

INFORMATII PERSONALE
Valentin Craciun


Afiliere: Institutul National pentru Fizica Laserilor, Plasmei si Radiatiei

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Sex Masculin | Data nasterii 05/04/1959 | Nationalitate Romana

EXPERIENȚA PROFESIONALĂ

- 2008-present Cercetator stiintific gradul I
Institutul National pentru Fizica Laserilor Plasmei si Radiatiei, Str. Atomistilor, Nr. 409, PO Box MG-36, 077125, Magurele, Ilfov, Romania Tel: +40-21 457 44 89, Fax: +40 (0) 21 457 42 43, 457 44 67, www.inflpr.ro/lspi.ro
- Cercetare stiintifica, sef de grup, director de proiect, conducator de doctorat
- Tipul sau sectorul de activitate:** Institut de cercetare
- 2006-2012 Cercetator stiintific asociat si cadru didactic la scoala doctorala
Universitatea din Florida, Gainesville, USA
- Cercetare stiintifica, sef de grup, conducator de doctorat
- Tipul sau sectorul de activitate:** Universitate
- 2003-2006 Asistent cercetare stiintifica si scoala doctorala
Universitatea din Florida, Gainesville, USA
- Cercetare stiintifica, sef de grup, conducator de doctorat
- Tipul sau sectorul de activitate:** Universitate, studii superioare
- 2000-2009 Cercetator principal gradul II
Institutul National pentru Fizica Laserilor, Plasmei si Radiatiei , Magurele, IF
- Cercetare stiintifica, director de proiect
- Tipul sau sectorul de activitate:** Institut de cercetare

Educatie si formare

- 1987-1991 **Doctorat in Fizica Tehnica, “Studii de fizica suprafetei cu laserul pentru aplicatii in microelectronica”** Replace with EQF (or other) level if relevant
Universitatea Politehnica Bucuresti
- 1979-1984 **Inginer fizician, Lucrare de diploma: “Tratamente termice cu laser a semiconductorilor”**
Universitatea Bucuresti
- Cursuri de fizica

Limba Materna Romana

Alte limbi straine cunoscute

	INTELEGERE		VORBIRE		SCRIERE
	Ascultare	Citire	Participare la conversatie	Discurs oral	
Engleza	C2	C2	C2	C2	C2
Franceza	C2	C2	C1	C1	C1

Niveluri: A1/A2: Utilizator elementar - B1/B2: Utilizator independent - C1/C2: Utilizator experimentat
 Cadrul european comun de referință pentru limbi străine

Competente de comunicare

- Abilitati bune de comunicare dobandite prin experienta mea de profesor la Univeristatea din Florida si om de stiinta vizitator la Universitatea din Orleans Franta si Colegiul Universitar Londra, UK.

Competențe organizaționale/manageriale

- Bune abilitati manageriale ca: sef departament laseri timp de 1 an,
 Presedintele Consiliului Stiintific INFLPR 4 ani.
 Abilitati organizatorice foarte bune ca membru executiv Societatea Europeana de Cercetare a Materialelor, 7 ani, vicepresedinte al E-MRS 2 ani.
- Sef de grup (in prezent responsabil pentu o echipa de 8 persoane)

Competențe dobândite la locul de muncă

Conoasterea foarte buna si expertizare in instalarea in vid, sisteme de depunerea a filmelor subtiri, sisteme de caracterizare a filmelor subtiri..

Competenta digitala

Auto-evaluare				
Procesarea informatiei	Comunicare	Crearea de continut	Securitate	Rezolvarea de probleme
Utilizator de baza	Utilizator experimentat	Utilizator experimentat	Utilizator de baza	Utilizator independent

Niveluri: Utilizator elementar - Utilizator independent - Utilizator experimentat
 Competențele digitale - Grilă de auto-evaluare

- Buna comanda a suitei de birou (procesor de text, foaie de distributie, software de prezentare)
- Stapanire buna a software-ului de editare foto obtinuta ca scriitor stiintific de articole

Prezentari invitate

Selectie din 2014-2022

1. Investigations of radiation induced effects in nanostructured ceramic thin films, 4th IC4N, Corfu 2019
2. Gamma induced radiation effects on amorphous transparent and conducting oxides, 7th TCM and 4th Bilateral E-MRS-MRS-Japan Symposium, Oct. 2018, Chania, Greece
3. INDLAS, Alba Iulia, 3-5 September 2018
4. Conference of the Romanian Microscopy Society, 16 -18 May, 2017, Sinaia, Romania
5. PLD: a versatile technique for structure-composition-properties investigations, BRAMAT 2017, Brasov, 8-12 March 2017
6. Investigations of Radiation Effects in Amorphous Transparent and Conductive Oxides (NT2.12.01); Craciun, V.; MRS Spring Meeting, 28 March – 1 April 2016, Phoenix, Arizona, US
7. Investigations of Radiation Effects in Amorphous and Nanostructured Thin Films (CSE-2); Craciun, V.; IC4N, 26-30 June 2016, Porto Heli, Greece
8. International Year of Light, Bucharest, 2015
9. ROMOPTO 2015, Bucharest, 31 August-3 September

10. Characteristics of amorphous transparent and conductive oxides grown by combinatorial pulsed laser deposition; South Africa Conference on Photonics, Mabula Lodge, April 2015
11. Combinatorial Pulsed Laser Deposition of Amorphous and Transparent Oxides, MRS Spring Meeting, April 2015.
12. On the metrology of amorphous transparent and conductive oxides grown by combinatorial pulsed laser deposition, IUMRS-ICEM Taiwan, June 2014, Symposium F2: p- or n-type oxide films, transparent conductive films and devices: photovoltaic, optoelectronic, plasmonic, gas sensor and microwave devices
13. PLD of hard coatings, INDLAS Bran, Romania, 19-23 May, 2014

Seminarii invitate: Selectie din 2014-2022

1. Air Force Research Lab, Dayton, OH, USA, Feb. 2018
2. Qwa-Qwa Campus, University of Free State, RSA, March 2018
3. University of Braga, Department of Physics, Nov. 2017
4. Air Force Research Lab, Dayton, OH, USA, 1st Feb. 2017.
5. University of Modena, July 2016
6. University of Barcelona, February 2nd, 2016
7. ICMAB, Barcelona, December 7th, 2015
8. PSI, Villigen, Switzerland, July 2015
9. University of Linkoping, Sweden, March 2015
10. Madrid, CSIC, Spain, October 2014
11. Turkey, Ozyegin University, July 2014
12. NIMS, Japan, July 2014
13. Kochi University, Japan, June 2014
14. Spring8, Japan, July 2014

Onoruri si premii:

1. Window on Science award, AFRL Dayton OH, 2017 and 2018
2. E-MRS Society Appreciation Diploma, Warsaw, 2015, 2017, 2018, 2019 and Lille, 2015
3. The Japan Society for the Promotion of Science Fellowship, 2014
4. 30 Years Anniversary Medal, E-MRS, Strasbourg, 2013
5. Davis Productivity Award, 2009, University of Florida
6. A. P. Sloan Certificate of Appreciation, 2007, University of Florida
7. Diploma for outstanding service, Materials Research Society, USA, 2006 and 2008
8. Fellowship of CNRS at University of Paris VII, France, December 2000.
9. Fellowship of EPSRC, University College London, UK, 1997
10. Fellowship of the French Ministry of Higher Education at University of Orleans, Laboratoire GREMI, France,

Proiecte

1. High Brightness Electron Source Developments, Office of Naval Research /Subcontract from William and Mary University, CoPI, 2003-2006, 150,000 \$
2. Thin Film Photovoltaics Partnership Program: Fundamental materials research and advanced process development for thin film CIS-based photovoltaics, Midwest Research Inst Renew Energy Lab, 2003-2004, \$30,120
3. Combinatorial pulsed laser deposition of transparent and conductive oxides, Romanian Government grant, 2007-2010, PI, \$330,000.
4. Pulsed laser deposition of amorphous transparent and conductive oxides for TFTs applications, Romanian Government grant, 2013-2015, PI, \$475,000.
5. Radiation effects in SiC, Institute of Atomic Physics, Romania IFA-CEA France grant, 2013-2015, \$300,000
6. Romanian-Hungarian collaborative research agreement on hard coatings, 2013-2014, \$4,000
7. Radiation effects in amorphous semiconductor oxides, Romanian Space Agency grant, 2013-2016, PI, \$300,000
8. Mentor for four Post-Doc research grants (Dr. D. Chiobasu, Dr. A Filip, Dr. Prepelita and Dr. Dorcioman, each \$80,000)
9. In situ characterization of liquid steel composition, Partnership Program, Romania, 2014-2017, \$700,000

Citari: Mai mult de 5000 de citari, H-index=37 (WoK)

Organizarea conferintelor

1. Symposium K: Nanostructures, Thin Films and Bulk Oxides-Synthesis, Characterization and Applications, MRS Spring Meeting, San Francisco, April 21-25, 2014
2. Materials, processing, and characterization techniques for future nuclear technologies symposium, E-MRS Fall meeting, Warsaw, September 16-19, 2014.
3. Conference Chair, International Conference on Physics and Advanced Materials, ICPAM-10, Iasi, September 22-26, 2014
4. Conference Chair, E-MRS Spring meeting, 2015, Lille, France.
5. Symposium L, Towards Oxide-Based Electronics: growth and applications of oxide thin films and heterostructures, E-MRS Fall meeting, Warsaw, September 13-18, 2015
6. Conference Chair, International Conference on Physics and Advanced Materials, ICPAM-11, Cluj-Napoca, September 8-14, 2016

7. Symposium T, Materials for current and future nuclear applications: processing, characterization, performance, E-MRS Fall Meeting, Warsaw, 19-22 September, 2016.
8. *Stress, structure, and stoichiometry effects on the properties of nanomaterials IV*, E-MRS Fall meeting, September, 2017, Warsaw
9. Symposium K, Nuclear Materials under Extreme Conditions, E-MRS Fall Meeting, Warsaw 16-20 September 2019
10. ESTAC12 12th European Symposium on Thermal Analysis and Calorimetry, Brasov, Romania, 27-30 August 2018, Conference Chair
11. E-MRS Fall Meeting, Warsaw 16-20 September 2018, General Chair
12. International Conference on Physics and Advanced Materials ICPAM 12, Crete, 22-29 Sept. 2018, Conference Chair

Teze si dizertatii finalizate sub supravegherea mea la UF, Gainesville, SUA.

1. Jinwoo Kwak (co-chair), Preparation of multilayered structural composites for enhancing gas barrier property of isotactic polypropylene, August 2010.
 2. Junghun Jang, Observation of Defects Evolution in Electronic Materials, May 2009
 3. Carmen V. Gaines, Near-surface structural changes in human tooth enamel subject to demineralization and remineralization, April 29, 2008
 4. Juhyun Woo, Growth and characterization of ZrC thin films, December 2005
- Membru in peste 40 de PhD Committee pentru studenti la UF
- Membru in PhD Committee:
1. Christophe Dutouquet, External Member (Rapporteur), PhD Committee, Université d'Orleans, Orleans, France, 2001
 2. Valentin Dan Nelea, External Member (Rapporteur), PhD Committee, Université Louis Pasteur, Strasbourg, France, June 2002
 3. Sebastien Bruneau, External Member (Rapporteur), PhD Committee, Université de la méditerranée, Marseille, France, June 2005
 4. Ionela Ionescu, President de Jury, Grenoble, France, March 2015
 5. University of Barcelona, member of the PhD Jury, Emerson Coy, February 1st, 2016

CARTI
Carti, Editate

1. *Physics and Chemistry of Advanced Laser Materials Processing*, Edited by Michel Meunier, **Valentin Craciun**, Eric Fogarassy, Wolfgang Kautek, Applied Surface Science, Elsevier Science B.V., Volumes 208-209, Pages 1-687 (15 March 2003), Proceedings of the E-MRS 2002 Spring Meeting Symposium D
2. *Advances in Laser and Lamp Processing of Functional Materials*, Edited by J. Reif, I Zergioti, **V. Craciun**, T. Lippert, J. Perriere, Applied Surface Science, Elsevier Science B.V., Volumes 252, Issue 13, 2006: Proceedings of the E-MRS 2005 Spring Meeting Symposium J
3. *Synthesis Processing and Characterization of Nanoscale Functional Oxide Films*, Edited by M. Alexe, **V. Craciun**, R. Gaboriaud, D. Kumar and K. Ebihara, Proceedings of Symposium J, E-MRS Nice, France, 29 May-02 June 2006, Thin Solid Films, Volume 515, Issue 16, Pages 6289-6618, 2007
4. *Current and Future Trends of Functional Oxide Films*, edited by D. Kumar, **V. Craciun**, M. Alexe, K.K. Singh (Mater. Res. Soc. Symp. Proc. **928E**, Warrendale, PA, 2006)
5. *Synthesis, Processing and Characterization of Nanoscale Multi Functional Oxide Films II*, edited by **Valentin Craciun**, Maryline Guilloux-Viry, Marin Alexe, José L. Costa Krämer, Jean-Paul Mosnier, Thin Solid Films vol. 518 (2010) and European MRS Symposia Proceedings vol. 244.
6. *Synthesis, Processing and Characterization of Nanoscale Multi Functional Oxide Films III*, edited by **Valentin Craciun**, Maryline Guilloux-Viry, Marin Alexe, Gustau Catalán Bernabé, Marco Fanciulli, Thin Solid Films 2012.
7. *Synthesis, Processing and Characterization of Nanoscale Multi Functional Oxide Films III*, **Craciun, Valentin**; Guilloux-Viry, Maryline; Alexe, Marin; et al., Thin Solid Films Volume 520 Issue: 14, 2012.
8. *Stress, structure and stoichiometry effects on nanomaterials*, edited by **Craciun, Valentin**; Gaboriaud, Rolly; Sanchez, Florencio; Schroeder, Thomas, Applied Surface Science Volume 260, 2012.
9. *Stress, structure and stoichiometry effects on nanomaterials II*, edited by **Craciun, Valentin**; Florencio Sánchez, Fabien Paumier, Dhananjay Kumar, Applied Surface Science 306, 1 July, 2014.
10. MRS Proceedings vol. 1675, 2014 Materials Today: Proceedings, Volume 2, Issue 6, 2015, Page 3789, Felicia Iacomi, **Valentin Craciun**, Sebastian Popescu, Kathrin Mueller, Marco Lattuada Editors
11. Applied Surface Science, Volume 352, 15 October 2015, Page 1, **V. Craciun**, F. Iacomi, C. Dubourdieu, F. Sánchez Barrera, M. Kompitsas Editors.
12. Applied Surface Science, Volume 381, 15 September 2016, E-MRS Fall Meeting 2015, Symposium L: Towards Oxide-Based Electronics: growth and applications of oxide thin films and heterostructures, Editors **Valentin Craciun**, Florencio Sánchez.

Carti, Contribuitor la capitolul (capitolele)

1. ZnO and ZnO-Related Compounds, J. Perriere, E. Millon, **V. Craciun**, Chapter 12 in Pulsed Laser Deposition of Thin Films, Edited by Robert Eason, Wiley, Hoboken, 2006.

Brevete

Petronela Garoi , **Valentin Craciun**, Florin Garoi, Cristian Viespe, "Procedeu de tratament termic al filmelor oxidice in vederea obtinerii de electrozi de contact pentru celule solare" brevet acceptat 12/2015, a 2014/00439/.

Lucrari stiintifice (selectie din 2018-2022)

1. On the chemistry, photocatalytic, and corrosion behavior of co-sputtered tantalum and titanium oxynitride thin films, Cristea, D; Croitoru, C; Marin, A; Dobromir, M; Ursu, EL; Velicu, IL; Tiron, V; Craciun, V; Cunha, L, APPLIED SURFACE SCIENCE, Volume592, Article Number153260, PublishedAUG 1 2022
2. Characteristics of Thin High Entropy Alloy Films Grown by Pulsed Laser Deposition, Laszlo, EA; Craciun, D; Dorcioman, G; Craciun, G; Geanta, V; Voiculescu, I; Cristea, D; Craciun, V, COATINGS, Volume12, Issue8, Article Number1211, DOI10.3390/coatings12081211, PublishedAUG 2022
3. Langmuir Probe Perturbations during In Situ Monitoring of Pulsed Laser Deposition Plasmas, Irimiciuc, SA, Chertopalov S, Novotny M, Craciun V, Lancok J, Agop M, MATERIALS, Volume15, Issue8, Article Number2769, DOI10.3390/ma15082769, PublishedAPR 2022
4. Implementation of Ag/SiO₂ nanofilms for metamaterial engineering, Prepelita P, Garoi F, Dumitru M, Craciun V, RESULTS IN PHYSICS, Volume35, Article Number105387, DOI10.1016/j.rinp.2022.105387, PublishedAPR 2022
5. Target Characteristics Used in Laser-Plasma Acceleration of Protons Based on the TNSA Mechanism, Magureanu A, Dinca L, Jalba C, Andrei RF, Burducea I, Ghita DG, Nastasa V, Gugiu M, Asavei T, Budriga O, Ticos D, Craciun V, Diaconescu B, Ticos CM, FRONTIERS IN PHYSICS, Volume10, Article Number727718, DOI10.3389/fphy.2022.727718, PublishedMAR 1 2022
6. Tantalum-Titanium Oxynitride Thin Films Deposited by DC Reactive Magnetron Co-Sputtering: Mechanical, Optical, and Electrical Characterization, Cristea, D, Velicu, IL, Cunha, L, Barradas, N, Alves, E, Craciun, V, COATINGS, Volume12, Issue1, Article Number36, DOI10.3390/coatings12010036, PublishedJAN 2022
7. Improvement of Mechanical and Corrosion Properties of Commercially Pure Titanium Using Alumina PEO Coatings, Malinovsky, V, Marin, AH; Ducu, C, Moga, S, Andrei, V, Coaca, E, Craciun, V, Lungu, M, Lungu, CP, COATINGS, Volume12, Issue1, Article Number29, DOI10.3390/coatings12010029, PublishedJAN 2022
8. Crystalline In₂O₃ nanoparticles synthesis using microwaves vaporization of metallic wires, Craciun, D, Garoi, P, Mogildea, M, Mogildea, G, Zgura, SI, Vasile, BS, Craciun, V, APPLIED SURFACE SCIENCE, Volume575, Article Number151788, DOI10.1016/j.apsusc.2021.151788, PublishedFEB 1 2022
9. Insight into the plasma oxidation process during pulsed laser deposition, Irimiciuc, SA, Chertopalov, S, Bulir, J, Vondracek, M, Fekete, L, Jiricek, P, Novotny, M Craciun, V, Lancok, J, PLASMA PROCESSES AND POLYMERS, Article Number, e2100102, DOI 10.1002/ppap.202100102, Early Access, OCT 2021Published Feb 2022
10. Robust Stability of Optical and Electronic Properties of Gallium-Doped Zinc Oxide Thin Films to Gamma Ray Irradiation, Barone, C; Gupta, J; Martin, RM; Sydoryk, I; Craciun, V; Nomoto, J; Makino, H; Yamamoto, T; Martin, C, PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS, Volume259, Issue8, Article Number2100469, DOI10.1002/pssb.202100469, PublishedAUG 2022
11. The Effects Induced by Microwave Field upon Tungsten Wires of Different Diameters, Mogildea, M; Mogildea, G; Craciun, V; Zgura, SI, MATERIALS, Volume: 14 Issue: 4, Article Number: 1036, DOI: 10.3390/ma14041036; Published: FEB 2021
12. The effect of vacuum and air annealing in the physical characteristics and photocatalytic efficiency of In₂S₃:Ag thin films produced by spray pyrolysis, B. Tiss, M. Benfraj, N. Bouguila, M. Kraini, S. Alaya, D. Cristea, C. Croitoru, V. Craciun, D. Craciun, P. Prepelita, I.-L. Velicu, V. Tiron, C. Moura, L. Cunha, Materials Chemistry and Physics 270 (2021) 124838
13. Structural and optical characteristics determined by the sputtering deposition conditions of oxide thin films, Prepelita, P; Garoi, F; Craciun, V, BEILSTEIN JOURNAL OF NANOTECHNOLOGY, Volume: 12 Pages: 354-365, Published: APR 19 2021
14. Qualitative Analysis of Remineralization Capabilities of Bioactive Glass (NovaMin) and Fluoride on Hydroxyapatite (HA) Discs: An In Vitro Study Shu-Min Hsu, Muhammad Alsafadi, Christina Vasconez, Chaker Fares, Valentin Craciun, Edgar O'Neill, Fan Ren, Arthur Clark and Josephine Esquivel-Upshaw, Materials 2021, 14, 3813. <https://doi.org/10.3390/ma14143813>
15. Influence of sodium aluminate concentration and process duration on microstructure, mechanical and electrochemical behavior of PEO coatings formed on CP-Ti, Malinovsky, V , Marin, A, Ducu, C , Andrei, V , Coaca, E , Craciun, V , Lungu, M, SURFACE & COATINGS TECHNOLOGY Volume418 Article Number127240, DOI10.1016/j.surfcoat.2021.127240, PublishedJUL 25 2021
16. In situ optical and electrical analysis of transient plasmas generated by ns-laser ablation for Ag nanostructured film production, Irimiciuc, SA; Chertopalov, S; Bulir, J; Fekete, L; Vondracek, M, Novotny, M ; Craciun, V ; Lancok, J, Nov 2021 | VACUUM 193, Article Number110528, DOI10.1016/j.vacuum.2021.110528
17. Langmuir Probe Technique for Plasma Characterization during Pulsed Laser Deposition Process, Irimiciuc, SA; Chertopalov, S; Lancok, J; Craciun, V, Jul 2021 | COATINGS 11 (7), Article Number762, DOI 10.3390/coatings11070762

18. Understanding pulsed laser deposition process of copper halides via plasma diagnostics techniques, Irimiciuc, SA; Chertopalov, S; Novotny, M; Craciun, V; Lancok, J, JOURNAL OF APPLIED PHYSICS Volume130, Issue24, Article Number243302, DOI 10.1063/5.0077082
19. On the Dynamics of Transient Plasmas Generated by Nanosecond Laser Ablation of Several Metals, Irimiciuc, SA, Chertopalov, S, Novotny, M, Craciun, V, Lancok, J, MATERIALS, Volume14, Issue23, Article Number7336, DOI10.3390/ma14237336, PublishedDEC 2021
20. Measurement error due to self-absorption in calibration-free laser-induced breakdown spectroscopy, Taleb, A, Motto-Ros, V, Carru, MJ, Axente, E, Craciun, V, Pelascini, F, Hermann, J, , ANALYTICA CHIMICA ACTA, Volume1185, Article Number339070, DOI10.1016/j.aca.2021.339070, PublishedNOV 15 2021
21. Effect of background atmosphere and substrate temperature on SrO:Bi³⁺(0.2 mol%) thin films produced using pulsed laser deposition with different lasers, M.H.M.Abdelrehman, V.Craciun, R.E.Kroon, A.Yousifa, H.A.A. 6-333 Published: MAR 3 2020 (IF 2.229)
Dissolution SeedAhmed, H. C. Swart, Physica B: Condensed MatterVolume 58115 March 2020 Article 411757
22. Microstructural investigations of 800 keV Ar ions irradiated nanocrystalline ZrN thin films, D Craciun, B Vasile, E Lambers, H Makino, V Craciun, SURFACE ENGINEERING Volume: 36 Issue: 3 Special Issue: SI Pages: 326-333, 2020
23. Dissolution activation energy of a fluorapatite glass-ceramic veneer for dental applications, S. M. Hsu, F. Ren, C. Batich, A. E. Clark, J. F. Esquivel-Upshaw, V. Craciun ,Materials Science and Engineering: C, In press, journal pre-proof, available online 5 March 2020 Article 110802 2020
24. Synthesis and Evaluation of Molybdenum Imido-Thiolato Complexes for the Aerosol-Assisted Chemical Vapor Deposition of Nitrogen-Doped Molybdenum Disulfide, Nathan C. Ou, Konstantin Preradovic, Erik T. Ferenczy, Courtney B. Sparrow, Ian M. Germaine, Titel Jurca, Valentin Craciun, Lisa McElwee-White Cite this: Organometallics 2020, February 17, 2020 <https://doi.org/10.1021/acs.organomet.9b00705>
25. Multiple structure formation and molecule dynamics in transient plasmas generated by laser ablation of graphite(Article) Irimiciuc, S.A, Hodoroaba, B.C.a,b, Bulai, G.c, Gurlui, S.d, Craciun, V., Spectrochimica Acta - Part B Atomic Spectroscopy Volume 165, March 2020, Article number 105774 2019
26. Deposition temperature influence on the wear behaviour of carbon-based coatings deposited on hardened steel D. Feldiorean, D. Cristea, M. Tierean, C. Croitoru, C. Gabor, L. Jakab-Farkas, L. Cunha, N.P. Barradas, E. Alves, V. Craciun, A. Marin, C. Moura, J. Leme, M. Socol, D. Craciun, M. Cosnita, D. Munteanu, Applied Surface Science, Volume 475, 1 May 2019, Pages 762-773
27. Annealing of preexisting defects in silicon single crystals by ion irradiation Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms, Volume 450, 1 July 2019, Pages 85-89, M. D. Mihai, P. Ionescu, D. Pantelica, H. Petrascu, D. Craciun, V. Craciun, F. Vasiliu, B.S. Vasile,I. Mercioniu
28. Analysis of multielemental thin films via calibration-free laser-induced breakdown spectroscopy, Hermann, Jörg; Axente, Emanuel; Pelascini, Frédéric; Craciun, Valentin, Analytical Chemistry 91 (3), pp 2544–2550, 2019. DOI: 10.1021/acs.analchem.8b05780
29. Structural and luminescence properties of Y₂O₃:Bi_{2.0} mol%,Yb_{10.0} mol% thin films prepared using the pulsed laser deposition and spin coating techniqueSurfaces and Interfaces, Volume 16, September 2019, Pages 101-107 E. Lee, J. J. Terblans, V. Craciun, H. C. Swart
30. Dopant-defect interactions in highly doped epitaxial Si:P thin films Thin Solid Films, Volume 685, 1 September 2019, Pages 1-7 Z. N. Weinrich, X. Li, S. Sharma, V. Craciun, M. Ahmed, E.A.C. Sanchez, S. Moffatt, K. S. Jones
31. Influence of Ag, Au and Pd noble metals doping on structural, optical and antimicrobial properties of zinc oxide and titanium dioxide nanomaterialsTrilok K. Pathak, R. E. Kroon, Valentin Craciun, Marcela Popa, M. C. Chifiriuc, H. C. Swart, HELIYON Volume: 5 Issue: 3 Article Number: e01333 Published: MAR 2019
32. Effect of Pt₃Pb on the permittivity and conductivity of lead zirconate titanate thin films Hiraku Maruyama, George Baurea, Tarielle Jones, Jason Nikkel, Marwa Mostafa Moharam, Valentin Craciun, Maria-Diana Mihai, Dan Pantelica, Jacob L.Jones, Juan C.Nino, Thin Solid Films, Volume 685, 1 September 2019, Pages 420-427
33. Growth of WO_x from Tungsten(VI) Oxo-Fluoroalkoxide Complexes with Partially Fluorinated β-Diketonate/β-Ketoesterate Ligands: Comparison of Chemical Vapor Deposition to Aerosol-Assisted CVD Nathan C. Ou, Duane C. Bock, Xiaoming Su, Doina Craciun, Valentin Craciun, and Lisa McElwee-White, ACS Appl. Mater. Interfaces 2019, 11, 28180–28188.
34. Rapid thermal annealing for high-quality ITO thin films deposited by radio-frequency magnetron sputtering Petronela Prepelita, Ionel Stavarache, Doina Craciun, Florin Garoi, Catalin Negriila, Beatrice Gabriela Sbarcea and Valentin Craciun, Beilstein J. Nanotechnol. 2019, 10, 1511–1522; doi:10.3762/bjnano.10.149
35. Antibacterial Properties of Charged TiN Surfaces for Dental Implant Application Patrick H. Carey IV, Dr. Fan Ren, Ziqi Jia, Dr. Christopher D Batich, Dr. Samira E.A. Camargo , Dr. Arthur E. Clark, Dr. Valentin Craciun, Neal De, Dr. Josephine F. Esquivel-Upshaw, CHEMISTRYSELECT Volume: 4 Issue: 31 Pages: 9185-9189 DOI: 10.1002/slct.201901001, Published: AUG 23 2019

36. Effect of background atmosphere and substrate temperature on SrO:Bi³⁺(0.2 mol%) thin films produced using pulsed laser deposition with different lasers Accepted, Physica B2018
37. Electrochemical deposition and characterization of ZnOS thin films for photovoltaic and photocatalysis applications Journal of Alloys and Compounds, Volume 769, 15 November 2018, Pages 201-209 O. K. Echendu, S. Z. Werta, F. B. Dejene, V. Craciun
38. Hermann J; Grojo D; Axente E; Craciun V/ Local thermodynamic equilibrium in a laser-induced plasma evidenced by blackbody radiation/ SPECTROCHIMICA ACTA PART B-ATOMIC SPECTROSCOPY Volume: 144 Pages: 82-86, JUN 2018
39. Vasile B. S.; Craciun D.; Ionescu, P.; Pantelica D; Dorcioman G; Craciun V/ Microstructure of 800 keV Ar ion irradiated thin ZrC films/ APPLIED SURFACE SCIENCE Volume: 442 Pages: 773-777 Published: JUN 1 2018
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