



**Curriculum vitae
Europass**



Personal data

Name, First name LUCA, Dumitru
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Phone(s) +40 232 201179
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E-mail(s) dumitru.luca@uaic.ro
Nationality Romanian
Birth date 10-09-1951
Gender male

Professional expertise

Period	2016 - present
Main activities and responsibilities	Emeritus professor, Doctoral supervisor
Name and address of the employer	„Alexandru Ioan Cuza” University of Iasi, strada Carol I nr.11, 700506-Iași, Romania,
Type /field of activity	http://www.uaic.ro Higher education public institution
Period	2007- 2016
Main activities and responsibilities	Full professor, Doctoral supervisor
Name and address of the employer	„Alexandru Ioan Cuza” University of Iasi, strada Carol I nr.11, 700506-Iași, Romania, http://www.uaic.ro
Type /field of activity	Higher education public institution
Period	1997-2007
Main activities and responsibilities	Associate professor, Dr.
Name and address of the employer	„Alexandru Ioan Cuza” University of Iasi, strada Carol I nr.11, 700506-Iași, Romania, http://www.uaic.ro
Type /field of activity	Higher education public institution
Period	2003, Jan-Sept.
Main activities and responsibilities	Post-doctoral researcher
Name and address of the employer	National Chang-Hua University of Education, 1 Chin der Road, Chang-Hua, Taiwan, ROC
Type /field of activity	Scientific research
Period	1990-1997
Main activities and responsibilities	Lecturer, Dr.

Name and address of the employer	„Alexandru Ioan Cuza” University of Iasi, strada Carol I nr.11, 700506-Iasi, Romania, http://www.uaic.ro
Type /field of activity	Higher education public institution
Period	1980-1990
Main activities and responsibilities	Teaching assistant
Name and address of the employer	„Alexandru Ioan Cuza” University of Iasi, strada Carol I nr.11, 700506-Iasi, Romania, http://www.uaic.ro
Type /field of activity	Higher education public institution
Period	1979-1980
Main activities and responsibilities	Research fellow
Name and address of the employer	Center for technical Physics, Iasi, Aleea Grigore Ghica Vodă nr. 15, Iasi
Type /field of activity	Research institute
Period	1978-1979
Main activities and responsibilities	Physicist
Name and address of the employer	Center for technical Physics, Iasi, Aleea Grigore Ghica Vodă nr. 15, Iasi
Type /field of activity	Research institute
Period	1975-1978
Main activities and responsibilities	Physics teacher
Name and address of the employer	Liceul Internat „Costache Negruzzi” Iasi, Str. Culturii nr. 7
Type /field of activity	High school, public institution
Education and training	
Period	1985-1995
Qualification/ award	PhD degree Doctoral thesis „Preparation and characterization of certain Al-containing ferromagnetic alloys”
Main fields/acquired professional competences	Ferromagnetic materials, plasma physics, plasma-wall interaction
Name and type of the education institution	„Alexandru Ioan Cuza” University of Iasi, strada Carol I nr.11, 700506-Iasi, Romania, http://www.uaic.ro
Level in the national/international classification	Doctoral studies
Period	1983-1984
Qualification/ award	Postgraduate English intensive course - Diploma
Main fields/acquired professional competences	English language
Name and type of the education institution	Alexandru Ioan Cuza” University of Iasi, strada Carol I nr.11, 700506-Iasi, Romania, http://www.uaic.ro
Level in the national/international classification	Graduate diplom
Period	1993-1994
Qualification/ award	Postgraduate German intensive course - Diploma

Main fields/acquired professional competences	German Language
Name and type of the education institution	Alexandru Ioan Cuza ¹ University of Iasi, strada Carol I nr.11, 700506-Iași, Romania, http://www.uaic.ro
Level in the national/international classification	Graduate diplom
Period	1970-19775
Qualification/ award	Bachelor + Master Degree
Main fields/acquired professional competences	Graduate in „Research-Higher education” programme, field „Electro-radio-physics”
Name and type of the education institution	Universitatea „Alexandru Ioan Cuza” din Iași (UAIC), Bd. Carol I nr.11, loc. Iași, cod poștal 700506, http://www.uaic.ro
Level in the national/international classification	Bachelor + Master

Personal skills and competences

Mother tongue Romanian
Foreign languages

Selfevaluation
Nivel european (*)

Engleză

Germană

Rusă

Franceză

Understanding				Speaking				Writing	
listening		reading		conversation		oral discourse			
C2	Experienced user	C2	Experienced user	C2	Experienced user	C2	Experienced user	C2	Experienced user
B2	Experienced user	B2	Utilizator independent	B1	Independent user	B1	Independent user	B1	Independent user
C2	Experienced user	C2	Experienced user	C2	Experienced user	C2	Experienced user	C2	Experienced user
B2	Independent user	B2	Independent user	B1	Independent user	B1	Independent user	B1	Independent user

Social competences and skills Team working, communication abilities, leading competences

Organizational competences and aptitudes Coordination of research and education teams at national and international levels; capability to work with tight deadlines

Computer literacy Numerical and symbolic programming, Physical computing, Data acquisition and processing, Office software.

Academic recognition

- Emeritus Professor of the "Alexandru Ioan Cuza " University (2016)
- Vice-Rector of the "Alexandru Ioan Cuza " University, responsible for research and knowledge transfer (2012-2016).
- Dean of the Faculty of Physics of the „Alexandru Ioan Cuza” University of Iași (UAIC), 2009 – 2012
- Member of the Academic College of the UAIC.
- Member of the Commission for Quality Assurance in the UAIC (2009-2012).
- Director of the Department of Research of the the Faculty of Physics of the UAIC, 2008 – 2009.
- Chair of the Plasma of the the Faculty of Physics of UAIC, 2004 – 2008.
- Vice-dean of the the Faculty of Physics of the UAIC, 2000 – 2004.
- Member of the Senate of the UAIC, (2000 – 2004, 2009-2012).
- Secretary for science of the of the UAIC, (1997- 2000).
- Member of the Government Commission Romania-JINR Dubna (2004 - 2019).
- Member of the Romanian National Council for Research in Higher Education (2007 – 2010)
- Panel expert for project evaluation of the Romanian National Council for Research in in Higher Education.
- Panel expert for project evaluation of the Romanian Agency for Quality Assessment (2000-2009)
- European Union Expert for assesment of research projects.
- Visiting scientist at the Nagoya Institute of Technology, Japan (2001) and Hamamatsu Institute of Electronics (2001, 2008, 2015, 2019).
- Visiting Professor of the Universities of Innsbruck (Austria, 2004), Saga and Shizuoka (Japan, 2007)
- Honorary guest professor, Shizuoka University (2009-2023): Special lectures for the Shizuoka University, Doctoral school of Electronic engineering (2009-2019).
- Visiting researcher in Holland (Eindhoven University of Technology, 7 months), Germania (Albert-Ludwigs Universitaet, 1 month), Austria (Univ. Karl Franzens University in Innsbruck – 1 month)
- Visiting profesor la Karl-Franzens Universitaet Innsbruck, Austria (1 month), Shizuoka University, Japan (2 weeks), Gomel State University, Belarus (7 weeks) Special lectures for the Doctoral School of Physics, Francisk Skorina State University, Gomel, Rep. of Belarus (2014-2019).
- Visiting Scientist at DESY – HasyLab, Hamburg, Germania (Project leader in 2010).
- Manager of the post-doctoral project POSDRU 85/S/1.5/4944 (2010-2013, worth 5 000 000 EUR).
- Scientific referee for *Thin Solid Films*, *Applied Surface Science*, *Sensors and Actuators A and B*, *Materials Science and Engineering B*, *Journal of Photochemistry and Photobiology A*, *Materials Science in Semiconductor Processing*.
- Member of the European Physical Society
- Member of the American Chemical Society
- Member of the American Physical Society
- Member of the Romanian Physical Society
- No. of ISI -Thompson publications: 74 (59 after 1995)
- No. of citations in Google Scholar: 1312
- h-index: 19
- I10 index: 33

The full list of cited publication is available at: <https://scholar.google.ro/citations?user=YcftBoIAAAAJ&hl=ro>.

Research profile

The vast majority of my research publications are tied to thin films and surfaces.

1. I have initiated in Iasi the *investigation of thin ferromagnetic films of FeAl* (including the novel synthesis approach - plasma-assisted magnetron sputtering); it was subsequently documented for the synthesis of certain metal and/or compound films. My early publications tackled the subjects of *plasma-surface interaction, as reflected in thin film growth and functional properties*.

2. I have initiated the research in the field of *Surface and interface physics* at the Alexandru Ioan Cuza University of Iasi in 1996. Initially, the investigations were carried out in co-operation with the surface scientists from the Eindhoven University of Technology in the frame of COPERNICUS European Union-funded research project. Starting 2008, the investigations were relocated in Iasi in the newly founded Laboratory of surface/interface physics, on the basis of newly acquired modern equipment, as follows:

- a. XPS and Auger spectrometers – started operating in June 2018 – purchased with financial support from the World Bank (see Contracts list)
- b. PVD-assisted synthesis facility for thin film preparation (operated in DC, RF and pulsed-DC).
- c. Ellipsometric instrument for optical characterization
- d. Contact angle and surface energy characterization equipment
- e. Anodization equipment for the synthesis and modification of oxide nanotubes.

The Lab inventory was gradually completed with equipment and components acquired in the frame of research projects earned through national and international projects. The lab facilities have been using until the present time, with a significant contribution to the formation of numerous PhD students and post-doctoral researchers of the Faculties of Physics, Chemistry and Biology of Alexandru Ioan Cuza University, via free and unlimited access. Conditions were also created so far to conduct high-quality research within bilateral research with foreign universities (Shizuoka University - Japan, Gomel State University-Belarus, Moldova State University, Innsbruck University-Austria). Research in the field of Solid surfaces and interfaces was also carried out with Romanian Higher Education entities and research institutions (National Institute for Research and Development in Technical Physics, Iasi, Petru Poni Research Institute, Iasi, National Institute for Research and Development in Materials Physics, Bucharest-Magurele, Technical University of Iasi etc.

Research directions:

1. Physics of low-dimensional materials (thin films, nanotubes/nanorods, nanoparticles).
2. Basic and applied research on the physico-chemical phenomena at the plasma-solid interfaces.

ISI WoS-ranked papers published after 1995

1. M Dobromir, CT Konrad-Soare, G Stoian, A Semchenko, D Kovalenko, D Luca, *Surface Wettability of ZnO-Loaded TiO₂ Nanotube Array Layers*, *Nanomaterials*, 10(10), 2020, 1901.
2. A Ciobanu, M Luca, CT Konrad-Soare, G Stoian, D Luca, *Computer-aided detection and morphological characterization of nanotube layers using scanning electron microscopy images*, *J. Appl. Phys.* 127 (10), 2020, 105102.
3. CT Teodorescu-Soare, M Dobromir, A Ciobanu, M Luca, G Stoian, D Luca, *Synthesis and optimization of photocatalytic performance of WO₃-loaded TiO₂ nanotube array layers*, *Semicond. Sci. Technol.* 34 (7) (2019) 075027.
4. M A Ciolan, I Motrescu, K Sugiura, D Luca, M Nagatsu, *Tailoring the Surface Functionalities of Radio Frequency Magnetron-Sputtered ZnO Thin Films by Ar/NH₃ Gas Mixture Surface-Wave Plasmas*, *Langmuir* 34 (38) 2018, 11253-11263.
5. CT Teodorescu-Soare, C Catrinescu, M Dobromir, G Stoian, A Arvinte, D. Luca, *Growth and characterization of TiO₂ nanotube arrays under dynamic anodization. Photocatalytic activity*, *J. Electroanal. Chemistry* 823 2018, 388-396.
6. D Macovei, V Tiron, C Adomnitei, D Luca, M Dobromir, S Antohe, D, Mardare, *On the hydrophilicity of Ni-doped TiO₂ thin films. A study by X-ray absorption spectroscopy*, *Thin Solid Films* 657 2018, 42-49.
7. D Mardare, C Adomnitei, D Florea, D Luca, A Yildiz, *The effect of CO₂ gas adsorption on the electrical properties of Fe doped TiO₂ films*, *Physica B: Condensed Matter* 524 2017, 17-21.
8. D Mardare, C Mita, N Cornei, S Tascu, D Luca, M Dobromir, C Adomnitei, *Platinum role in hydrophilicity enhancement of Cr-doped TiO₂ thin films*, *Philosophical Magazine* 96(28) (2016) 3000-3015.
9. T Potlog, M Dobromir, D Luca, P Onufrijevs, A Medvids, A Shamardin, *Rutile to anatase phase transition in TiO₂: Nb thin films by annealing in H₂ atmosphere*, *Current Applied Physics* 16(8) (2016) 826-829.
10. M. Dobromir, R. P. Apetrei, S. Rebegea, A. V. Manole, V. Nica, and D. Luca, *Synthesis and characterization of RF sputtered WO₃/TiO₂ bilayers*, *Surf. Coat. Technol.* 285 (2016), 197-209.
11. T Potlog, P Dumitriu, M Dobromir, A Manole, D Luca, *Nb-doped TiO₂ thin films for photovoltaic applications*, *Materials & Design* 85 (2015) 558 – 563.
12. C Adomnitei, N Cornei, D Luca, I Sandu, V Vasilache, M Dobromir, D. Mardare, *The Influence of Ni doping on the Surface Wettability of TiO₂ Thin Films*, *J. Optoelect. Advanced Mater.* 17 (5-6) (2015) 889-893.
13. D Mardare, N Cornei, D Luca, M Dobromir, ȘA Irimiciuc, L Pungă, A Pui, C. Adomniței, *Synthesis and hydrophilic properties of Mo-doped TiO₂ thin films*, *J. Appl. Phys.* 115 (21) (2015) 213501.
14. AV Manole, M Dobromir, R Apetrei, V Nica, D Luca, *Surface characterization of sputtered N:TiO₂ thin films within a wide range of dopant concentration*, *Ceramics International*, 40 (7)(2014) 9989-9995.
15. M A Ciolan, I Motrescu, D Luca, M Nagatsu, *Low Temperature Plasma Functionalization of ZnO with Amine Groups for Bioapplications Digest J. Nanomat. & Biostructures (DJNB)* 115 (21) (2014) 213501.
16. M A Ciolan, I Motrescu, D Luca, M Nagatsu, *Mass spectrometric study of Ar/NH₃ surface wave plasma utilized for surface functionalization of ZnO nanoparticles*, *Japan. J. Appl. Phys.* 53 (1) (2013) 010207.
17. A V Manole, M Dobromir, M Girtan, R Mallet, G Rusu, D Luca, *Optical properties of Nb-doped TiO₂ thin films prepared by sol-gel method*, *Ceramics International* 39(5) (2013) 4771-4776.
18. C Adomnitei, D Luca, M Girtan, I Sandu, V Nica, AV Sandu, D Mardare, *Nb-doped TiO₂ thin films deposited by spray pyrolysis method*, *J. Optoelectron. Adv. Mater.* 15 (5-6) (2013) 519-522.

19. M Dobromir, AV Manole, L Ursu, C Ursu, M Neagu, D Luca, *Characterization of doped TiO₂ thin films obtained by pulsed laser deposition*, Optoelectron. Adv. Mater. - Rapid Comm. 7 (5-6) (2013), 397-401.
20. M Dobromir, AV Manole, S Rebegea, R Apetrei, M Neagu, D Luca, *Characterization of Rutile N-Doped TiO₂ Films Prepared by RF Magnetron Sputtering*, Key Engineering Materials 543 (2013) 277-280.
21. M Dobromir, AV Manole, V Nica, R Apetrei, M Neagu, D Luca, *Analyzing the Development of N-Doped TiO₂ Thin Films Deposited by RF Magnetron Sputtering*, Sensor Lett. 11 (4) (2013) 675-678.
22. D Mardare, A Yildiz, M Girtan, A Manole, M Dobromir, M Irimia, C Adomnitei, N Cornei, D Luca, *Surface wettability of titania thin films with increasing Nb content* J. Appl. Physics 112(7) (2012) Article Number: 073502.
23. D Mardare, A Yildiz, R Apetrei, P Rambu, D Florea, N G Gheorghie, D Macovei, CM Teodorescu, D Luca, *The Meyer-Neldel rule in amorphous TiO₂ films with different Fe content*, J. Mater. Res. 7 (17) 17 (2012) 2271-2277.
24. I-L Velicu, M Neagu, M Dobromir, D Luca, N Lupu, H Chiriac, and F Borza, *Structural, Magnetic and Magnetoelastic Behaviour of FeCuNbSiB Thin Films*, Sensor Lett. 10(2012) 901-904.
25. D Mardare, V Nica, V Pohoata, D Macovei, N Gheorghie D Luca, CM Teodorescu, *X-ray absorption fine structure investigations on heat-treated Cr-doped titania thin films*, Thin Solid Films 520 (4) (2011) 1348-1352.
26. C Dantus, D Timpu, D Luca, F Iacomi, *UV irradiation influence on the structural and optical properties of CdO thin films*, Eur. Phys. J. - Appl. Phys, 55 (1) (2011) 10301.
27. D I Rusu, G G Rusu, D Luca, *Structural Characteristics and Optical Properties of Thermally Oxidized Zinc Films*, Acta Physica Polonica A, 119(6) (2011) 850-856.
28. R. Frunza, D. Ricinchi, F. Gheorghiu, R. Apetrei, D. Luca, L. Mitoseriu, M. Okuyama, *Preparation and characterisation of PZT films by RF-magnetron sputtering*, J. Alloys and Compounds, 509 (21) (2011) 6242-6246.
29. M. Dobromir, G. Biliuta, D. Luca, M Aflori, V. Harabagiu, S. Coseri, *XPS study of the ion-exchange capacity of the native and surface oxidized viscose fibers*, Colloids and Surfaces A: Physicochem. Eng. Aspects 381 (2011) 106–110.
30. D. Mardare, A. Manole, A. Yildiz, and D. Luca, *Photoinduced Wettability of Titanium Oxide Thin Films*, Chem. Eng. Comm., 198 (2011) 530–540, 2011.
31. D. Crisan, N. Dragan, M. Raileanu, M. Crisan, A. Ianculescu, D. Luca, A. Nastuta, D. Mardare, *Structural study of sol-gel Au/TiO₂ films from nanopowders*, Applied Surface Science 257 (2011) 4227–4231.
32. F. Prihor Gheorghiu A. Ianculescu, P. Postolache, N. Lupu, M. Dobromir, D. Luca, L. Mitoseriu, *Preparation and properties of (1-x)BiFeO₃-xBaTiO₃ multiferroic ceramics*, Journal of Alloys and Compounds 506 (2010) 862–867.
33. C.M. Teodorescu, G. Socol, C. Negrila, D. Luca, D. Macovei, *Nanostructured thin layers of vanadium oxides doped with cobalt, prepared by pulsed laser ablation: chemistry, local atomic structure, morphology and magnetism*, J. Experimental Nanosci. 5 (6) 2010, 509–526.
34. G. G. Rusu, A. P. Râmbu, V.E. Buta, M. Dobromir, D. Luca, M. Rusu, *Structural and optical characterization of Al-doped ZnO films prepared by thermal oxidation of evaporated Zn/Al multilayered films*, Mater. Chem. Phys. 123 (2010) 314–321.
35. R. Schrittwieser, C. Ioniță, A. Murawski, C. Maszl, M. Asăndulesă, A. Năstuță, G. Rusu, C. Douat, S. B. Olenici, I. Vojvodic, M. Dobromir, D. Luca, S. Jaksch, and P. Sheier, *Cavity-hollow cathode sputtering source for titanium films*, J. Plasma Physics, 76 (2010) 655–664.
36. D Mardare, F Iacomi, N Cornei, M Girtan, and D. Luca, *Undoped and Cr-doped TiO₂ Thin Films Obtained by Spray Pyrolysis*, Thin Solid Films 518 (2010) 4586-4589.
37. A. Manole, V. Dascaleanu, M. Dobromir. D. Luca, *Combining degradation and contact angle data in assessing the photocatalytic TiO₂:N surface*, Surface and Interface Analysis, 2010, 42, 947–954.
38. R. Apetrei, C. Catrinescu, D. Mardare, C.M. Teodorescu, D. Luca, *Photo-degradation activity of sputter-deposited nitrogen – doped titania thin films*, Thin Solid Films 518(4) (2009) 1040-1043.

39. N. Iftimie, D. Luca, F. Iacomi, M. Girtan D, Mardare, *Gas sensing materials based on TiO₂ thin films*, J. Vac. Sci. Technol. B 27(1) (2009), 538.
40. D. Mardare, N. Iftimie, D. Luca, *TiO₂ Thin Films as Sensing Gas Materials*, Journal of Non-Crystalline Solids, 354 (2008) 4396–4400.
41. D. Crisan, N. Dragan, M. Crisan, M. Raileanu, A. Braileanu, M. Anastasescu, A. Ianculescu, D. Mardare, D. Luca, V. Marinescu, A. Moldovan, *Crystallization study of sol – gel undoped and Pd-doped TiO₂ materials*, J. Phys. Chemistry of Solids 69 (2008) 2548– 2554.
42. D. Mardare, F. Iacomi, D. Luca, *Substrate and Fe-Doping Effects on the Hydrophilic Properties of TiO₂ Thin Films*, Thin Solid Films, 515 (2007) 6474–6478.
43. D. Mardare, D. Luca, C.-M. Teodorescu, D. Macovei, *On the Hydrophilicity of Nitrogen-Doped TiO₂ Thin Films*, Surface Science 601 (2007) 4515–4520).
44. D. Luca, C.-M. Teodorescu, R. Apetrei, D. Macovei, D. Mardare, *Preparation and Characterization of Increased-Efficiency Photocatalytic TiO_{2-2x}N_x Thin Films*, Thin Solid Films 515 (2007) 8606-8610.
45. M. Purica, F. Iacomi, C. Baban, P. Prepelita, N. Apetroaei, D. Mardare, D. Luca, *Investigation of Structural properties of ITO thin films deposited on different substrates*, Thin Solid Films 515 (2007) 874-878.
46. D. Luca, D. Macovei, C.M. Teodorescu, *Characterization of Titania Thin Films Prepared by Reactive Pulsed-Laser Ablation*, Surface Science, 600(18) (2006) 4342-4346.
47. D. Luca, D. Mardare, F. Iacomi, C. M. Teodorescu, *Increasing Surface Hydrophilicity of Titania Thin Films by Doping*, Appl. Surf. Sci. 252 (2006) 6122-6126.
48. R. Apetrei, D. Alexandroaei, D. Luca, P. Balan, C. Ionita, R. Schrittwieser, and G. Popa, *OES Diagnostic of the Discharge Plasma in a Hollow-Cathode Sputtering Source*, Japanese Journal of Applied Physics, 45(10B) (2006) pp. 8128 – 81310.
49. C.M. Teodorescu, D. Luca *Comparative Study of Magnetism and Interface Composition in Fe/GaAs(100) and Fe/InAs(100)* Surf. Sci. 600(18) (2006) 4200-4204.
50. R. Apetrei, D. Alexandroaei, D. Luca, P. Balan, C. Ionita, R. Schrittwieser, and G. Popa, *Pulsed Regime of a Hollow-Cathode Discharge Used in a Sputter Source*, Japanese J. Appl. Phys. 45(10B) (2006) 8132-8136.
51. P. C. Balan, R. Apetrei, D. Luca, C. Ionitã, R. Schrittwieser, G. Popa, *Electrical and Optical Diagnosis of a Cavity Hollow-Cathode Post-Discharge Used as a Sputtering Source*, J. Optoel. Adv. Mater. 7 (2005) 2459 – 2464.
52. D. Luca, *Preparation of TiO_x thin films by reactive pulsed-laser ablation*, J. Optoel. Adv. Mater. 7 (2) (2005) 625-630.
53. D. Luca and L.-S Hsu, *Structural evolution and optical properties of TiO₂ thin films prepared by thermal oxidation of Ti films*, J. Optoel. Adv. Mater. 5 (4) (2003) 835-840.
54. L.-S. Hsu, D. Luca, *Substrate and annealing effects on the pulsed-laser deposited TiO₂ thin films*, J. Optoel. Adv. Mater. 5 (4) (2003) 841-847.
55. L.-S Hsu, C.-J. Liu, T.-W. Wu, D. Luca, *Substrate and oxygen-annealing effects on the pulsed-laser deposited La_{0.5}Ca_{0.5}Mn_{1-x}M_xO₃ (M=Fe, Ni) thin films*, J. Optoel. Adv. Mater. 5 (2) (2003) 409-414.
56. D. Luca, A. W. Denier van der Gon, V. Anita, M. W. G. Ponjée, H. H. Brongersma, G. Popa, *Surface nitridation processes and non-linear behaviour of the reactive magnetron discharge with titanium target – Vacuum*, 61 (2001) 163-167.
57. V. Anita, D. Luca, V. Hodoroaba, Gh. Popa, *Ti-N thin layer deposition using the magnetron discharge*, Vacuum 47(9) (1996) 1103-1104.
58. V. Tutovan, D. Luca, *The magnetic behaviour of Fe₃Al thin films obtained by cathodic sputtering*, Appl. Surf. Sci. 65/66, (1996) 145-148.
59. D. Luca, M. Sorohan, *Rotational hysteresis and magnetization curling of Fe-Al thin films obtained by magnetic sputtering – J. Mag. Magnet. Mater.*, 148 (1995) 104-105.

Non-ISI ranked publications in international journals (after 2012, selection)

1. M. Dobromir, A.V. Manole, S. Rebegea, R. Apetrei, M. Neagu, D. Luca, [Characterization of Rutile N-Doped TiO₂ Films Prepared by RF Magnetron Sputtering](#), Key Engineering Materials 543 (2013) 277-280.
2. M. Dobromir, A.V. Manole, V. Nica, R. Apetrei, M. Neagu, D. Luca, [Analyzing the Development of N-Doped TiO₂ Thin Films Deposited by RF Magnetron Sputtering](#), Sensor Lett. 11 (4) (2013) 675-678.
3. Ioana-Laura Velicu, Maria Neagu, M. Dobromir, D. Luca, N. Lupu, H. Chiriac, F. Borza, *Structural, Magnetic and Magnetoelastic Behaviour of FeCuNbSiB Thin Films*, Sensor Lett. 10, 901-904 (2012).
4. D. Mardare, A. Manole, A. Yildiz, and D. Luca, *Photoinduced Wettability of Titanium Oxide Thin Films*, Chem. Eng. Comm., 198 (2011) 530–540, 2011 .
5. S. Raevschi, V. Botnariuc, L. Gorceac, T. Potlog, M. Dobromir, D. Luca , *X-Ray Photoelectronic Spectroscopy of GaN, AlGaIn Layers, Grown on Silicon by the Chemical Transport Reactions Method*, Capitol in vol. 55 al [IFMBE Proceedings](#) pp 56-59, Online ISBN: 978-981-287-736-9, Springer Singapore.
6. T. Potlog, V. Botnariuc, S. Raevschi, M. Dobromir, D. Luca, *3-rd International Conference on Nanotechnologies and Biomedical Engineering, XRD and XPS of Cd₂SnO₄ Thin Films Obtained by Spray Pyrolysis*, Capitol in vol. 55 al [IFMBE Proceedings](#) pp 44-46, Online ISBN: 978-981-287-736-9, Springer Singapore.
7. A. Rogachev, D. Luca, V. Gaishun, A. Semchenko, V. Sidsky, O. Tyulenkova, D. Kovalenko, *Sol-Gel Synthesis of Functional Nanostructured Materials for Electronic Devices*, Advanced Materials Research, vol. 1117, pp. 164-167.
8. M. Dobromir, R. P. Apetrei, A.V. Rogachev, D. L. Kovalenko, D. Luca, *Synthesis and Characterization of Nb-Doped TiO₂ Thin Films Prepared by RF Magnetron Sputtering*, Advanced Materials Research, vol. 1117, pp. 139-142.
9. A. V. Rogachev, D. L. Kovalenko, V. Gaishun, D. L. Gorbachev, V. V. Vaskevich, M. Dobromir, D. Luca, A.S. Chirtsov, *Vacuum-Plasma Synthesis of Functional Coatings Using Targets Obtained by the Sol-Gel Method*, Advanced Materials Research, Vol. 1117, pp. 156-158, 2015.
10. T. Potlog, D. Duca, M. Dobromir, R. Apetrei, D. Luca, *Characterization of transparent and conducting doped titanium dioxide for energy conversion*, EPFL-CONF-213289, pp 57-62, 2015 Lausanne, Switzerland.
11. M. Dobromir, A. Manole, R. Apetrei, D. Luca *Characterization of RF-sputtered ultra-thin WO₃ films grown on TiO₂ surface*, - NSTI-Nanotech 2013, Washington DC, USA, ISBN: 978-1-4822-0581-7, pp 198-201.
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1. [Local Ordering at the Interface of the TiO₂-WO₃ bi-layers](#), authors D Macovei, V Dăscăleanu, CM Teodorescu, D Luca, Chapter 10 in vol. *Nanostructures and Thin Films for Multifunctional Applications*, 317-331, [I. Tiginyanu](#), [P. Topala](#) and [V. Ursaki](#) (eds), **Springer International Publishing**, doi:10.1007/978-3-319-30198-3_10.
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2. D. Luca, C. Stan - *Mecanica mediilor continui* Ed. STEF, 2006, 228 pages, ISBN 978-973-8961-48-7.
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5. D. Alexandroaei, D. Creanga, M. Delibas, D. Dorohoi, G. Leu, E. Lozneau, D. Luca, M. Postolache, V. Scutaru, C. Stan, A. Tîmpu, D. Tîmpu - *Experimente de fizica generala si biofizica*, Ed. Univ. Al. I. Cuza Iasi, 2000, 228 pages.

R/D Project/grants

No.	Project/ Program	Position	Period	Worth/
1	PN-II 71-63 (MAMAINCOPAE) Materiale cu magnetizare controlata, indusa prin parametri externi	scientific advisor on behalf of sub-contractor, UAIC-lasi	2007-2010	300 000 RON
	CEEX CLUMAGIN (CEX 05-D11-32) Magnetismul clusterilor in interactiune: procese fundamentale si aplicatii.	co-director in consortium on behalf of sub-contractor, UAIC- lasi	2005 -2008	195 000 RON
2	CEEX – NANOTICATPOL (CEX PC-D04-PT04-106) Nanomateriale si filme nanostructurate pe baza de TiO ₂ pentru aplicatii fotocatalitice in domeniul degradarii compusilor organici poluanti ai mediului.	co-director in consortium on behalf of sub-contractor, UAIC- lasi	2005 -2008	150 000 RON
3	CERES 4-67/2004 Studiul efectelor dopării asupra proprietăților fotocatalitice ale TiO ₂	co-director in consortium on behalf of sub-contractor, UAIC- lasi	2004 -2006	55 000 RON
4	CERES 4-100/2004 Studiul dinamicii proceselor de condensare a clusterilor in mediu de plasma folosind spectrometria time-of-flight	co-director in consortium on behalf of sub-contractor, UAIC- lasi	2004 -2006	40 000 RON
5	Grant CNCSIS Cercetari privind obtinerea unor sisteme magnetice nanoscopice folosind tehnologii cu plasma	Director	1999	90 MROL
6	<i>Growth and Characterization of Low-dimensional TiO_xN_y Structures</i> Research project founded by the National Council of Research of Taiwan – ROC (NSC-92-2811-M-018-002)	Director	2003-2004	350 000 USD
7	CEEX -FOTONTECH <i>Dezvoltari de tehnologii mixte pentru micro/nano structuri si sisteme fotonice integrate cu aplicatii in comunicatii</i>	Member of the research team	2005 - 2008	100 000 RON
8	Proiect INFRAATECH <i>Laborator de criogenie</i> (proprietate a Univ. Al. I. Cuza Iasi în cadrul Parcului tehnologic Tehnopolis Iași).	Member of the research team	2005 - 2006	160 000 RON
9	Grant CNCSIS 1148 tema nr.2 <i>Cercetari asupra proprietatilor straturilor subtiri micro si nanostructurate de oxizi de titan cu aplicatii in ecologie</i>	Member of the research team	2006-2009	25 000 RON

10	CEEX – GASCOMET <i>Cercetari privind chimizarea produsului gazos obtinut prin co-gazeificare pentru obtinerea de gaz cu continut ridicat de metan utilizat drept gaz de oras</i>	Member of the research team	2006 - 2008	250 000 RON
11	CEEX EPintel (Contract M1-C2-6060) <i>Fundamentarea sinergiei dirijate a nano/microcomponentelor integrate in materiale textile compozite in scopul asigurarii unor functii inteligente ale echipamentelor de protectie in medii agresive.</i>	Member of the research team	2006 - 2009	180 000 RON
12	EU COPERNICUS PROJECT ERB CIPA CT 94 0224 <i>Development of in-situ monitoring for the control of advanced surfaces and materials processing systems.</i>	Administrator, Member of the research team	1995 - 1998	40 212 ECU
13	EU PECO PROJECT - CT92-4034, Basic research in low-temperature discharges in view of further technological applications.	Member of the research team	1993 - 1996	11 250 ECU
14	Grant CNCISIS nr. 39702 – World Bank: <i>Investigation of low-temperature plasma properties as reflected in certain technological applications.</i>	Member of the research team	1998 - 2002	100 000 USD
15	Grant CNCISIS nr. 39699 Banca Mondială: Developing Master and PhD programs in the field of plasma physics in „Al. I. Cuza” University, Iasi, Romania.	Member of the research team	1998 - 2002	150 000 USD
16	Contract 37121/2000 Tema 18 <i>Studiul proprietatilor plasmei de temperatura joasa produsa in amestecuri de gaze reactive</i>	Member of the research team	1999 - 2001	100 000
17	Proiect MCT, Contracte cu nr: S1035/1996, 942/1996, 556/1996 <i>Fenomene de suprafata produse prin actiunea plasmei si a altor medii active. Elaborarea de sisteme si metode noi de tratament de suprafata si studiul proprietatilor acestora</i>	Member of the research team	1996-1998	30 mill. ROL
18	Contract de cercetare nr. 65/24.06.1992 <i>Lucrări de cercetare fundamentală și aplicativă în colaborare cu Laboratorul Internațional de Supraconductibilitate și electronica corpului solid din Chișinău, Rep. Moldova</i>	Member of the research team	1992-1996	5.5 mill. ROL

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