INFORMATII PERSONALE

Valentin Craciun

[Toate rubricile CV sunt optionale. Eliminati rubricile goale.]

Afiliere: Institutul National pentru Fizica Laserilor, Plasmei si Radiatiei

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Valentin.craciun@inflpr.ro

www.gap.inflpr.ro

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

EXPERIENŢA PROFESIONALĂ

[Descrieţi separat fiecare loc de muncă. Începeţi cu cel mai recent.]

2008-present — Cercetator stiintific 1

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 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 2

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

[Adăugaţi câmpuri separate pentru fiecare etapă de formare. Începeţi cu cea mai recent.]

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

Studii de Fizica Interactiunii laser-materie

1979-1984 — Inginer fizician, Lucrare de diploma: “Tratamente termice cu laser a semiconductorilor”

Universitatea Bucuresti

- Cursuri de fizica

[Eliminati rubricile ramase goale.]

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 referinţă 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.

Competenţe organizaţionale/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)

Competenţe 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 sofware-ului de editare foto obtinuta ca scriitor stiintific de articole

Alte aptitudini

- Deprinderi sportive bune

Permis de conducere: B

Informatii suplimentare

Prezentari invitate Selectie din 2014-2020

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, 8-122 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;SouthAfrica 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 2014-2020

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 two Post-Doc research grants (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 3000 de citari, H-index=33 (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. nternational 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. JinwooKwak (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

PhD Committee member for more than 40 students at UF

Students from other institutions:

1. Christophe Dutouquet, External Member (Rapporteur), PhD Committee, Universitéd'Orleans, Orleans, France, 2001
2. Valentin Dan Nelea, External Member (Rapporteur), PhD Committee, Université Louis Pasteur, Strasbourg, France, June 2002
3. Sebastien Bruneau,ExternalMember (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**, MarylineGuilloux-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**, MarylineGuilloux-Viry, Marin Alexe, GustauCatalánBernabé, 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 Science306, 1 July, 2014.

10. MRS Proceedings vol. 1675, 2014Materials 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 temic al filmelor oxidice in vederea obtinerii de electrozi de contact pentru celule solare" brevet acceptat 12/2015, a 2014/00439/.

Lucrari stiintifice (selectie din 2014-2020)

1. 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. SeedAhmed, H. C. Swart, Physica B: Condensed MatterVolume 58115 March 2020 Article 411757
2. 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 Published: MAR 3 2020 (IF 2.229)
3. Dissolution activation energy of a fluorapatite glass-ceramic veneer for dental applications, Materials Science and Engineering: C, In press, journal pre-proof, available online 5 March 2020Article 110802 S. M. Hsu, F. Ren, C. Batich, A. E. Clark, J. F. Esquivel-Upshaw, V. Craciun
4. 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, XXXX, XXX, XXX-XXXPublication Date:February 17, 2020 https://doi.org/10.1021/acs.organomet.9b00705
5. 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
6. Deposition temperature influence on the wear behaviour of carbon-based coatingsdeposited 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
7. 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
8. 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
9. Structural and luminescence properties of Y2O3:Bi2.0 mol%,Yb10.0 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
10. 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
11. 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
12. 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
13. Growth of WOx 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.

14. Rapid thermal annealing for high-quality ITO thin films deposited by radio-frequency magnetron sputtering Petronela Prepelita, Ionel Stavarache, Doina Craciun, Florin Garoi, Catalin Negrila, Beatrice Gabriela Sbarcea and Valentin Craciun, Beilstein J. Nanotechnol. 2019, 10, 1511–1522; doi:10.3762/bjnano.10.149
15. 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
16. 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
17. 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
18. 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
19. 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
20. Hermann J; Axente E; Craciun V; Taleb A; Pelascini F / Evaluation of pressure in a plasma produced by laser ablation of steel/ SPECTROCHIMICA ACTA PART B-ATOMIC SPECTROSCOPY Volume: 143 Pages: 63-70 Published: MAY 2018
21. 5. Investigations of thin titanium oxide films grown by reactive pulsed laser deposition, Dorcioman, G; Fufa, O; Craciun, V; Miroiu, M; Garoi, P; Axente, E; Sima, F; Craciun, D, ROMANIAN JOURNAL OF ORAL REHABILITATION, Volume: 10 Issue: 3 Pages: 41-49, Published: JUL-SEP 2018
22. 6. Structural and physical properties of InAlAs quantum dots grown on GaAs, Vasile, BS; Ben Daly, A; Craciun, D; Alexandrou, I; Lazar, S; Lemaitre, A; Maaref, MA; Iacomi, F; Craciun, V, PHYSICA B-CONDENSED MATTER Volume: 535 Pages: 262-267, DOI: 10.1016/j.physb.2017.07.054, Published: APR 15 2018
23. Pulsed laser deposition of HfO2 thin films on indium zinc oxide: Band offsets measurements, D. Craciun, **V. Craciun,** Applied Surface Science, Volume 400, 1 April 2017, Pages 77-80
24. Optical properties of Ar ions irradiated nanocrystallineZrC and ZrN thin films, Journal of Nuclear Materials, C. Martin, K.H. Miller, H. Makino, D. Craciun, D. Simeone, **V. Craciun**, Volume 488, May 2017, Pages 16-21
25. Surface characterization and cathodoluminescence degradation of ZnO thin films, Applied Surface Science, E. Hasabeldaim, O.M. Ntwaeaborwa, R.E. Kroon, **V. Craciun**, E. Coetsee, H.C. Swart, In Press, Corrected Proof, Available online 30 November 2016
26. Chalcogenide thin films deposited by rfMS technique using a single quaternary target, Applied Surface Science, P. Prepelita, I. Stavarache, C. Negrila, F. Garoi, **V. Craciun,**In Press, Corrected Proof, Available online 10 November 2016

Semnatura: Valentin Craciun Magurele, 15 dec. 2021