

CURRICULUM VITAE

SURNAME: Dinescu

FIRST NAME (s): Maria

Affiliation and official address: National Institute for Lasers, Plasma and Radiation Physics, (NILPRP),
PO Box MG-16, RO-77 125 Magurele, Bucharest , Romania

Tel: +4021 457 44 14; **Fax:** +4021 457 42 43

Date and place of birth: 10.09 1954, Calimanesti, Romania

Nationality: Romanian

Education (*degrees, dates, universities*)

- **PhD Thesis:** Institute of Atomic Physics, Lasers Department, "Technological Applications of Lasers: Laser Oxidation and Laser Induced Periodical Structures"
- **Bachelor of Science in Physics (B.Sc., 1978, degree: Laser, Plasma , Spectroscopy)** University of Bucharest, Romania

Career/Employment (*employers, positions and dates*)

- **June 1999- present: Senior scientist Ist degree, Lasers Department, National Institute of Lasers, Plasma and Radiation Physics, Bucharest**
- 1992- June 1999: Senior scientist IInd degree, Lasers Department, National Institute of Lasers, Plasma and Radiation Physics, Bucharest
- 1978-1992: Researcher scientist, Lasers Department, Institute of Atomic Physics, Bucharest

Languages: English, French, Italian, Romanian

Specialization

(i) main field

Photonics, Laser Materials Processing (ceramics, metals, polymers), Thin Film Growth, PLD, MAPLE, LIFT, Nanomaterials and Nanoparticles, Patterning

ii) other fields: Material Characterization Techniques (AFM, XPS, SIMS, XRD)

iii) Current research interest: 1) Photonics; 2) Laser processing of thin films and heterostructure, laser printing, laser patterning: composite materials, metals, polymers, ferroelectrics, biocompatible; 3) Laser interaction with soft material; 4) Nanoscience, carbon based nanostructures

Honours, Awards, Fellowships, Membership of Professional Societies

- **Dragomir Hurmuzescu award of the Romanian Academy (1982)**
- **Invited Professor:** i) University of Linz, Inst. of Applied Physics (two semesters); ii) Polytechnic Institute, "Ecole des Mines" Nancy, France (8 months)
- Stages in Italy (Institute of Acoustics CNR Rome, University of Rome "La Sapienza", University of Lecce), France (University of Orleans, GREMI, etc)
- **Member of :**
 - **European Physical Society (EPS)**
 - **The International Society for Optical Engineering (SPIE)**
 - **European Optical Society (EOS)**
 - **Material Research Society (MRS)**

1. **Co-Director: 5th Intl. School “Laser Intl. School on Lasers in Materials Science”** S. Servolo (Venice, Italy) July 10-17, **2016**
2. **Co-Director: 2nd Intl. School “Laser-Surface Interactions for New Materials Production”** S. Servolo (Venice, Italy), July 11-18, **2010**
3. **Director: NATO-Advanced Research Workshop (ARW): “Piezoelectric Materials: Advances in Science, Technology and Applications”**, Predeal, Romania, May 24-27, **1999**

Co-Chair of International Conferences:

E-MRS

1. E-MRS Symposium V, Stress, structure, and stoichiometry effects on the properties of nanomaterials III, September **2015**, Warsaw, Poland.
2. E-MRS Symposium V, Laser materials processing for micro and nano-applications, May **2012**, **Strasbourg, France**
3. E-MRS Symposium “Photon-Assisted Synthesis and Processing of Materials in Nano-Microscale”, June **2006**, Nice, France
4. Advanced Laser Technologies (ALT’06), Brasov **2006**, Romania
5. MRS Symposium “Advanced Optical Processing of Materials”, April **2003**, San Francisco, USA
6. Advanced Laser Technologies (ALT’01), September **2001**, Constanta, Romania,

Participation to International Projects:

- Romanian-Swiss Research Programme (RSRP); „**Small band-gap nanostructured perovskite materials for photovoltaic and photocatalytic hydrogen generation applications**” (2013-2016)
- Romanian Coordinator of FP 7, FP7-ICT-2009-4-247868, e-LIFT “**Laser printing of organic/inorganic material for the fabrication of electronic devices**” project, (2010-2012)
- NATO-SfP Project Co-Director 982671 project, **Polymers based piezoelectric sensor array for chemical warfare agents detection**, (2007-2011)
- Romanian Coordinator of FP 6, NMP3-CT-2006-033297, 3D-DEMO, **Single step 3D DEposition of complex nanopatterned Multifunctional Oxides thin films**, project (2006-2010)
- Romanian Coordinator of **FP 5 IST –2001-33326 “Piezoelectric sensor arrays for biomolecular interactions and gas monitoring” (PISARRO)** project (2002-2004)
- **NATO Linkage grant "Growth of Ferroelectric Thin Films by fs Pulsed Laser Deposition"** (2003-2005)
- **NATO SfP Co-Director of the Project 97-1934, “ Laser Based Clean Technologies for Smart Sensor Applications”**, (1999-2002)

Publications

- **Number of papers in refereed journals:** more than 300, with more than 1900 citations (without self citations)

- **Number of communications to scientific meetings:** more than 300

- **Hirsh factor:** 24

- **Number of books:** **Co-Editor of seven books**

1. Applied Surface Science Vol 396C, E-MRS 2015 Symposium V, “Stress, structure and stoichiometry effects on the properties of nanomaterials”, (2017)
2. Applied Surface Science Vol 278, E-MRS 2012 Symposium V, “Laser materials processing for micro and nano-applications”, (2013)
3. **E-MRS Symposim Proceedings vol 197**, “Photon Assisted Synthesis and Processing of Functional Materials”, Eds. Maria Dinescu, Hiroshi Fukumura, Henry Helvajian, Eric Millon, Tamas Szorenyi, Elsevier B.V. (2007)
4. **PROCEEDING SPIE Vol. 6606**, Eds. D.C. Dumitras, Maria Dinescu, V.I Konov, (2007)
5. **MRS Symposium Proceedings Vol. 780**, Advanced Optical Processing of Materials, Eds. D.B. Chrisey, Maria Dinescu, I.W. Boyd, A.V. Rode, (2003)
6. **PROCEEDING SPIE, Vol. 4762**, Eds. D.C. Dumitras, Maria Dinescu, V.I Konov, (2002)

7. **NATO-ASI, 3-Vol. 76**, “Piezoelectric materials: Advances in Science Technology and Applications”, Eds. Carmen Galassi, M. Dinescu, K. Uchino, M. Sayer, Kluwer Academic Publisher, (2000)

Chapter in books:

1. Filipescu M., PallaPapavlu A., Dinescu M., Chapter: Functional metal oxide thin films grown by pulsed laser deposition, Book: Crystalline and Non-crystalline Solids InTech, ISBN 978-953-51-4721-3(2016)
2. V. Dinca, L. E. Sima, L. Rusen, A. Bonciu, T. Lippert, M. Dinescu, M. Farsari, CHAPTER 9: Bio-Interfaces Engineering Using Laser-Based Methods for Controlled Regulation of Mesenchymal Stem Cell Response In Vitro, Book title: Recent Advances in Biopolymers, Publisher: InTech, Pages 1-32, (2016)
3. Vasilescu, A., Dinca, V., Filipescu, M., Rusen, L., Hosu, I.S., Boukherroub, R., Szunerits, S., Dinescu, M., Peteu, S.F. Chapter 9: Recent approaches to enhance the selectivity of peroxyxynitrite detection, Book: Peroxyxynitrite Detection in Biological Media: Challenges and Advances, RSC Detection Science, Pages: 166-185 (2015)
4. N.D. Scarisoreanu, M. Dinescu, F. Craciun, Multifunctional oxides obtained by PLD: Applications as ferroelectric and piezoelectric materials, Lasers in Materials Science, Chapter 10, *Springer Series in Materials Science 191*, Pages 227-259 (2014)
5. N. D. Scarisoreanu, R. Birjega, A. Andrei, M. Dinescu, F. Craciun ,C. Galassi, Phase Transitions, Dielectric and Ferroelectric Properties of Lead-free NBT-BT Thin Films, Materials Science, "Advances in Ferroelectrics", Chapter 16, book edited by Aimé Peláiz Barranco, ISBN 978-953-51-0885-6 (2012)
6. P.M. Ossi and M. Dinescu, “Ch. 7, Creating nanostructures with lasers” in *Springer series in Material Science 139*, Laser Processing of Materials: Fundamentals, Applications, and Developments, Peter Schaaf, Pages :105-139, (2010)
7. M. Dinescu, PLD of Piezoelectric and Ferroelectric Material, in *Springer series in Material Science, 130*, "Laser - Surface Interactions for New Materials Production, P.M.Ossi and A. Miotello, Pages :323-347 (2009)
8. F. Craciun and M. Dinescu, “Pulsed Laser Deposition of Piezoelectric Thin Films” in R.W. Eason, (eds.), Pulsed Laser Deposition of Thin Films, *John Wiley& Sons*, New York, Pages: 487-533 (2007)
9. F. Craciun, P. Verardi, M. Dinescu, “Piezoelectric thin films: processing and properties”, Handbook of Thin Film Materials, Vol. 3. Ferroelectric and Dielectric Thin Films, Ed- H.S. Nalwa, Academic Press, Pages: 231-309 (2002)

Scientific coordination of:

- 12doctorate thesis
- 25 Master of Science thesis
- 40 graduating theses

Co-Editor: *Applied Surface Science* (since 2014)

Selected publications: 2015-2017

1. N. D. Scarisoreanu, F. Craciun, V. Ion, R. Birjega, A. Bercea, V. Dinca, M. Dinescu, L. E. Sima, M. Icriverzi, A. Roseanu, L. Gruionu, and G. Gruionu, *Lead-Free Piezoelectric (Ba,Ca)(Zr,Ti)O₃ Thin Films for Biocompatible and Flexible Devices*, **ACS Appl. Mater. Interfaces**, 9 (1), pp 266–278, (2017)
2. Palla-Papavlu, A; Filipescu, M; Schneider, CW; Antohe, S; Ossi, PM; Radnoczi, G; Dinescu, M; Wokaun, A; Lippert, T, “*Direct laser deposition of nanostructured tungsten oxide for sensing applications*”, **JOURNAL OF PHYSICS D-APPLIED PHYSICS**, 49, 20, Page 5101 (2016)
3. Scarisoreanu, ND; Craciun, F; Birjega, R; Ion, V; Teodorescu, VS; Ghica, C; Negrea, R; Dinescu, M, “*Joining Chemical Pressure and Epitaxial Strain to Yield Y-doped BiFeO₃ Thin Films with High Dielectric Response*”, **SCIENTIFIC REPORTS**, Volume: 6, Page 25535, (2016)
4. Mihailescu, M; Paun, IA; Zamfirescu, M; Luculescu, CR; Acasandrei, AM; Dinescu, M, “*Laser-assisted fabrication and non-invasive imaging of 3D cell-seeding constructs for bone tissue engineering*”, **JOURNAL OF MATERIALS SCIENCE**, 51, 9, Pages: 4262-4273 (2016)

5. Barca, ES; Filipescu, M; Luculescu, C; Birjega, R; Ion, V; Dumitru, M; Nistor, LC; Stanciu,; Abrudeanu, M; Munteanu, C; Dinescu, M, "Pyramidal growth of ceria nanostructures by pulsed laser deposition", **Applied Surface Science**, 363, Pages: 245-251 (2016)
6. Maria Verrastro, Nunzia Cicco, Fabiana Crispo, Antonio Morone, Maria Dinescu, Marius Dumitru, Fabio Favati, Diego Centonze, ,, *Amperometric biosensor based on Laccase immobilized onto a screen-printed electrode by Matrix Assisted Pulsed Laser Evaporation* " **Talanta**, 154, Pages 438–445, (2016)
7. Paun, IA; Acasandrei AM; Luculescu, CR; Mustaciosu, CC; Ion, V; Mihailescu, M; Vasile, E; Dinescu, M; "MAPLE deposition of polypyrrole-based composite layers for bone regeneration" **Applied Surface Science**, (357) Part A, Pages:975–984 (2015)
8. Scarisoreanu, ND; Craciun, F; Moldovan, A; Ion, V; Birjega, R; Ghica, C; Negrea, RF; Dinescu, M; "High Permittivity $(1-x)Ba(Zr_{0.2}Ti_{0.8})O_{3-x}(Ba_{0.7}Ca_{0.3})TiO_3$ ($x=0.45$) Epitaxial Thin Films with Nanoscale Phase Fluctuations"; **ACS Appl. Mater. Interfaces**, 7 , Pages: 23984-23992 (2015)