

## CURRICULUM VITAE

**Prenume:** Lucian

**Nume de familie:** Pintilie

**Data nasterii:** 30 septembrie 1959

**Locul nasterii:** BACAU, ROMANIA.

**Nationalitatea:** Romana

**Statutul civil:** casatorit, 2 copii

**Adrese:** **Locul de munca:** INCDFM, str. Atomistilor 105bis, Magurele, jud. Ilfov, Romania, Tel: 021-3690170; Fax: 021-3690177; E-mail: [pintilie@infim.ro](mailto:pintilie@infim.ro)

**Acasa:** str.Alunis nr. 10, Magurele, jud. Ilfov, Romania.

### Studii:

**1979-1984:** Facultatea de Fizica a Universitatii Bucuresti, specialitatea “Fizica materialelor”. Absolvita in 1984. Proiect de diploma cu titlul: “Detectori piroelectrici de IR”.

**1995:** Doctorat in Fizica, specialitatea Fizica Solidului. Titlul tezei de doctorat: “Materiale ceramice de tip perovskit cu factor de merit ridicat si aplicatii in detectia radiatiei infarosii”.

### Cariiera profesionala:

**1984-1987:** stagiar la Combinatul Chimic Giurgiu; detasat in timpul stagiului pentru a lucra in INCDFM (pe atunci IFTM – Institutul de Fizica si Tehnologia Materialelor)

**1987:** angajat prin concurs in INCDFM (fost IFTM), pe postul de inginer fizician

**1988:** promovat concursul de inginer tehnolog, functie echivalata dupa 1990 cu cea de cercetator stiintific

**1987-1994:** cercetator in grupul de materiale feroelectrice si detectori piroelectrici

**1994-1997:** cercetator in grupul de straturi subtiri fotoconductive

**1995-1998:** cercetator principal III (CP III)

**1997-2004:** sef al laboratorului de “Fizica semiconductorilor si structurilor complexe”

**1998-2001:** cercetator principal II (CP II)

**2001-2008:** CS I in laboratorul de “Fizica semiconductorilor si structurilor complexe”

**2008:** nimit Director General al Institutului National de Cercetare-Dezvoltare pentru Fizica Materialelor, Bucuresti-Magurele, in urma castigarii concursului organizat de ANCS pentru ocuparea acestui post.

### Stagii de lucru internationale:

**1997:** 3 luni la Institutul Max Planck pentru Fizica Microstructurilor din Halle, Germania; studiul proprietatilor fotoelectrice in straturi subtiri feroelectrice

**2001-2002:** 13 luni „visiting scientist” la Institutul pentru Cresteri de Cristale din Berlin, Germania; studiul nivelelor de captura in monocristale si straturi epitaxiale de SiC folosind metoda DLTS (Deep Level Transient Spectroscopy)

**2002-2003:** bursa NATO de un an la Universitatea do Minho, Braga, Portugalia; investigarea proprietatilor electrice in straturi feroelectrice policristaline de tip PZT

**2003-2007:** cercetator asociat la Institutul Max Planck pentru Fizica Microstructurilor din Halle, Germania; investigarea proprietatilor electrice si fotoelectrice in straturi subtiri, multistraturi si super-retele feroelectrice

### Sinteza activitatii stiintifice:

- 16 proiecte de cercetare, din care 8 conduse in calitate de director de proiect
- 1 bursa NATO castigata prin concurs
- 13 lectii invitate la conferinte internationale organizate in tara si strainatate
- 131 publicatii din care:
  - 86 lucrari in jurnale cu factor de impact ISI
  - 4 lucrari/capitole in volume cu ISBN sau ISSN
  - 14 lucrari in jurnale fara factor de impact ISI
  - 27 lucrari in volume ale unor conferinte nationale si internationale
- 4 brevete acordate
- 5 omologari de produse
- peste 580 de citari, excluzand autocitatile
- factor Hirsh 13 (la 13 martie 2009)
- factor individual de impact din lucrari si citari mai mare de 100

#### a) Asociatii profesionale:

Membru al "Societatii Romane de Crestere a Cristalelor-Stiinta Materialelor"  
Membru al „Societatii Romane de Fizica”

#### b) Alte activitati:

Indrumator proiecte de diploma pentru studenti  
Referent la: Applied Physics Letters, Thin Solid Films, Physica Status Solidi, Microelectronic Engineering, Chemistry of Materials, Materials Science and Engineering B, Journal of Materials Science, Journal of Crystal Growth, Optical Materials, Journal of Physics D: Applied Physics, Applied Physics A, etc.

#### c) Premii si distinctii:

Diploma de excelenta in cercetare pe anul 2000 acordata de ANSTI.

### Experiența acumulată în programe de cercetare naționale/internaționale

Program /Proiect	Funcția( Membru in echipa de cercetare, Director de proiect in calitate de coordonator, Responsabil stiintific din partea partenerului P1.....din consortiu )	Perioada: dela..până la...	Valoarea pe întreaga perioadă, care revine instituției din care face parte candidatul
Proiect NATO "Science for Peace" SfP-971970-INOWATE "Integrated Optoelectronic Circuits for Infrared Wavelength Telecommunication"	Co-director	1999-2004	100000 USD+2,8 miliarde cofinantare CORINT
Grant MCT "Studiul proprietatilor fotoelectrice ale heterostructurilor feroelectric-fotoconductor"	Director de proiect	1996-1997	1 milion ROL
Grant Academie "Studiul fenomenelor fizice la interfata feroelectric/semiconductor in heterostructuri BiTiO/Si" 3050GR/2.12.97	Director de proiect	1997-1998	1 milion ROL
Proiect RELANSIN "Dispozitiv	Director proiect	2000 –	1.2 miliarde ROL

inteligent în infraroșu destinat aplicațiilor de monitorizare și control a particulelor în suspensie sau a umezelii în materiale granulare” 681/2000		2002	
Proiect CERES : “Procese electronice in structuri de detectie a radiatiei corpusculare si luminoase” (Percol)	Director de proiect	2002-2004	2.1 miliarde ROL
Proiect CERES : «Mecanisme fizice de detectie si metode de masura asociate pentru domeniul infrarosu »	Director de proiect	2002 – 2004	2.3 miliarde ROL
Proiect CERES: “Fenomene polare si transport de sarcina in straturi micro si nanostructurate feroelectrice” (POLTRANSF)	Director de proiect	2004-2006	1,1 miliarde ROL
Proiect CEEEX: Fenomene complexe si efecte de dimensiune in straturi subtiri nanostructurate cu proprietati feroelectrice si feroice (DINAFER)- DINAFER-2-CEEEX-06-11-44	Director de proiect	2006 – 2008	15 miliarde ROL

#### Lista selectiva de lucrari

Nr. Crt.	Titlul articolului; autorii, subliniindu-se candidatul; denumirea revistei; vol.(nr.); pagina de început - pagina de sfârșit; anul;
1	The influence of the top-contact metal on the ferroelectric properties of epitaxial ferroelectric Pb(Zr <sub>0.2</sub> Ti <sub>0.8</sub> )O <sub>3</sub> thin films Author(s): <b>Pintilie L.</b> , Vrejoiu I, Hesse D, M. Alexe, Source: <b>JOURNAL OF APPLIED PHYSICS</b> Volume: <b>104</b> Issue: <b>11</b> Article Number: <b>114101</b> Published: <b>DEC 1 2008</b>
2	Structural and multiferroic properties of epitaxial $\gamma$ -Fe <sub>2</sub> O <sub>3</sub> -BiFeO <sub>3</sub> /Bi <sub>3.25</sub> La <sub>0.75</sub> Ti <sub>3</sub> O <sub>12</sub> composite bi-layers; O. Gautreau, C. Harnagea, L. Gunawan, G. A. Botton, F. Normandin, T. Veres, <b>L.Pintilie</b> , M. Alexe and A. Pignolet, <b>J. PHYS. D: APPL. PHYS.</b> 41 (2008) 112002 (6pp)
3	Capacitance tuning in antiferroelectric-ferroelectric PbZrO <sub>3</sub> -Pb(Zr <sub>0.8</sub> Ti <sub>0.2</sub> )O <sub>3</sub> epitaxial multilayers 013003; <b>Pintilie, L.</b> , Boldyreva, K., Alexe, M., Hesse, D.; <b>NEW JOURNAL OF PHYSICS</b> Volume 10, 14 January 2008
4	Coexistence of ferroelectricity and antiferroelectricity in epitaxial PbZrO <sub>3</sub> films with different orientations; <b>Lucian Pintilie</b> , Ksenia Boldyreva, Marin Alexe, and Dietrich Hesse <b>J. APPL. PHYS.</b> <b>103</b> , 024101 (2008)
5	Erratum: “Thickness-driven antiferroelectric-to-ferroelectric phase transition of thin PbZrO <sub>3</sub> layers in epitaxial PbZrO <sub>3</sub> /Pb(Zr <sub>0.8</sub> Ti <sub>0.2</sub> )O <sub>3</sub> multilayers” [Appl. Phys. Lett. 91, 122915 (2007)]; Ksenia Boldyreva, <b>Lucian Pintilie</b> , Andriy Lotnyk, I. B. Misirlioglu, Marin Alexe, and Dietrich Hesse <b>APPL. PHYS. LETT.</b> 91, 209901 (2007)
6	Antiferroelectric hysteresis loops with two exchange constants using the two dimensional Ising model; I. B. Misirlioglu, <b>L. Pintilie</b> , K. Boldyreva, M. Alexe, and D. Hesse <b>APPL. PHYS. LETT.</b> <b>91</b> , 202905 (2007)
7	Thickness-driven antiferroelectric-to-ferroelectric phase transition of thin PbZrO <sub>3</sub> layers in epitaxial PbZrO <sub>3</sub> /Pb(Zr <sub>0.8</sub> Ti <sub>0.2</sub> )O <sub>3</sub> multilayers; Ksenia Boldyreva, <b>Lucian Pintilie</b> , Andriy Lotnyk, I. B. Misirlioglu, Marin Alexe, and Dietrich Hesse <b>APPL. PHYS. LETT.</b> <b>91</b> , 122915 (2007)
8	Microstructure and electrical properties of (120) <sub>O</sub> -oriented and of (001) <sub>O</sub> -oriented epitaxial antiferroelectric PbZrO <sub>3</sub> thin films on (100) SrTiO <sub>3</sub> substrates covered with different oxide bottom electrodes; Ksenia Boldyreva, Dinghua Bao, Gwenaél Le Rhun, <b>Lucian Pintilie</b> , Marin Alexe, and

	Dietrich Hesse <b>J. APPL. PHYS.</b> <b>102</b> , 044111 (2007)
9	Space charge contribution to the apparent enhancement of polarization in ferroelectric bilayers and multilayers; I. B. Misirlioglu, M. Alexe, <b>L. Pintilie</b> , and D. Hesse <b>APPL. PHYS. LETT.</b> <b>91</b> , 022911 (2007)
10	Extrinsic contributions to the apparent thickness dependence of the dielectric constant in epitaxial Pb(Zr,Ti)O <sub>3</sub> thin films; <b>L. Pintilie</b> , I. Vrejoiu, D. Hesse, G. LeRhun, and M. Alexe <b>PHYS. REV. B</b> <b>75</b> , 224113 (2007)
11	Ferroelectric polarization-leakage current relation in high quality epitaxial Pb(Zr, Ti)O-3 films <b>Pintilie L</b> , Vrejoiu I, Hesse D, LeRhun G, Alexe M <b>PHYSICAL REVIEW B</b> <b>75</b> (10): Art. No. 104103 (2007)
12	Short-circuit photocurrent in epitaxial lead zirconate-titanate thin films ; <b>Pintilie L</b> , Vrejoiu I, Rhun GL, Alexe M <b>JOURNAL OF APPLIED PHYSICS</b> <b>101</b> (6): Art. No. 064109 (2007)
13	Intrinsic ferroelectric properties of strained tetragonal PbZr <sub>0.2</sub> Ti <sub>0.8</sub> O <sub>3</sub> obtained on layer-by-layer grown, defect-free single-crystalline films ; Vrejoiu I, Le Rhun G, <b>Pintilie L</b> , Hesse D, Alexe M, Gosele U <b>ADVANCED MATERIALS</b> <b>18</b> (13): 1657 (2006)
14	Increased ferroelastic domain mobility in ferroelectric thin films and its use in nano-patterned capacitors; Le Rhun G, Vrejoiu I, <b>Pintilie L</b> , Hesse D, Alexe M, Gosele U <b>NANOTECHNOLOGY</b> <b>17</b> (13): 3154-3159 (2006)
15	Polarization fatigue and frequency-dependent recovery in Pb(Zr,Ti)O-3 epitaxial thin films with SrRuO <sub>3</sub> electrodes; <b>Pintilie L</b> , Vrejoiu I, Hesse D, Alexe M <b>APPLIED PHYSICS LETTERS</b> <b>88</b> (10): Art. No. 102908 (2006)
16	Metal-ferroelectric-metal heterostructures with Schottky contacts. I. Influence of the ferroelectric properties <b>Pintilie L</b> , Alexe M <b>JOURNAL OF APPLIED PHYSICS</b> <b>98</b> (12): Art. No. 123103 (2005)
17	Metal-ferroelectric-metal structures with Schottky contacts. II. Analysis of the experimental current-voltage and capacitance-voltage characteristics of Pb(Zr,Ti)O-3 thin films; <b>Pintilie L</b> , Boerasu I, Gomes MJM, Zhao T, Ramesh R, Alexe M <b>JOURNAL OF APPLIED PHYSICS</b> <b>98</b> (12): Art. No. 123104 (2005)
18	Ferroelectric-like hysteresis loop in nonferroelectric systems ; <b>Pintilie L</b> , Alexe M <b>APPLIED PHYSICS LETTERS</b> <b>87</b> (11): Art. No. 112903 (2005)
19	Polarization reversal and capacitance-voltage characteristic of epitaxial Pb(Zr,Ti)O-3 layers <b>Pintilie L</b> , Lisca M, Alexe M <b>APPLIED PHYSICS LETTERS</b> <b>86</b> (19): Art. No. 192902 (2005)
20	Simple model of polarization offset of graded ferroelectric structures <b>Pintilie L</b> , Boerasu I, Gomes MJM <b>JOURNAL OF APPLIED PHYSICS</b> <b>93</b> (12): 9961-9967 (2003)
21	Competition between ferroelectric and semiconductor properties in Pb(Zr <sub>0.65</sub> Ti <sub>0.35</sub> )O-3 thin films deposited by sol-gel Boerasu I, <b>Pintilie L</b> , Pereira M, Vasilevskiy MI, Gomes MJM <b>JOURNAL OF APPLIED PHYSICS</b> <b>93</b> (8): 4776-4783 (2003)