991
6. Perniu D., Manciu A., **Isac L.**, Schoonman J., *Gallium and Tin doped  $CuInS_2$* , Journal of Optoelectronic and Advanced Materials – Symposia, Vol. 1, No. 6, 2009, 992-995
7. E. Ienei, M. Voinea, R. Lates, **L. Isac**, I. Visa, A. Duta, *The influence of the incidence angle on the efficiency of a flat plat Collector*, Proceedings of International Congress on Heating, Cooling and Buildings EUROSUN 7-10 October 2008, Lisabon, Portugal, 1-7
8. Manolache, S., **Isac, L.**, Purghel, E., Duta, A., *The influence of the buffer layers ( $Al_2O_3$  and  $In_2S_3$  thin films) in the 3D solar cell FTO/ $TiO_2$ / $CuSbS_2$* , Proceedings of 23rd European Photovoltaic Solar Energy Conference, 1-5 September 2008, Valencia, Spain, 563-566
9. Duta, A., Visa, I., Manolache, S.A., **Isac, L.**, *p-type semiconductors for solid state solar cells*, Proceedings of 23rd European Photovoltaic Solar Energy Conference, 1-5 September 2008, Valencia, Spain, 716-719
10. Mitrea, S.A., Hodorogea, S.M., Duta, A., **Isac, L.**, Purghel, E., Voinea, M., *Some Aspects regarding I. R. Absorbing Materials based on Thin Alumina Films for Solar-Thermal Energy Conversion, using X- Ray Diffraction Technique*, World Academy of Science, Engineering and Technology, Vol:2, 2008, 11-26
11. Ienei, E., Voinea, M., Bogatu, C., **Isac, L.**, Duta, A., *Metal/metal oxide composites used as absorbers for solar thermal collectors*, Proceedings of the 2nd Conference on Sustainable Energy, CSE, 3-5 july 2008, Braşov, Romania, 51-55
12. Mitrea, S.A., Hodorogea, S.M., Sbarcea, G.B., **Isac, L.**, Purghel, E., Voinea, M., Garoi, P., *Structural characterization of thin films for solar cells using X-Ray diffraction and optical microscopy*, Proceedings of the 2nd Conference on Sustainable Energy, CSE, 3-5 july 2008, Braşov, Romania, 56-59
13. **Isac, L.**, Duta, A., Kriza, A., Nanu, M., Dumitrescu, L., Schoonman, J., *Complementarity of XRD and Raman spectroscopy in the analysis of CuS thin films*, Proceedings of the 7th

	<p>International Conference on Technology and Quality for Sustained Development, TQSD, Bucuresti, 2006 (6 pag)</p> <p>14. Vladuta, C., Duta, A., Dobre, E.B., Visa, I., <b>Isac, L.</b>, <i>Relation between composition, microstructure and mechanical properties of PET-rubber composites</i>, Proceedings of the 7th International Conference on Technology and Quality for Sustained Development, TQSD, Bucuresti, 2006 (6 pag)</p> <p>15. Dumitrescu, L., Roman, Gh., Coman, Gh., <b>Isac, L.</b>, Manciulea, I., <i>Valorification of domestic wastes by composting</i>, Proceedings of International Conference on Materials Science and Engineering BRAMAT 2003, Vol IV, 13-14 march 2003, Braşov, Romania, 400-405</p> <p>16. <b>Isac, L.</b>, Dumitrescu, L., Dragan, D., Țică, R., Manciulea, I., <i>Monitoring of nitrites, nitrates and ammonia water quality indicators from the Târlung lake Braşov district</i>, Proceedings of 13th Roamnian International Conference on Chemistry and Chemical Engineering RICCE 13, Vol. 3, september 2003, Bucureşti, Romania, 93-98</p> <p>17. Stezar, L., Dumitrescu, L., <b>Isac, L.</b>, <i>Photocatalytic oxidation-an effective method for removal of organic pollutants from wastewaters</i>, Proceedings of International Conference on Materials Science and Engineering BRAMAT 2001, Vol IV, 1-2 march 2001, Braşov, Romania, 141-144</p> <p>18. Patachia, S., Savin, G., <b>Isac, L.</b>, Spiridon, M., <i>Utilizarea metodei potențiometrice în evidențierea caracterului antioxidant al acidului ascorbic</i>, Proceedings of International Conference on Materials Science and Engineering BRAMAT 1999, Vol IV, 3-5 february 1999, Braşov, Romania, 399-404</p> <p>19. Patachia, S., Savin, G., <b>Isac, L.</b>, Spiridon, M., <i>Corelarea metodelor potențiometrice și spectrofotometrice în evidențierea caracterului antioxidant al unor substanțe</i>, Proceedings of International Conference on Materials Science and Engineering BRAMAT 1999, Vol IV, 3-5 february 1999, Braşov, Romania, 405-408</p>
Volum(e) de specialitate publicat(e) în edituri recunoscute național	<p>1. <b>Isac L.</b>, Eneşca A., Mihoreanu C., Perniu D., Duţă A., <i>Spectrally Solar Selective Coatings for Colored Flat Plate Solar Thermal Collectors</i>, in: Visa Ion (Ed) Sustainable Energy in the Built Environment-Steps Towards nZEB, part II, Springer International</p>




	<p>Publishing Switzerland (20 pag), XIII, 2014, ISBN 978-3-319-09707-7</p> <p>2. Duță A., Eneșca A., <b>Isac L.</b>, Perniu D., Andronic L., Bogatu C., <i>Thin Film Vis-Active Photocatalysts for Up-Scaled Wastewater Treatment</i>, in: Visa Ion (Ed) Sustainable Energy in the Built Environment-Steps Towards nZEB, part IV, Springer International Publishing Switzerland (20 pag), XIII, 2014, ISBN 978-3-319-09707-7</p> <p>3. <b>Isac, L.</b>, Cazan, C., <i>Advanced materials for industrial product designing</i>, Editura Universității Transilvania din Brașov, 2015, ISBN 978-606-19-0489-1 (200 pagini)</p> <p>4. Țică, R., Duță A., Perniu D., <b>Isac, L.</b>, <i>Chimie Generală</i>, Editura Universității Transilvania din Brașov, 2002, ISBN 973-635-004-5 (185 pagini)</p> <p>5. Țică, R., Drăghici C., Dumitrescu, L., Duță A., Perniu, D., <b>Isac, L.</b>, Roman, G., Tudor, E., Nanu, D., Stezar, L., Savin, G., <i>Învățăm Chimie Organică prin teste</i>, Editura Ecran Magazin, 1999, ISBN 973-99170-0-3 (383 pagini)</p>
--	---

**Director de departament,**  
Prof. dr. ing. Codruța JALIU



**Candidat,**  
Conf. dr. Luminița ISAC



FIȘA DE VERIFICARE A ÎNDEPLINIRII STANDARDELOR MINIMALE NAȚIONALE PENTRU OCUPAREA  
POSTULUI DE **PROFESOR UNIVERSITAR**, COMISIA **INGINERIA MATERIALELOR**  
Publicate în Monitorul Oficial al României, PARTEA I, Nr. 890 bis/27.XII.2012

**Conf. dr. Luminița Anișoara ISAC**  
**Departamentul Design de Produs, Mecatronică și Mediu**  
**Facultatea Design de Produs și Mediu**  
**Universitatea Transilvania din Brașov**

Domeniul de activitate	Condiții profesor	Punctaj realizat
A1 Activitate didactică	40 puncte	54,03
A2 Activitate de cercetare	300 puncte	520,92
A3 Recunoașterea impactului activității	60 puncte	540,44
<b>Total</b>	<b>400 puncte</b>	<b>1115,39</b>

**A1 Activitatea didactica**

DESCRIERE CRITERIU	DETALII	PUNCTAJ OBTINUT
1.1. Cărți și capitole în cărți de specialitate		
1.1.1. Cărți / capitole ca autor		
1.1.1.1. Internaționale Calcul: nr.pagini/5 x nr.autori	Comșit M., Vișa I., Moldovan M. D., <b>Isac L.</b> , <i>Architecturally Integrated Multifunctional Solar-Thermal Facades</i> , in: Visa Ion (Ed) Sustainable Energy in the Built Environment-Steps Towards nZEB, part I, Springer International Publishing Switzerland (20 pag), XIII, 2014, ISBN 978-3-319-09707-7 online: <a href="http://link.springer.com/book/10.1007/978-3-319-09707-7">http://link.springer.com/book/10.1007/978-3-319-09707-7</a>	1
	<b>Isac L.</b> , Eneșca A., Mihoreanu C., Perniu D., Duță A., <i>Spectrally Solar Selective Coatings for Colored Flat Plate Solar Thermal Collectors</i> , in: Visa Ion (Ed) Sustainable Energy in the Built Environment-Steps Towards nZEB, part II, Springer International Publishing Switzerland (20 pag), XIII, 2014, ISBN 978-3-319-09707-7 online: <a href="http://link.springer.com/book/10.1007/978-3-319-09707-7">http://link.springer.com/book/10.1007/978-3-319-09707-7</a>	0,8
	Duță A., Eneșca A., <b>Isac L.</b> , Perniu D., Andronic L., Bogatu C., <i>Thin Film Vis-Active Photocatalysts for Up-Scaled Wastewater Treatment</i> , in: Visa Ion (Ed) Sustainable Energy in the Built Environment-Steps Towards nZEB, part IV, Springer International Publishing Switzerland (20 pag), XIII, 2014, ISBN 978-3-319-09707-7 online: <a href="http://link.springer.com/book/10.1007/978-3-319-09707-7">http://link.springer.com/book/10.1007/978-3-319-09707-7</a>	0,6
1.1.1.2. Naționale Criteriu: minim 2, d.c. 1 prim autor Calcul: nr.pagini/10 x nr.autori	<b>Isac, L.</b> , Cazan, C., <i>Advanced materials for industrial product designing</i> , Editura Universității Transilvania din Brașov, 2015, ISBN 978-606-19-0489-1 (230 pagini)	11,5
	Țică, R., Duță A., Perniu D., <b>Isac, L.</b> , <i>Chimie Generală</i> , Editura Universității Transilvania din Brașov, 2002, ISBN 973-635-004-5 (185 pagini)	4,62
	Țică, R., Drăghici, C., Dumitrescu, L., Duță A., Perniu, D., <b>Isac, L.</b> , Roman, G., Tudor, E., Nanu, D., Stezar, L., Savin, G., <i>Învățăm Chimie Organică prin teste</i> , Editura Ecran Magazin, 1999, ISBN 973-99170-0-3 (383 pagini)	3,48
1.1.2. Cărți/Capitole ca editor		
1.1.2.1. internaționale Calcul: nr.pagini/10 x nr.editori	-	-
1.1.2.2. naționale Calcul: nr.pagini/20 x nr.editori	-	-
1.2 Material didactic/ Lucrări didactice		
1.2.1. Manuale didactice-Monografii	<b>Isac, L.</b> , <i>Chimie</i> , Notițe de curs pentru anul I, specializări tehnice, platforma e-learning 2014-2015, Universitatea Transilvania Brașov (80 pag)	4

Criteriu: minim 1 Calcul: nr.pagini/20 x nr.autori	<b>Isac, L.,</b> <i>Analiza si sinteza proceselor tehnologice</i> , Notițe de curs pentru anul III, Ingineria și Protecția Mediului în Industrie, platforma e-learning 2014-2015, Universitatea Transilvania Brașov (100 pag - 205 slideuri )	5
	<b>Isac, L.,</b> <i>Special Materials</i> , Notițe de curs pentru anul III, Industrial Design, platforma e-learning 2014-2015, Universitatea Transilvania Brașov (90 pag - 180 slideuri)	4,5
1.2.2.Indrumare de laborator Criteriu: minim 1 Calcul: nr.pagini/25 x nr.autori	<b>Isac, L.,</b> Țică, R., Andronic, L., Vlăduță, C., <i>Chimie - Activități experimentale</i> , Editura Universitatii Brașov, 2004 (133 pag)	1,33
	<b>Isac, L.,</b> Țică, R., <i>Îndrumar de laborator pentru chimie generală</i> , Reprografia Universității Transilvania din Brașov, 2000 (110 pag)	2,2
1.3. Coordonare de programe de studii, organizare și coordonare de programe de formare continuă și proiecte educaționale		
Director/Responsabil/ Membru Calcul: Director – 15; Responsabil – 10; Membru – 5	Responsabil (tutore ) anul III – 2014/2015 - Ingineria și Protecția Mediului în Industrie	10
	Membru in echipa de implementare a proiectului <i>Leonardo da Vinci, RO/95102/EX: "Improving Competencies on Recycling Waste and Sustainable Development"</i> , 2005-2006	5
<b>PUNCTAJ TOTAL A1 – Activitate didactică</b>		<b>54,03</b>

## A2 Activitatea de cercetare

DESCRIERE CRITERIU	DETALII	PUNCTAJ OBTINUT
2.1. Articole în reviste cotate ISI Thomson Reuters și în volume indexate ISI Proceedings Criteriu: minim 15 articole din care minim 10 reviste cotate ISI Th.R., din care min 5 cu FI de minim 0.5 si minim 5 ca autor principal indiferent de FI Calcul: Reviste: (25+20xFI)/nr.autori Volume: 20/nr.autori (max 3 articole/manifestare)	Enesca, A., <b>Isac, L.,</b> Duta, A., <i>Charge carriers injection in tandem semiconductors for dyes mineralization</i> , Applied Catalysis B: Environmental 162, <b>2015</b> , 353-362, FI = 6,007(2013)	48,38
	György, E., Pérez Del Pino, A., Logofatu, C., Duta, A., <b>Isac, L.,</b> <i>Effect of nitrogen doping on wetting and photoactive properties of laser processed zinc oxide-graphene oxide nanocomposite layers</i> , Journal of Applied Physics 116 (2), <b>2014</b> , 024906, FI = 2,185(2013)	13,74
	Enesca, A., <b>Isac, L.,</b> Andronic, L., Perniu, D., Duta, A., <i>Tuning SnO<sub>2</sub>-TiO<sub>2</sub> tandem systems for dyes mineralization</i> , Applied Catalysis B: Environmental 14, <b>2014</b> , 175-184, FI = 6,007(2013)	29,03
	Duta, A., <b>Isac, L.,</b> Milea, A., Ienei, E., Perniu, D., <i>Coloured solar-thermal absorbers - A comparative analysis of cermet structures</i> , Energy Procedia 48, <b>2014</b> , 543-553	4
	Enesca, A., <b>Isac, L.,</b> Duta, A., <i>Hybrid structure comprised of SnO<sub>2</sub>, ZnO and Cu<sub>2</sub>S thin film semiconductors with controlled optoelectronic and photocatalytic properties</i> , Thin Solid Films 542, <b>2013</b> , 31-37, FI = 1,864 (2013)	20,76
	<b>Isac, L.,</b> Andronic, L., Enesca, A., Duta, A., <i>Copper sulfide films obtained by spray pyrolysis for dyes photodegradation under visible light irradiation</i> , Journal of Photochemistry and Photobiology A: Chemistry 252, <b>2013</b> , 53– 59, FI = 2,291 (2013)	17,7
	Dudita, M., <b>Isac, L.,</b> Duta, A., <i>Influence of solvents on properties of solar selective coatings obtained by spray pyrolysis</i> , Bulletin of Materials Science 35, <b>2012</b> , 997-1002, FI = 0,584 (2012)	12,22
	Visa, M., <b>Isac, L.,</b> Duta, A., <i>Fly ash adsorbents for multi-cation wastewater treatment</i> , Applied Surface Science 258(17), <b>2012</b> , 6345-6352, FI = 2,112 (2012)	22,41
	<b>Isac, L.,</b> Popovici, I., Duta, A., <i>Tailoring chemically sprayed Cu<sub>x</sub>S films crystallinity</i> , Revue Roumaine de Chimie 56(12), <b>2011</b> , 1107-1112, FI = 0,418 (2011)	11,12
	Andronic L., <b>Isac L.,</b> Duta A., <i>Photochemical synthesis of Copper sulphide/Titanium oxide photocatalyst</i> , Journal of Photochemistry and Photobiology A: Chemistry 221, <b>2011</b> , 30-37, FI = 2,421 (2011)	24,47
	Popovici, I., Perniu, D., <b>Isac, L.,</b> Cioc R., Duță A., <i>Surfactant Assisted Control over Morphology and Surface Properties of Sprayed TiO<sub>2</sub> Thin Films</i> , Revue Roumaine de Chimie, Vol. 56, Issue 10-11, <b>2011</b> , Pag 1075-1080, FI= 0,418 (2011)	6,67
	<b>Isac, L.,</b> Popovici, I., Enesca, A., Duta, A., <i>Copper sulfides thin films with controlled properties for photovoltaic cells</i> , Environmental Engineering and Management Journal 10(9), <b>2011</b> , 1235-1241, FI = 1,004 (2011)	11,27

	Ienei, E., <b>Isac, L.</b> , Cazan, C., Duta, A., <i>Characterization of Al/Al<sub>2</sub>O<sub>3</sub>/NiO<sub>x</sub> solar absorber obtained by spray pyrolysis</i> , Solid State Sciences 12, <b>2010</b> , 1894-1897, FI = 1,828 (2010)	15,39
	Ienei, E., <b>Isac, L.</b> , Duta, A., <i>Synthesis of alumina thin films by spray pyrolysis</i> , Revue Roumaine de Chimie 55(3), <b>2010</b> , 161-165, FI = 0,693 (2010)	12,95
	<b>Isac, L.</b> , Popovici, I., Enesca, A., Duta, A., <i>Copper sulfide (Cu<sub>x</sub>S) thin films as possible p-type absorbers in 3D solar cells</i> , Energy Procedia 2(1), <b>2010</b> , 71-78	5
	Visa, M., <b>Isac, L.</b> , Duta, A., <i>Fly ash - Activated carbon powder composites for dyes and heavy metals removal</i> , Advanced Materials Research 79-82, <b>2009</b> , 243-246	6,66
	<b>Isac, L.</b> , Duta, A., Purghel, E., Chitanu, G.C., Mitrea, S., Pelin, I., <i>Tailoring alumina thin film properties using hydrophilic/hydrophobic copolymer additives</i> , Physica Status Solidi (A) Applications and Materials Science 205(10), <b>2008</b> , 2413-2416, FI = 1,205 (2008)	8,18
	Purghel, E., Voinea, M., <b>Isac, L.</b> , Duta, A., <i>Optical properties of Ni/NiO<sub>x</sub> as infiltration agent in cermet solar Ir absorber</i> , Revista de Chimie 59(4), <b>2008</b> , 469-471, FI = 0,389 (2008)	8,19
	Manolache, S.A., <b>Isac, L.A.</b> , Duta, A., Kriza, A., Nanu, M., <i>Metal based sulfides, p-type semiconductors in solid state solar cells</i> , Proceedings of the International Semiconductor Conference, CAS 1, <b>2006</b> , 141-144	4
	<b>Isac, L.A.</b> , Duta, A., Nanu, M., Schoonman, J., <i>Tailoring copper sulfide thin films morphology using spray pyrolysis deposition technique</i> , Journal of Optoelectronics and Advanced Materials 9(10), <b>2007</b> , 3072-3075, FI = 0,827 (2007)	10,38
	<b>Isac, L.</b> , Duta, A., Kriza, A., Manolache, S., Nanu, M., <i>Copper sulfides obtained by spray pyrolysis - Possible absorbers in solid-state solar cells</i> , Thin Solid Films 515(15), <b>2007</b> , 5755-5758, FI = 1,693 (2007)	11,77
	<b>Isac, L.A.</b> , Duta, A., Kriza, A., Nanu, M., Schoonman, J., <i>Crystal order in Cu<sub>2</sub>S thin films obtained by spray pyrolysis</i> , Journal of Optoelectronics and Advanced Materials 9(5), <b>2007</b> , 1265-1268, FI = 0,827 (2007)	8,31
	<b>Isac, L.A.</b> , Duta, A., Kriza, A., Enesca, A., Nanu, M., <i>The growth of CuS thin films by Spray Pyrolysis</i> , Journal of Physics: Conference Series 61, <b>2007</b> , 477-481	4
	Enesca, A., Duta, A., <b>Isac, L.</b> , Manolache, S., Schoonman, J., <i>The influence of the annealing process on the properties of WO<sub>3</sub> photoelectrode used in a photoelectrochemical cell (PECC)</i> , Journal of Physics: Conference Series 61, <b>2007</b> , 472-476	4
	Manolache, S., Duta, A., <b>Isac, L.</b> , Nanu, M., Goossens, A., Schoonman, J., <i>The influence of the precursor concentration on CuSbS<sub>2</sub> thin films deposited from aqueous solutions</i> , Thin Solid Films 515(15), <b>2007</b> , 5957-5960, FI = 1,693 (2007)	9,81
	Contineanu, M., <b>Isac, L.</b> , <i>Cinetica dispariției termice a speciilor radicalice formate la radioliza acidului selenios</i> , Revista de Chimie 49 (4), 1998, 274-278	10
2.2. Articole în reviste și volumele unor manifestări științifice indexate în alte baze de date Criteriu: minim 5 Calcul: Reviste: 20/nr.autori Volume: 10/nr.autori (max 3 articole/manifestare) Baze de date luate în considerare: Scopus, IEEE Xplore, Science direct, Elsevier, Wiley, ACM, Springerlink, Engineering Village,	Duta A., Perniu D., <b>Isac L.</b> , Enesca A., <i>Solar Energy Materials Obtained by Spray Pyrolysis Deposition</i> , Academia Romana, A 9-a editie a Seminarului National de nanostiinta si nanotehnologie, 2010 ( <a href="http://www.romnet.net/ro/seminar16martie2010/lucrari_extenso/Anca%20Duta].pdf">http://www.romnet.net/ro/seminar16martie2010/lucrari_extenso/Anca%20Duta].pdf</a> ) ( <a href="http://www.romnet.net/ro/seminar16martie2010/">http://www.romnet.net/ro/seminar16martie2010/</a> )	2,5
	Enesca, A., <b>Isac, L.</b> , Duta, A., <i>The influence of the SnO<sub>2</sub> substrate on the TiO<sub>2</sub> and WO<sub>3</sub> photoelectric properties</i> , Proceedings of 25th European Photovoltaic Solar Energy Conference and Exhibition, 6-10 September 2010, Valencia, Spain, 595-598	3,33
	Popovici, I., Perniu, D., <b>Isac, L.</b> , Enesca, A., Duta, A., <i>The influence of different n-type semiconductors on solid state solar cells with CuInS<sub>2</sub> p-type absorber</i> , Proceedings of 24th European Photovoltaic Solar Energy Conference and Exhibition, 21-25 September 2009, Hamburg, Germany, 3020-3023	2
	<b>Isac, L.</b> , Popovici, I., Perniu, D., Enesca, A., Duta, A., <i>The influence of the n-type semiconductor layer on the photovoltaic response in the 3 D solar cells with Cu<sub>x</sub>S as p-type absorber</i> , Proceedings of 24th European Photovoltaic Solar Energy Conference and Exhibition, 21-25 September 2009, Hamburg, Germany, 2953-2956	2
	<b>Isac, L.</b> , Perniu, D., Nanu, M., Duta, A., <i>Thin films of In<sub>2</sub>S<sub>3</sub> as alternatives to CdS layers in solar cells</i> , Journal of Optoelectronics And Advanced Materials - Symposia, Vol. 1,	5

Cabi, Emerald, CSA, Compendex, INSPEC, Referativnai Jurnal, Google Scholar	No. 6, 2009, 986 – 991	
	Perniu D., Manciu A., <b>Isac L.</b> , Schoonman J., <i>Gallium and Tin doped CuInS<sub>2</sub></i> , Journal of Optoelectronic and Advanced Materials – Symposia, Vol. 1, No. 6, 2009, 992-995	5
	E. Ienei, M. Voinea, R. Lates, <b>L. Isac</b> , I. Visa, A. Duta, <i>The influence of the incidence angle on the efficiency of a flat plat Collector</i> , Proceedings of International Congress on Heating, Cooling and Buildings EUROSUN, 7-10 October 2008, Lisabon, Portugal, 1-7	1,67
	Manolache, S., <b>Isac, L.</b> , Purgel, E., Duta, A., <i>The influence of the buffer layers (Al<sub>2</sub>O<sub>3</sub> and In<sub>2</sub>S<sub>3</sub> thin films) in the 3D solar cell FTO/TiO<sub>2</sub>/CuSbS<sub>2</sub></i> , Proceedings of 23rd European Photovoltaic Solar Energy Conference, 1-5 September 2008, Valencia, Spain, 563-566	2,5
	Duta, A., Visa, I., Manolache, S.A., <b>Isac, L.</b> , <i>p-type semiconductors for solid state solar cells</i> , Proceedings of 23rd European Photovoltaic Solar Energy Conference, 1-5 September 2008, Valencia, Spain, 716-719	2,5
	Mitrea, S.A., Hodorozea, S.M., Duta, A., <b>Isac, L.</b> , Purgel, E., Voinea, M., <i>Some Aspects regarding I. R. Absorbing Materials based on Thin Alumina Films for Solar-Thermal Energy Conversion, using X- Ray Diffraction Technique</i> , World Academy of Science, Engineering and Technology, Vol:2, 2008, 11-26, <a href="http://www.waset.org/publications/5399">http://www.waset.org/publications/5399</a>	1,67
	<b>Isac, L.</b> , Duta, A., Kriza, A., Nanu, M., Dumitrescu, L., <i>Influence of the Cu-precursor on the morphology and composition of Cu<sub>2-x</sub>S thin films obtained by chemical spray pyrolysis</i> , Analele Universitatii Ovidius seria: Chimie/Ovidius University annals of Chemistry, Volume 7, 2006, 83-86, <a href="http://anale-chimie.univ-ovidius.ro/2006-1-annals-of-chemistry/">http://anale-chimie.univ-ovidius.ro/2006-1-annals-of-chemistry/</a>	4
	<b>Isac, L.</b> , Kriza, A., Duta, A., Dumitrescu, L., Manciulea, I., <i>Cu<sub>2-x</sub>S as possible absorbers and/or p-type semiconductors in photovoltaic cells</i> , Analele Universitatii Ovidius seria: Chimie/Ovidius University annals of Chemistry, Volume 7, November 1, 2006, 87-90, <a href="http://anale-chimie.univ-ovidius.ro/2006-1-annals-of-chemistry/">http://anale-chimie.univ-ovidius.ro/2006-1-annals-of-chemistry/</a>	4
	Patachia, S., Rinja, M., <b>Isac, L.</b> , <i>Some methods for doping poly(vinyl alcohol) hydrogels [PVA-HG]</i> , Romanian Journal of Physics Vol 51 , Nr. 1-2, 2006, 253-262	6,67
	Patachia, S., <b>Isac, L.</b> , Rinja, M., <i>New methods for copper and sulphide ions retaining from wastewater</i> , Environmental Engineering and Management Journal, December 2004, Vol.3, No.4, 661-667, <a href="http://omicron.ch.tuiasi.ro/EEMJ/pdfs/vol3/no4/9_Silvia%20Patachia.pdf">http://omicron.ch.tuiasi.ro/EEMJ/pdfs/vol3/no4/9_Silvia%20Patachia.pdf</a>	6,67
	Dumitrescu, L., Manciulea, I., <b>Isac, L.</b> , Tica, R., <i>Reducing the environmental Pollution by waste composting</i> , Environmental Engineering and Management Journal, December 2005, Vol.4, No.2, 161-168 <a href="http://omicron.ch.tuiasi.ro/EEMJ/pdfs/vol4/no2/6_Lucia%20Dumitrescu.pdf">http://omicron.ch.tuiasi.ro/EEMJ/pdfs/vol4/no2/6_Lucia%20Dumitrescu.pdf</a>	5
2.3. Brevete de inventie		
2.3.1. Internationale Calcul punctaj: 35/nr autori (Triadic, Europatent)	-	-
2.3.2. Nationale Calcul punctaj: 25/nr autori (National)	-	-
2.4. Granturi, proiecte câștigate prin competiție		
2.4.1 Director/responsabil granturi Criteriu: director/responsabil-minim3 dintre care cel puțin unul ca director		
2.4.1.1. internationale Calcul: 20x ani de desfășurare	-	-
2.4.1.2. nationale Calcul: 10x ani de desfășurare	Director de proiect: <i>Conceperea, optimizarea și modelarea straturilor subțiri de Cu<sub>x</sub>S cu morfologie controlată utilizate în celule solare în stare solidă</i> , PN-II-PCE-ID 763/2009, 2009	10
	Responsabil științific coordonator proiect: <i>Sistem inovativ sustenabil pentru auto-decontaminarea fotocatalitică a echipamentelor de protecție CBRN – CB-PhotoDeg - PNII PT-PCCA-2013-4-0747 (2014-2016)</i>	20
	Responsabil științific grup ”Sinteze straturi subțiri”: <i>Sisteme fotocatalitice complexe</i>	30

	<i>pentru epurarea avansată a apelor rezultate din industria textilă</i> , PNII 71-04/2007 FOTOCOMPLEX (2007-2010)	
<b>2.4.2 Membru in echipă</b>		
2.4.2.1. internationale	<i>Titanium Dioxide Visible-Light Driven Composite Materials for Industrial Wastewater Photodegradation</i> , European funded SFERA-II project (2014)	4
Calcul: 4 x ani de desfasurare	<i>Solar collectors sealing with increased durability in the working environment (saline aerosols, humidity, temperature and UV)</i> , European funded SFERA-II project (2014)	4
2.4.2.2. Nationale	<i>Sistem inovativ integrat materiale-Tehnologie -Echipament pentru procese simultane de fotocataliza si adsorbtie aplicate in epurarea sustenabila a apelor uzate SimFotoAd</i> , PNII PT-PCCA-2013-4-0726 (2013-2015)	4
Calcul: 2 x ani de desfasurare	<i>Sisteme solar-termice eficiente cu grad ridicat de acceptare in arii urbane - EST IN URBA</i> , PN-II-PT-PCCA-2011-3.2-051 (2012-2015)	6
	<i>Complex high surface area photoactive nanomaterials for environmentally-friendly energy production and organic pollutants degradation</i> , NANOVISMAT, PN II 162/2012 (2012 – 2015)	6
	<i>Conceperea, optimizarea și modelarea straturilor subțiri de fotocatalizatori pe bază de oxid de staniu cu morfologie controlată</i> , PN-II-PCE- 753/2009 (2009, 2011)	4
	<i>Compozite lemn polimer cu componente de materiale nanostructurate și nanosenzori pentru îmbunătățirea microclimatului de locuit</i> , NANOPROTECT, PNII 31-04/2007 (2007-2010)	6
	<i>Materiale multifuncționale pentru creșterea eficienței conversiei solar termice</i> , MATSOL-T, CEEEX Modul I 277/2006 (2006 -2008)	6
	<i>Rețea de cercetare și servicii pentru sinteza nanostructurilor cu aplicații în produse avansate din industria textilă, acoperiri protectoare și protecția mediului</i> , SINAPS CEEEX 69/2006 (2006-2008)	6
	<i>Sistem integrat de conversie a energiei din surse regenerabile</i> , RECIS, CEEEX 226 (2006-2008)	6
	<i>Cercetări privind creșterea eficienței conversiei energiei solare in celule fotovoltaice în stare solidă</i> , CNCSIS –A 400/2006 (2006-2008)	6
	<i>Design de Produs pentru Dezvoltare Durabilă</i> , Platforma CNCSIS 79 (2007)	2
	<i>Cercetări privind valorificarea superioară prin compostare a deșeurilor menajere</i> , CNCSIS –A 658/2002, 602/2003-2004 (2002-2004)	6
<b>PUNCTAJ TOTAL A2 – Activitate de cercetare</b>		<b>520,92</b>

### A3 Recunoașterea impactului activității

DESCRIERE CRITERIU	DOVADA	PUNCTAJ OBTINUT
3.1. Citări în reviste ISI și BDI Se exclud autocitările; lucrări citate: articol de revista, conferința, carte, teză, brevet invenție		
3.1.1. ISI Calcul: 5/nr.autori pentru FI<0.5 10/nr.autori pentru 0.5<FI<1 15/nr.autori pentru 1<FI<2 20/nr.autori pentru FI>2	<b>Isac, L.,</b> Duta, A., Kriza, A., Manolache, S., Nanu, M., <i>Copper sulfides obtained by spray pyrolysis - Possible absorbers in solid-state solar cells</i> , Thin Solid Films 515(15), 2007, 5755-5758 (25 citari in reviste ISI)	
	1. Kumarakuru, H., Coombes, M.J., Neethling, J.H., Westraadt, J.E., "Fabrication of Cu <sub>2</sub> S nanoneedles by self-assembly of nanoparticles via simple wet chemical route", Journal of Alloys and Compounds 589, 2014, 67-85 (FI = 2,726)	4
	2. Suriakarthick, R., Nirmal Kumar, V., Shyju, T.S., Gopalakrishnan, R., "Investigation on post annealed copper sulfide thin films from photochemical deposition technique", Materials Science in Semiconductor Processing 26(1), 2014, 155-161 (FI = 1,761)	3
	3. Apolinar-Irbe, A. <i>et al.</i> , "Effects of the annealing on CUS thin films using triethanolamine as complexing agent by CBD", Chalcogenide Letters 10(12), 2014, 543-553 (FI = 1,184)	3
	4. Zhang, L. <i>et al.</i> "Enhancement of photocatalytic H <sub>2</sub> evolution on Zn <sub>0.8</sub> Cd <sub>0.2</sub> S loaded with CuS as cocatalyst and its photogenerated charge transfer properties", Dalton Transactions 42(36), 2013, 12998-13003 (FI = 4,097)	4

DESCRIERE CRITERIU	DOVADA	PUNCTAJ OBTINUT
	5. Zhang, L.J., Xie, T.F., Wang, D.J., Li, S., Wang, L.L., Chen, L.P., Lu, Y.C., "Noble-metal-free CuS/CdS composites for photocatalytic H <sub>2</sub> evolution and its photogenerated charge transfer properties", International Journal of Hydrogen Energy 38(27), 2013, 1811-11817 (FI = 2,93)	4
	6. Bedir, M., AztaŶ, M., Tekin, M., "The Effect of the Grain Parameters on the Characterization of Polycrystalline CuS Films", Arabian Journal for Science and Engineering 38(7), 2013, 1895-1902 (FI = 0,385)	1
	7. SteviŶ, Z. <i>et al.</i> "Synthesis and characterization of specific electrode materials for solar cells and supercapacitors", Journal of Renewable and Sustainable Energy 5(4), 2013, 1041816 (FI = 0,925)	2
	8. Zheng, X. <i>et al.</i> , "Single-phase and well-dispersed Cu <sub>1.75</sub> S nanocrystals by ambient pressure diethylene glycol solution synthesis", Applied Surface Science 266, 2013, 39-45 (FI = 2,538)	4
	9. Davis, P., Mangolini, L., "Single precursor synthesis of copper sulfide nanocrystals using aerosol spray pyrolysis", MRS Communications 3(1), 2013, 57-60 (FI = 1,25)	3
	10. Adelifard, M., Eshghi, H., Mohagheghi, M.M.B., "Comparative studies of spray pyrolysis deposited copper sulfide nanostructural thin films on glass and FTO coated glass", Bulletin of Materials Science 35(5), 2012, 739-744 (FI = 0,87)	2
	11. Adelifard, M., Eshghi, H., Bagheri Mohagheghi, M.M., "Synthesis and characterization of nanostructural CuS-ZnS binary compound thin films prepared by spray pyrolysis", Optics Communications 285(21-22), 2012, 4400-4404 (FI = 1,542)	3
	12. Zhang, Y., Tian, J., Li, H., Wang, L., Qin, X., Asiri, A.M., Al-Youbi, A.O., Sun, X., "Biomolecule-assisted, environmentally friendly, one-pot synthesis of CuS/reduced graphene oxide nanocomposites with enhanced photocatalytic performance", Langmuir 28(35), 2012, 12893-12900 (FI = 4,384)	4
	13. Kruszynska, M. <i>et al.</i> , "Size and shape control of colloidal copper(I) sulfide nanorods", ACS Nano 6(7), 2012, 5889-5896 (FI = 12,033)	4
	14. Adelifard, M., Eshghi, H., Mohagheghi, M.M.B., "An investigation on substrate temperature and copper to sulphur molar ratios on optical and electrical properties of nanostructural CuS thin films prepared by spray pyrolysis method", Applied Surface Science 258(15), 2012, 5733-5738 (FI = 2,538)	4
	15. Boudouh, H., <i>et al.</i> "Monte carlo simulation of ion-exchange response of copper sulfide ion selective electrode for metal pollutant detection", Journal of the Electrochemical Society 159(3), 2012, D148-D154 (FI = 2,859)	4
	16. Rafea, M.A., Farag, A.A.M., Roushdy, N., "Controlling the crystallite size and influence of the film thickness on the optical and electrical characteristics of nanocrystalline Cu <sub>2</sub> S films", Materials Research Bulletin 47(2), 2012, 257-266 (FI = 1,968)	3
	17. Ratanatawanate, C., Bui, A., Vu, K., Balkus, K.J., "Low-Temperature synthesis of copper(II) sulfide quantum dot decorated TiO <sub>2</sub> nanotubes and their photocatalytic properties", Journal of Physical Chemistry C 115(14), 2011, 6175-6180 (FI = 4,835)	4
	18. Yilmaz, A., "Characterization of MnS films deposited by the spray pyrolysis method", Physica Scripta 83(4), 2011, 045603 (FI = 1,296)	3
	19. Allouche, N.K., Ben Nasr, T., Guasch, C., Kamoun Turki, N., "Optimization of the synthesis and characterizations of chemical bath deposited Cu <sub>2</sub> S thin films", Comptes Rendus Chimie 13(11), 2010, 1364-1369 (FI = 1,483)	3
	20. Lu, Y., Yi, G., Jia, J., Liang, Y., "Preparation and characterization of patterned copper sulfide thin films on n-type TiO <sub>2</sub> film surfaces", Applied Surface Science 256(23), 2010, 7316-7322 (FI = 2,358)	4
	21. Singh, R. <i>et al.</i> "Performance and byproduct analysis of coal gas solid oxide fuel cell", Energy and Fuels 24(2), 2010, 1176-1183 (FI = 2,733)	4
	22. Arca, E., Fleischer, K., Fleischer, K., Shvets, I.V., "Influence of the precursors and chemical composition of the solution on the properties of ZnO thin films grown by spray pyrolysis", Journal of Physical Chemistry C 113(50), 2009, 21074-21081 (FI = 4,835)	4
	23. Rhee, J.H. <i>et al.</i> "Cu <sub>2</sub> S-deposited mesoporous NiO photocathode for a solar cell", Chemical Physics Letters 477(4-6), 2009, 345-348 (FI = 1,991)	3

DESCRIERE CRITERIU	DOVADA	PUNCTAJ OBTINUT
	24. Zhuge, F., Li, X., Gao, X., Gan, X., Zhou, F., "Synthesis of stable amorphous Cu <sub>2</sub> S thin film by successive ion layer adsorption and reaction method", Materials Letters 63(8), 2009, 652-654 (FI = 2,269)	4
	25. Voinea, M., Bogatu, C., Chitanu, G.C., Duta, A., "Copper cermets used as selective coatings for flat plate solar collectors", Revista de Chimie 59(6), 2008, 659-663 (FI = 0,538)	2
	Manolache, S., Duta, A., <b>Isac, L.</b> , Nanu, M., Goossens, A., Schoonman, J., <i>The influence of the precursor concentration on CuSbS<sub>2</sub> thin films deposited from aqueous solutions</i> , Thin Solid Films 515(15), 2007, 5957-5960 (19 citari in reviste ISI)	
	1. Yang, B., Wang, L., Han, J., Zhou, Y., Song, H., Chen, S., Zhong, J., Lv, L., Niu, D., Tang, J., "CuSbS <sub>2</sub> as a promising earth-abundant photovoltaic absorber material: A combined theoretical and experimental study", Chemistry of Materials 26(10), 2014, 3135-3143 (FI = 8,535)	3,33
	2. Zou, Y., Jiang, J., "Colloidal synthesis of chalcostibite copper antimony sulfide nanocrystals", Materials Letters 123, 2014, 66-69 (FI = 2,269)	3,33
	3. Hao, Z. <i>et al.</i> , "Synthesis and characterization of Cu <sub>3</sub> SbS <sub>3</sub> nanocrystallites: Effect of reaction time", Materials Letters 122, 2014, 338-340 (FI = 2,269)	3,33
	4. Septina, W., Ikeda, S., Iga, Y., Harada, T., Matsumura, M., "Thin film solar cell based on CuSbS <sub>2</sub> absorber fabricated from an electrochemically deposited metal stack", Thin Solid Films 550, 2014, 700-704 (FI = 1,864)	2,5
	5. Poudeu, P.F.P., Djieutedjeu, H., Sahoo, P., "Crystal structure of FePb <sub>4</sub> Sb <sub>6</sub> Se <sub>14</sub> and its structural relationship with FePb <sub>3</sub> Sb <sub>4</sub> Se <sub>10</sub> ", Zeitschrift fur Anorganische und Allgemeine Chemie 638(15), 2012, 2549-2554 (FI = 1,163)	2,5
	6. Yan, C., Su, Z., Gu, E., Cao, T., Yang, J., Liu, J., Liu, F., Lai, Y., Li, J., Liu, Y., "Solution-based synthesis of chalcostibite (CuSbS <sub>2</sub> ) nanobricks for solar energy conversion", RSC Advances 2(28), 2012, 10481-10484 (FI = 3,708)	3,33
	7. Tablero, C., "Electronic property analysis of O-doped Cu <sub>3</sub> SbS <sub>3</sub> ", Solar Energy Materials and Solar Cells 104, 2012, 180-184 (FI = 5,03)	3,33
	8. Dufton, J.T.R., Walsh, A., Panchmatia, P.M., Peter, L.M., Colombara, D., Islam, M.S., "Structural and electronic properties of CuSbS <sub>2</sub> and CuBiS <sub>2</sub> : Potential absorber materials for thin-film solar cells", Physical Chemistry Chemical Physics 14(20), 2012, 7229-7233 (FI = 4,198)	3,33
	9. Colombara, D., Peter, L.M., Rogers, K.D., Painter, J.D., Roncallo, S., "Formation of CuSbS <sub>2</sub> and CuSbSe <sub>2</sub> thin films via chalcogenisation of Sb-Cu metal precursors", Thin Solid Films 519(21), 2011, 7438-7443 (FI = 1,864)	2,5
	10. Garza, C., Shaji, S., Arato, A., Perez Tijerina, E., Alan Castillo, G., Das Roy, T.K., Krishnan, B., "P-Type CuSbS <sub>2</sub> thin films by thermal diffusion of copper into Sb <sub>2</sub> S <sub>3</sub> ", Solar Energy Materials and Solar Cells 95(8), 2011, 2001-2005 (FI = 5,03)	3,33
	11. Rabhi, A., Kanzari, M., "Structural, optical and electrical properties of CuSbS <sub>2</sub> these amorphous films: Effect of the thickness variation", Chalcogenide Letters 8(6), 2011, 383-390 (FI = 1,184)	2,5
	12. Costisor, O., Vlad, M., Sasca, V., Labadi, I., Carp, O., Linert, W., "Synthesis, thermal behavior, and spectral properties of mixed-metal Cu(I)-VO(IV)-thiourea coordination polymers", Monatshefte fur Chemie 142(1), 2011, 39-44 (FI = 1,629)	2,5
	13. Costisor, O., Linert, W., Sajti, L., Labadj, I., Simu, G., "On copper - Thiourea species: From metal complexes to supramolecular architecture and advanced materials", Reviews in Inorganic Chemistry 30(3), 2010, 135-157 (FI = 2,923)	3,33
	14. Dittrich, H., Stadler, A., Topa, D., Schimper, H.-J., Basch, A., "Progress in sulfosalt research", Physica Status Solidi (A) Applications and Materials Science 206(5), 2009, 1034-1041 (FI = 1,525)	2,5
	15. Rabhi, A. <i>et al.</i> "Optical and structural properties of CuSbS <sub>2</sub> thin films grown by thermal evaporation method", Thin Solid Films 517(7), 2009, 2477-2480 (FI = 1,864)	2,5
	16. Zhou, J., Bian, G.-Q., Zhu, Q.-Y., Zhang, Y., Li, C.-Y., Dai, J., "Solvothelmal crystal growth of CuSbQ <sub>2</sub> (Q=S, Se) and the correlation between macroscopic morphology and microscopic structure", Journal of Solid State Chemistry 182(2), 2009, 259-264 (FI = 2,20)	3,33
	17. Popovici, I., Duta, A., "Tailoring the composition and properties of sprayed CuSbS <sub>2</sub> thin	3,33



DESCRIERE CRITERIU	DOVADA	PUNCTAJ OBTINUT
	films by using polymeric additives", International Journal of Photoenergy, 2012, 962649 (FI = 2,663)	
	18. Manolache, S.A., Duta, A., "The development of crystalline Sb <sub>2</sub> S <sub>3</sub> thin films as a component of the three-dimensional (3D) solar cells", Romanian Journal of Information Science and Technology 11(2), 2008, 109-121 (FI = 0,28 )	0,83
	19. Manolache, S.A., Duta, A., "The influence of the spray deposition parameters in the photovoltaic response of the three-dimensional (3D) solar cell: TCO/dense TiO <sub>2</sub> /CuSbS <sub>2</sub> /graphite", Journal of Optoelectronics and Advanced Materials 9(10), 2007, 3219-3222 (FI = 0,563)	1,67
	Andronic L., <b>Isac L.</b> , Duta A., <i>Photochemical synthesis of Copper sulphide/Titanium oxide photocatalyst</i> , Journal of Photochemistry and Photobiology A: Chemistry 221 (2011) 30-37 (16 citari in reviste ISI)	
	1. Duta, M., Perniu, D., Duta, A., "Photocatalytic zinc oxide thin films obtained by surfactant assisted spray pyrolysis deposition", Applied Surface Science 306, 2014, 80-88 (FI = 2,538)	6,67
	2. Liang, Y., Shao, M., Liu, L., McEvoy, J.G., Hu, J., Cui, W., "Synthesis of Cu <sub>2</sub> S/K <sub>4</sub> Nb <sub>6</sub> O <sub>17</sub> composite and its photocatalytic activity for hydrogen production", Catalysis Communications 46, 2014, 128-132 (FI = 3,32)	6,67
	3. Suriakarthick, R., Nirmal Kumar, V., Shyju, T.S., Gopalakrishnan, R., "Investigation on post annealed copper sulfide thin films from photochemical deposition technique", Materials Science in Semiconductor Processing 26(1), 2014, 155-161 (FI = 1,761)	5
	4. Gomathisankar, P. <i>et al.</i> , "Photocatalytic hydrogen production from aqueous Na <sub>2</sub> SO <sub>3</sub> + Na <sub>2</sub> S solution with B/CuO/ZnO under visible light irradiation", RSC Advances 3(43), 2014, 20429-20436 (FI = 3,708)	6,67
	5. Costa <i>et al.</i> "Green synthesis of covellite nanocrystals using biologically generated sulfide: Potential for bioremediation systems", Journal of Environmental Management 128, 2013, 226-232 (FI = 3,188)	6,67
	6. Gomathisankar, P. <i>et al.</i> , "Photocatalytic hydrogen production with CuS/ZnO from aqueous Na <sub>2</sub> S + Na <sub>2</sub> SO <sub>3</sub> solution", International Journal of Hydrogen Energy 38(21), 2013, 8625-8630 (FI = 2,93)	6,67
	7. Lee, G., Kang, M., "Physicochemical properties of core/shell structured pyrite FeS <sub>2</sub> /anatase TiO <sub>2</sub> composites and their photocatalytic hydrogen production performances", Current Applied Physics 13(7), 2013, 1482-1489 (FI = 2,026)	6,67
	8. Breault, T.M., Bartlett, B.M., "Composition dependence of TiO <sub>2</sub> :(Nb,N)- x compounds on the rate of photocatalytic methylene blue dye degradation", Journal of Physical Chemistry C 117, 2013, 8611-8618 (FI = 2,775)	6,67
	9. Dong, X.-L. <i>et al.</i> , "Preparation of CdS-TiO <sub>2</sub> /Fe <sub>3</sub> O <sub>4</sub> photocatalyst and its photocatalytic properties", Journal of Sol-Gel Science and Technology 66(2), 2013, 231-237 (FI = 1,547)	5
	10. Shih, Z.-Y., Periasamy, A.P., Hsu, P.-C., Chang, H.-T., "Synthesis and catalysis of copper sulfide/carbon nanodots for oxygen reduction in direct methanol fuel cells", Applied Catalysis B: Environmental 132-133, 2013, 363-369 (FI = 6,007)	6,67
	11. Mousavi-Kamazani, M., Salavati-Niasari, M., Emadi, H., "Synthesis and characterization of CuInS <sub>2</sub> nanostructure by ultrasonic-assisted method and different precursors" Materials Research Bulletin 47(12), 2012, 3983-3990 (FI = 1,968)	5
	12. Zhao, N., Yao, Y., Feng, J.-J., Yao, M.-M., Li, F., "Enhanced photocatalytic activity of Co surface doped nanocrystalline TiO <sub>2</sub> -SiO <sub>2</sub> composite films", Water, Air, and Soil Pollution 223(9), 2012, 5855-5864 (FI = 1,748)	5
	13. Zhang, H., Zhu, H., "Preparation of Fe-doped TiO <sub>2</sub> nanoparticles immobilized on polyamide fabric", Applied Surface Science 258(24), 2012, 10034-10041 (FI = 2,538)	6,67
	14. Li, J. <i>et al.</i> , "Nanocomposite of Cu-TiO <sub>2</sub> -SiO <sub>2</sub> with high photoactive performance for degradation of rhodamine b dye in aqueous wastewater", Journal of Nanoscience and Nanotechnology 12(8), 2012, 6265-6270 (FI = 1,339)	5
	15. Saranya, M., Grace, A.N., "Hydrothermal synthesis of CuS nanostructures with different morphology", Journal of Nano Research 18-19, 2012, 43-51 (FI = 0,57)	0,33
	16. Boudouh, H., Essehli, R., Guessasma, S., Aissat, A., "Monte Carlo simulation to reveal the copper dissolution kinetics of an ion selective electrode based on copper sulfide",	6,67

DESCRIERE CRITERIU	DOVADA	PUNCTAJ OBTINUT
	Materials Chemistry and Physics 133(1), 2012, 383-391 (FI = 2,129)	
	<b>Isac, L.A.,</b> Duta, A., Kriza A., Enesca, A., Nanu M., <i>The growth of CuS thin films by Spray Pyrolysis</i> , Journal of Physics: Conference Series 61, 2007, 477-481 (14 citari in reviste ISI)	
	1. Vasuhi, A., <i>et al.</i> "Effect of heat-treatment on the structural and optical properties of Cu <sub>2</sub> S thin films deposited by CBD method", Journal of Materials Science: Materials in Electronics 25(2), 2014, 824-831 (FI = 1,966)	3
	2. Santos Cruz, J. <i>et al.</i> "Optical and electrical properties of thin films of CuS nanodisks ensembles annealed in a vacuum and their photocatalytic activity", International Journal of Photoenergy, 2013, 178017 (FI = 2,663)	4
	3. Fang, Z. <i>et al.</i> , "Phase evolution of Cu-S system in ethylene glycol solution: The effect of anion and PVP on the transformation of thiourea", Chinese Journal of Chemistry 31(8), 2013, 1015-1021 (FI = 0,916)	2
	4. Adelifard, M., Eshghi, H., Mohagheghi, M.M.B., "Comparative studies of spray pyrolysis deposited copper sulfide nanostructural thin films on glass and FTO coated glass", Bulletin of Materials Science 35(5), 2012, 739-744 (FI = 0,87)	2
	5. Adelifard, M., Eshghi, H., Bagheri Mohagheghi, M.M., "Synthesis and characterization of nanostructural CuS-ZnS binary compound thin films prepared by spray pyrolysis", Optics Communications 285(21-22), 2012, 4400-4404 (FI = 1,542)	3
	6. Adelifard, M. <i>et al.</i> "An investigation on substrate temperature and copper to sulphur molar ratios on optical and electrical properties of nanostructural CuS thin films prepared by spray pyrolysis method", Applied Surface Science 258(15), 2012, 5733-5738 (FI = 2,538)	4
	7. Bollero, A. <i>et al.</i> "Preparation and quality assessment of CuS thin films encapsulated in glass", Thin Solid Films 520(12), 2012, 4184-4189 (FI = 1,864)	3
	8. Găineri, E. <i>et al.</i> "Optical properties of amorphous CuS thin films deposited chemically at different pH values", Journal of Alloys and Compounds 516, 2012, 20-26 (FI = 2,726)	4
	9. Casaca, A. <i>et al.</i> , "Electrical transport properties of CuS single crystals", Journal of Physics Condensed Matter 24(1), 2012, 015701 (FI = 2,223)	4
	10. Kumar, P., Nagarajan, R., "An elegant room temperature procedure for the precise control of composition in the Cu-S system", Inorganic Chemistry 50(19), 2011, 9204-9206 (FI = 4,794)	4
	11. Pola, J. <i>et al.</i> , "Laser photodeposition of sulfur and room-temperature solid-state reaction with copper", Journal of Photochemistry and Photobiology A: Chemistry 219(1), 2011, 109-114 (FI = 2,291)	4
	12. Jin, P.-J., Yao, Z.-Q., Zhang, M.-L., Li, Y.-H., Xing, H.-P., "A pigment (CuS) identified by micro-Raman spectroscopy on a Chinese funerary lacquer ware of West Han Dynasty", Journal of Raman Spectroscopy 41(2), 2010, 222-225 (FI = 2,519)	4
	13. Bollero, A. <i>et al.</i> , "CuS-based thin films for architectural glazing applications produced by co-evaporation: Morphology, optical and electrical properties", Surface and Coatings Technology 204(5), 2009, 593-600 (FI = 2,199)	4
	14. Gonzalves, A.P., Lopes, E.B., Casaca, A., Dias, M., Almeida, M., "Growth of CuS platelet single crystals by the high-temperature solution growth technique", Journal of Crystal Growth 310(11), 2008, 2742-2745 (FI = 1,693 )	3
	Visa, M., <b>Isac, L.,</b> Duta, A., <i>Fly ash adsorbents for multi-cation wastewater treatment</i> , Applied Surface Science 258 (17), 2012, 6345-6352 (14 citari in reviste ISI)	
	1. Wang, F., Yang, L., Sun, G., Guan, L., Hu, S., "The hierarchical porous structure of substrate enhanced photocatalytic activity of TiO <sub>2</sub> /cementitious materials", Construction and Building Materials 64, 2014, 488-495 (FI = 2,265)	6,67
	2. Visa, M., Chelaru, A.-M., "Hydrothermally modified fly ash for heavy metals and dyes removal in advanced wastewater treatment", Applied Surface Science 303, 2014, 14-22 (FI = 2,538)	6,67
	3. Zhang, P., Mo, Z., Han, L., Zhu, X., Wang, B., Zhang, C., "Preparation and photocatalytic performance of magnetic TiO <sub>2</sub> /montmorillonite/Fe <sub>3</sub> O <sub>4</sub> nanocomposites, Industrial and Engineering Chemistry Research 53(19), 2014, 8057-8061 (FI = 2,235)	6,67
	4. Belviso, C. <i>et al.</i> , "Removal of Mn from aqueous solution using fly ash and its hydrothermal synthetic zeolite", Journal of Environmental Management 137, 2014, 16-22	6,67

DESCRIERE CRITERIU	DOVADA	PUNCTAJ OBTINUT
	(FI = 3,188)	
	5. Keng, P.-S., Lee, S.-L., Ha, S.-T., Hung, Y.-T., Ong, S.-T., "Removal of hazardous heavy metals from aqueous environment by low-cost adsorption materials", Environmental Chemistry Letters 12(1), 2014, 15-25 (FI = 1,906)	5
	6. Jiang, L., Liu, P., "Novel magnetic fly ash/poly(acrylic acid) composite microgel for selective adsorption of Pb(II) ion: Synthesis and evaluation", Industrial and Engineering Chemistry Research 53(8), 2014, 2924-2931 (FI = 2,235)	6,67
	7. Aziz, A.S.A., Manaf, L.A., Man, H.C., Kumar, N.S., "Kinetic Modeling and Isotherm Studies for Copper(II) Adsorption onto Palm Oil Boiler Mill Fly Ash (POFA) as a Natural Low-Cost Adsorbentes", BioResources 9(1), 2014, 336-356 (FI = 1,549)	5
	8. Cazan, C., Perniu, D., Cosnita, M., Duta, A., "Polymeric wastes from automobiles as second raw materials for large scale products", Environmental Engineering and Management Journal 12(8), 2013, 1649-1655 (FI = 1,258)	5
	9. Tian, X. <i>et al.</i> , "A simple technique for the facile synthesis of novel crystalline mesoporous ZrO <sub>2</sub> -Al <sub>2</sub> O <sub>3</sub> hierarchical nanostructures with high lead (II) ion absorption ability", Applied Surface Science 284, 2013, 412-418 (FI = 2,538)	6,67
	10. Wang, R., Li, Q., Xie, D., Xiao, H., Lu, H., "Synthesis of NiO using pine as template and adsorption performance for Pb(II) from aqueous solution", Applied Surface Science 279, 2013, 129-136 (FI = 2,538)	6,67
	11. Ozay, H., "Comparison study of low cost fly ash supported Cu, Co and Ni metal catalyst systems for the reduction of 4-nitrophenol", Science of Advanced Materials 5(6), 2013 575-582 (FI = 2,908)	6,67
	12. Visa, M., Duta, A., "TiO <sub>2</sub> /fly ash novel substrate for simultaneous removal of heavy metals and surfactants", Chemical Engineering Journal 223, 2013, 860-868 (FI = 4,058)	6,67
	13. Wang, Z., Ye, C., Wang, X., Li, J., "Adsorption and desorption characteristics of imidazole-modified silica for chromium(VI)", Applied Surface Science 287, 2013, 232-241 (FI = 2,538)	6,67
	14. Visa, M., "Tailoring fly ash activated with bentonite as adsorbent for complex wastewater treatment", Applied Surface Science 263, 2012, 753-762 (FI = 2,538)	6,67
	<b>Isac, L.</b> , Popovici, I., Enesca, A., Duta, A., <i>Copper sulfide (Cu<sub>2</sub>S) thin films as possible p-type absorbers in 3D solar cells</i> , Energy Procedia 2(1), 2010, 71-78 (4 citari in reviste ISI)	
	1. Suriakarthick, R., Nirmal Kumar, V., Shyju, T.S., Gopalakrishnan, R., "Investigation on post annealed copper sulfide thin films from photochemical deposition technique", Materials Science in Semiconductor Processing 26(1), 2014, 155-161 (FI = 1,761)	3,75
	2. Safrani, T., Jopp, J., Golan, Y., "A comparative study of the structure and optical properties of copper sulfide film chemically deposited on various substrates", RSC Advances 3 (45), 2013, 23066-23074 (FI = 3,708)	5
	3. Rusen, E., Mocanu, A., Somoghi, R., "Core-shell hybrid material for ZnO nanorods generation", Colloid and Polymer Science 290(18), 2012, 1937-1942 (FI = 2,41)	5
	4. Popovici, I., Duta, A., "Tailoring the composition and properties of sprayed CuSbS <sub>2</sub> thin films by using polymeric additives", International Journal of Photoenergy, 2012, 962649 (FI = 2,663)	5
	Ienei, E., <b>Isac, L.</b> , Cazan, C., Duta, A., <i>Characterization of Al/Al<sub>2</sub>O<sub>3</sub>/NiOx solar absorber obtained by spray pyrolysis</i> , Solid State Sciences 12 (2010), pp.1894-1897 (5 citari in reviste ISI)	
	1. Amri, A., Jiang, Z.T., Pryor, T., Yin, C.-Y., Djordjevic, S., "Developments in the synthesis of flat plate solar selective absorber materials via sol-gel methods: A review", Renewable and Sustainable Energy Reviews 36, 2014, 316-328 (FI = 5,51)	5
	2. Bagheri Khatibani, A., Rozati, S.M., "Growth and molarity effects on properties of alumina thin films obtained by spray pyrolysis", Materials Science in Semiconductor Processing 18(1), 2014, 80-87 (FI = 1,761)	3,75
	3. Amri, A., Duan, X., Yin, C.-Y., Jiang, Z.-T., Rahman, M.M., Pryor, T., "Solar absorptance of copper-cobalt oxide thin film coatings with nano-size, grain-like morphology: Optimization and synchrotron radiation XPS studies", Applied Surface Science 275, 2013, 127-135 (FI = 2,538)	5
	4. Khatibani, A. B., Rozati, S. M., "Synthesis and characterization of amorphous aluminum	3,75

DESCRIERE CRITERIU	DOVADA	PUNCTAJ OBTINUT
	oxide thin films prepared by spray pyrolysis: Effects of substrate temperature", JOURNAL OF NON-CRYSTALLINE SOLIDS 363, 2013, 121-133 (FI = 1,716)	
	5. Li, J., Hou, X., Wang, Z., Wu, J., Ba, D., "Latest development of vacuum tube solar collectors", Journal of Vacuum Science and Technology 32, 2012, 943-950 (FI = 2,14)	5
	Ienei, E., <b>Isac, L.</b> , Duta, A., <i>Synthesis of alumina thin films by spray pyrolysis</i> , Revue Roumaine de Chimie 55(3),2010,161-165 (3 citari in reviste ISI)	
	1. Bagheri Khatibani, A., Rozati, S.M., "Growth and molarity effects on properties of alumina thin films obtained by spray pyrolysis", Materials Science in Semiconductor Processing 18(1), 2014, 80-87 (FI = 1,761)	5
	2. Santos Abreu, A., Knoll, M., Moosburger-Will, J., Konrad, A., Tidecks, R., Horn, S., "Alumina and yttria powder and yttria coatings made by ultrasonic spray pyrolysis, Chemical Vapor Deposition 19(1), 2013, 15-21 (FI = 1,796)	5
	3. Khatibani, A. B., Rozati, S. M., "Synthesis and characterization of amorphous aluminum oxide thin films prepared by spray pyrolysis: Effects of substrate temperature", JOURNAL OF NON-CRYSTALLINE SOLIDS 363, 2013, 121-133 (FI = 1,716)	5
	Visa, M., <b>Isac, L.</b> , Duta, A., <i>Fly ash - Activated carbon powder composites for dyes and heavy metals removal</i> , Advanced Materials Research 79-82,2009, 243-246 (3 citari in reviste ISI)	
	1. Malarvizhi, T.S., Santhi, T., "Lignite fired fly ash modified by chemical treatment for adsorption of zinc from aqueous solution", Research on Chemical Intermediates 39(6), 3013, 2473-2494 (FI = 1,54)	5
	2. Visa, M., Duta, A., "TiO <sub>2</sub> /fly ash novel substrate for simultaneous removal of heavy metals and surfactants", Chemical Engineering Journal 223, 2013, 860-868 (FI = 4,058)	6,67
	3. Vijayakumar, G. <i>et al.</i> , "Adsorption, kinetic, equilibrium and thermodynamic studies on the removal of basic dye Rhodamine-B from aqueous solution by the use of natural adsorbent perlite", Journal of Materials and Environmental Science 3(1), 2012, 157-170 (FI = 0,567)	1,67
	<b>Isac, L.</b> , Duta, A., Purghel, E., Chitanu, G.C., Mitrea, S., Pelin, I., <i>Tailoring alumina thin film properties using hydrophilic/hydrophobic copolymer additives</i> , Physica Status Solidi (A) Applications and Materials Science 205(10), 2008, 2413-2416 (1 citare in reviste ISI)	
	1. Bagheri Khatibani, A., Rozati, S.M., "Growth and molarity effects on properties of alumina thin films obtained by spray pyrolysis", Materials Science in Semiconductor Processing 18(1), 2014, 80-87 (FI = 1,761)	2,5
3.1.2. BDI Calcul: 3/nr.autori	<b>Isac, L.</b> , Duta, A., Kriza, A., Manolache, S., Nanu, M., <i>Copper sulfides obtained by spray pyrolysis - Possible absorbers in solid-state solar cells</i> , Thin Solid Films 515(15), 2007, 5755-5758 (3 citari in reviste BDI)	
	1. Vas-Umuay, P., Chang, C.-H., "Growth kinetics of copper sulfide thin films by chemical bath deposition", ECS Journal of Solid State Science and Technology 2(4), 2013, P120-P129	0,6
	2. Irtegov, Y., An, V., Azhgikhin, M., "Study of nanostructured metal sulfides produced by self-propagating high-temperature synthesis", Proceedings - 2012 7th International Forum on Strategic Technology, IFOST 2012", 6357544	0,6
	3. Ramya, M., Ganesan, S., "Study of thickness dependent characteristics of Cu <sub>2</sub> S thin film for various applications", Iranian Journal of Materials Science and Engineering 8(2), 2011, 34-40	0,6
	Manolache, S., Duta, A., <b>Isac, L.</b> , Nanu, M., Goossens, A., Schoonman, J., <i>The influence of the precursor concentration on CuSbS<sub>2</sub> thin films deposited from aqueous solutions</i> , Thin Solid Films 515(15),2007 ,5957-5960 (0 citare in revistă BDI)	
	1. Manolache, S.A., Duta, A., "The development of crystalline Sb <sub>2</sub> S <sub>3</sub> thin films as buffer layer or as absorber material for three-dimensional (3D) solar cells, Proceedings of the International Semiconductor Conference, CAS 2, 2008, 373-376	0,5
	Andronic L., <b>Isac L.</b> , Duta A., <i>Photochemical synthesis of Copper sulphide/Titanium oxide photocatalyst</i> , Journal of Photochemistry and Photobiology A: Chemistry 221 (2011) 30-37 (3 citari in reviste BDI)	
	1. Mou, X., Rong, C., Dong, X., Zhang, X., Ma, C., Zhang, X., Ma, H., Shi, F., Xue, M., "Preparation and photocatalytic properties of CdS/ZnS/TiO <sub>2</sub> photocatalyst", Advanced Materials Research 610-613, 2013, 1620-1623	1

DESCRIERE CRITERIU	DOVADA	PUNCTAJ OBTINUT
	2. Simonescu, C.M., Căpățină, C., Teodorescu, V.S., Florea, G., "CuS nanoparticles obtained in presence of one surfactant", <i>Metalurgia International</i> 16, 2011, 140-146	1
	3. Guan, L.-X., Zhao, N., Yao, M.-M., "Photocatalytic properties of Ag surface doped nanocrystalline TiO <sub>2</sub> -SiO <sub>2</sub> composite films", <i>Advanced Materials Research</i> 532-533, 2012, 153-156	1
	<b>Isac, L.A.</b> , Duta, A., Kriza A., Enesca, A., Nanu M., <i>The growth of CuS thin films by Spray Pyrolysis</i> , <i>Journal of Physics: Conference Series</i> 61, 2007, 477-481 (o citare în reviste BDI)	
	1. Milekhin, A.G. <i>et al.</i> , "Surface-enhanced Raman scattering by semiconductor nanostructures", <i>Optoelectronics, Instrumentation and Data Processing</i> 49(5), 2013, 504-513	0,6
	<b>Isac, L.</b> , Popovici, I., Enesca, A., Duta, A., <i>Copper sulfide (Cu<sub>x</sub>S) thin films as possible p-type absorbers in 3D solar cells</i> , <i>Energy Procedia</i> 2(1),2010,71-78 (o citare in reviste BDI)	
	1. Xu, C., Zhang, X., Zhang, J., Yin, H., "Preparation of nano-CuS by phase-transfer method and its application to CuS modified electrode", <i>Advanced Materials Research</i> 335-336, 2011, 433-441	0,75
3.2. Prezentari invitate in plenul unor manifestari nationale si internationale si profesor invitat (exclusiv Erasmus)		
3.2.1. internationale Calcul: 20	-	-
3.2.2. nationale Calcul: 10	Lector, școala de vară "Aplicații ale energiei solare", Stația de Cercetări ICPE – Agigea, 18-23 august 2008; Titlul prezentării: <i>Materiale și sisteme utilizate in conversia solar-termică</i>	10
3.2.3. profesor invitat Calcul: 15	-	-
3.3. Membru în colective de redacție sau comitete științifice al revistelor și manifestărilor științifice, organizator de manifestări științifice, recenzor pentru reviste și manifestăr științifice naționale și internaționale		
3.3.1. ISI Calcul: Editor/Chairman – 20 Membru – 10 Recenzor - 5	Recenzor <i>Journal of the American Chemical Society</i> (FI=10,677)	5
	Recenzor <i>Chemistry of Materials</i> (FI = 8,535)	5
	Recenzor <i>Journal of Alloys and Compounds</i> (FI = 2,39)	5
	Recenzor <i>The Journal of Physical Chemistry</i> (FI=2,775)	5
	Recenzor <i>Applied Surface Science</i> (FI=2,538)	5
	Recenzor <i>Thin Solid Films</i> (FI = 1,864)	5
	Recenzor <i>Environmental Engineering and Management Journal</i> (FI = 1,117)	5
3.2.2. BDI	-	-
3.3.3. Nationale si Internationale neindexate Calcul: Editor/Chairman – 10 Membru – 5 Recenzor - 2	Membru in comitetul de organizare al conferintei "International Conference on Amorphous and Nanostructured Chalcogenides", edițiile 2007 și 2013, Brașov, Romania	10
	Membru in comitetul de organizare al conferintei "International Conference of Sustainable Energy", CSE, edițiile 2008, 2011 și 2014, Brașov, România	15
	Membru in comitetul de organizare al "Conference on Materials Science and Engineering", BRAMAT, edițiile 1999, 2001, 2003, 2005 și 2007, Brașov, Romania	25
	Membru in comitetul de organizare al conferinței "Trends in Environmental Education" - EnvEdu 2004 – I editie, 2004, Brașov, România	5
3.4. Experiența de management, analiza și evaluare în cercetare și/sau învățământ		
3.4.1. Conducere	-	-
3.4.2. Membru	-	-
3.5. Premii		
3.5.1. Academia	-	-

DESCRIERE CRITERIU	DOVADA	PUNCTAJ OBTINUT
Romana		
3.5.2. ASAS, AOSR, academii de ramura si CNCIS (Calcul: 15)	-	-
3.5.3. Premii internationale	-	-
3.5.4. Premii nationale in domeniu	-	-
3.6. Membru in academii, organizatii, asociatii profesionale de prestigiu, nationale si internationale, apartenenta la organizatii din domeniul educatiei si al cercetarii		
3.6.1. Academia Romana Calcul: 100	-	-
3.6.2. ASAS, AOSR si academii de ramura Calcul: 10	-	-
3.6.3. Conducere asociatii profesionale		
3.6.3.1. Internationale Calcul: 30	-	-
3.6.3.2. Nationale Calcul: 10	-	-
3.6.4. Asociatii profesionale		
3.6.4.1 Internationale Calcul: 5	-	-
3.6.4.2 Nationale Calcul: 3	Societatea Romana de Chimie	3
3.6.5. Organizatii in domeniul educatiei si cercetarii		
3.6.5.1. Conducere Calcul: 30	-	-
3.6.5.2. Membru Calcul: 3	-	-
<b>PUNCTAJ TOTAL A3 – Recunoasterea impactului activității</b>		<b>540,44</b>

Director de departament,  
Prof. dr. ing. Codruța JALIU

Candidat,  
Conf. dr. Luminița Anișoara ISAC