

PERSONAL INFORMATION

Liviu Leontie



Affiliation: Alexandru Ioan Cuza University of Iași

+40232201168 +40742664403

lleontie@uaic.ro

<http://www.researcherid.com/rid/B-4169-2011>

Skype [liviu.leontie](https://www.skype.com/user/liviu.leontie)

ORCID: **0000-0003-3155-7007**

Sex M | Nationality Romanian

WORK EXPERIENCE

26.10.2022–present

Professor Emeritus

10.2014 – present

Professor Habilitated

Alexandru Ioan Cuza University of Iași (UAIC) <https://www.uaic.ro/en/>

-Teaching and research; Erasmus+ Coordinator, Faculty of Physics
Condensed Matter and Atmospheric Physics / Preparation, structural and optical characterization, environmental applications of oxide and III-VI thin films and related structures.

10.2005 – 09.2014

[Business or sector](#) Education

Associate Professor

Alexandru Ioan Cuza University of Iași <https://www.uaic.ro/en/>

-Teaching and research; Erasmus+ Coordinator, Faculty of Physics (2012–2014)
Condensed Matter Physics / Preparation, structural and optical characterization of organic, oxide and III-VI thin films and related structures

10.1997 – 09.2005

[Business or sector](#) Education

Lecturer

Alexandru Ioan Cuza University of Iași <https://www.uaic.ro/en/>

-Teaching and research; General Physics, Solid-State Physics / Preparation, structural and optical characterization of organic and oxide thin films

10.1990 – 09.1997

[Business or sector](#) Education

Assistant Professor

Alexandru Ioan Cuza University of Iași <https://www.uaic.ro/en/>

-Teaching and research; General Physics, Solid-State Physics / Preparation, structural and optical characterization of oxide thin films

09.1990 – 09.1990

[Business or sector](#) Education

High School Teacher

Several high schools in Iași

-Teaching

[Business or sector](#) Education

EDUCATION AND TRAINING

2016

Thermal Analysis Seminar / Training; April 12, 2016.

Gheoghe Asachi Technical University of Iași; organizer: Sartorom Impex SRL.

-Thermal analysis of polymeric materials; thermal analysis of construction materials.

- 2016 **How to write a successful Horizon 2020 framework programme / Training at UAIC; October 10–11, 2016.**
Transnational actions to support successful participation in Horizon 2020.
- 2016 **Radiation protection in diagnostic and interventional radiology / Training course; Level 2 Licence; October, 2016.**
S.C. Micorad X-Ray S.R.L. Iași; CNCAN (National Commission for Nuclear Activities Control).
- 2013 **Habilitation in Physics**
Alexandru Ioan Cuza University of Iași
Ph. D. supervisor
- 2009 **Radiological safety in the use of ionising radiation sources / Training course; Level 2 Licence**
“Horia Hulubei” National Institute of Physics and Nuclear Engineering - IFIN HH, Bucharest-Măgurele
-Working with ionising radiation sources and radiological safety.
- 2001 **Utilization of Radioactive Isotopes / Postgraduated course; Diploma**
University of Bucharest, Faculty of Physics (Bucharest-Măgurele).
- Working with radioactive isotopes.
- November 1 – 30, 2000 **Research Stay**
Max Planck Institute of Microstructure Physics, Halle, Germany.
- 1999 **Ph. D. in Physics**
Alexandru Ioan Cuza University of Iași
- 1980 **B. Sc. in Physics; Diploma**
Alexandru Ioan Cuza University of Iași
- 1976 – 1980 **Faculty of Physics**
Alexandru Ioan Cuza University of Iași

RESEARCH

- a) Physics of low-dimensional semiconductor materials and structures (transport, optical properties of oxide materials, layered III–VI materials and organic semiconductors); Atmospheric/Environmental Physics / published papers-109 WOS (including 4 reviews) quoted, 3-non-ex-ISI, 2-Romanian Academy journals; 8-University Annals.
b) *H*-index: 25; WOS citations: over 2100.
c) over 120 participations in international and over 80 national conferences (oral and poster).

PERSONAL SKILLS

Mother tongue(s) Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
Replace with name of language certificate. Enter level if known.					
French	C1	C1	C1	C1	C1
Russian	A2	A2	A2	A2	A2
Replace with name of language certificate. Enter level if known.					

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
[Common European Framework of Reference for Languages](#)

Communication skills Good communication skills gained through my experience as university and high school teacher and researcher.

Organisational / managerial skills

- leadership (currently responsible for a team of 3 people, 1 Laboratory);
- team work (coordinating researcher in 1 grant; team member in 28 research grants);
- academic management (Faculty Council member, 2008–2012; LLP-Erasmus, Erasmus+ coordinator of the Faculty, 2012–2024);
- organization of scientific meetings (both national and international-8), including section chairman (3 international conferences);
- member of CNADTCU, The National Council for Attestation of University Titles, Diplomas and Certificates (2017–2020).
- ARACIS (Romanian Agency for Quality Assurance in Higher Education) evaluator (2019–present).

Job-related skills

- Teaching units and Curriculum Planning
- Effective Communication, including online
- Leadership Skills
- Team working
- Time management
- Technological skills
- Critical thinking and problem-solving
- Compassion & Empathy

Digital competence

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Independent user	Independent user	Independent user	Independent user	Independent user

Levels: Basic user - Independent user - Proficient user
[Digital competences - Self-assessment grid](#)

-Adobe Acrobat, Microsoft package, graphics (CorelDRAW) and specific scientific software (Origin, Excel, structural analysis)

Other skills

- expertise in assessment of projects (INTAS);
- "peer review" activities: reviewer of about 20 international journals;
- board member of 2 national and 3 international journals.

ADDITIONAL INFORMATION

Invited Professor Erasmus Mundus mobilities Université Lille 1, U.F.R. de Physique, 27.02–31.03.2013.
 IANUS teaching mobility: Moldova State university, Faculty of Physics and Engineering, 02.09.2013–01.10.2013.
 Postdoctoral mobility, Al Idrisi II: University of Science and Technology of Oran-Mohamed Boudiaf (USTO-MB), 01.10.2014–31.03.2015.

International doctoral commissions Doctoral Committee, Faculty of Science Dhar El Mehraz, Sidi Mohamed Ben Abdellah University, Fez (Morocco), 19 June 2019.

Publications L. Leontie, I. Evtodiev, V. Nedeff, M. Stamate, and M. Caraman, "Photoelectric properties of Bi₂O₃/GaSe heterojunctions", *Applied Physics Letters*, 94 (7), 071903 (2009).

Projects

	Integrated Center for Studies in Environmental Sciences for the (Romanian) North-East Development Region (Acronym CERNESIM) (2010–2014); National Program Capacities, Project no. 257 / 28.09.2010; <i>Coordinating researcher (group head)</i>; over 240,000 EUR. Mobility Projects for Researchers, Romanian Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI), grant nos. PN-III P1-1.1-MC-2017-1800; PN-III P1-1.1 MC-2018-0386; PN-IV-P2-2_2-MC-2024-0305, MC 60/08/11/2024. JINR–RO grants nos: 04-4-1121-2015/2017, 04-4-1141-2020/2022 (director). Grant PN-III-P1-1.1-MCD-2021-0031, MCD (Program 1 Subprogram 1.1 - Human Resources, MOBILITY PROJECTS FOR EXPERIENCED RESEARCHERS FROM DIASPORA (Director).
Seminars	"Thin films and related structures of oxide and layered III–VI group semiconductors. Optoelectronic and energy applications." Holon Institute of Technology (H.I.T.) Physics Seminar talk; Holon, May 18, 2017.
Memberships	European Physical Society (EPS), European Materials Research Society (EMRS), IEEE (member no. 90316708, 2008), PHANTOMS, TMS, The Minerals, Metals & Materials Society (TMS, 2001), Romanian Physical Society.
References	Who's Who in Science and Engineering; "2000 OUTSTANDING SCIENTIST OF THE 21st CENTURY", IBC, 2003–2008 and 2011; The 21st Century Award for Achievement and The IBC (International Bibliographical Centre, Cambridge) Living Science Award; International Scientist of the Year, 2003–2008, as well as in Who is Who (Encyclopedia of Romanian Personalities, 2011).

ANNEXES

- publications;
- projects.

ANNEX

1-List of published papers, Web of Science-quoted journals

1. V. Şunel, G. I. Rusu, G. G. Rusu, **L. Leontie**, C. Şoldea
"Electrical characteristics of some derivatives of p-aminobenzoic acid in thin films"
Progress in Organic Coatings **26 (1)** (1995) 53–61 (Review).
2. Mihaela Rusu, A. Airinei, **L. Leontie**, Diana Mardare, and G.I. Rusu
"On the Semiconducting Properties of Some Bisphenolic Chelate Polymers in Thin Films"
Physics of Low-Dimensional Structures **5 (6)** (1998) 31–42.
3. **L. Leontie**, M. Caraman, G. I. Rusu
"On the Photoconductivity of Bi₂O₃ in Thin Films"
Journal of Optoelectronics and Advanced Materials **2 (4)** (2000) 385–389.
4. G. I. Rusu, I. Căplănuş, **L. Leontie**, A. Airinei, E. Butuc, D. Mardare, and I. I. Rusu
"Studies on the Electronic Transport Properties of some Aromatic Polysulfones in Thin Films"
Acta Materialia **49 (3)** (2001) 553–559.
5. **L. Leontie**, M. Caraman, M. Delibas, and G. I. Rusu
"Optical Properties of Bismuth Trioxide Thin Films"
Materials Research Bulletin **36 (9)** (2001) 1629–1637.
6. **L. Leontie**, M. Caraman, M. Alexe, C. Harnagea
"Structural and optical characteristics of bismuth oxide thin films"
Surface Science **507–510** (2002), 480–485 (20th European Conference on Surface Science).
7. **L. Leontie**, Mihaela Roman, I. Căplănuş, G. I. Rusu
"On the electronic transport properties of some disubstituted carbanion pyridazinium ylids in thin films"

- Progress in Organic Coatings* **44 (4)** (2002) 287–293 (Review).
8. Valentina Chiricenco, M. Caraman, I. I. Rusu, **L. Leontie**
“On the luminescence of GaS(Cu) single crystals”
Journal of Luminescence **101 (1–2)** (2003), 71–77.
9. **L. Leontie**, Ivona Olariu, and G. I. Rusu
“On the charge transport in some new carbanion disubstituted ylides in thin films”
Materials Chemistry and Physics **80 (2)** (2003), 506–511.
10. **L. Leontie**, M. Roman, F. Brinza, C. Podaru, G. I. Rusu
“Electrical and optical properties of some new synthesized ylides in thin films”
Synthetic Metals **138 (1–2)** (2003) 157–163 (Spring Meeting of the European-Materials-Research-Society (E-MRS)).
11. **L. Leontie**, I. Druta, R. Alupoae, and G. I. Rusu
“On the electronic transport in some new synthesized high resistivity organic semiconductors in thin films”
Materials Science and Engineering B **100 (3)** (2003) 252–258.
12. **L. Leontie**, M. Caraman, A. Visinoiu, G. I. Rusu
“On the optical properties of bismuth oxide thin films prepared by pulsed laser deposition”
Thin Solid Films **473 (2)** (2005) 230–235.
13. **L. Leontie**, I. Druta, R. Danac, and G. I. Rusu
“On the electronic transport properties of pyrrolo[1,2-a][1,10]phenanthroline derivatives in thin films”
Synthetic Metals, **155 (1)** (2005), 138–145.
14. **L. Leontie**, I. Druta, R. Danac, M. Prelipceanu, and G. I. Rusu
“Electrical properties of some new high resistivity organic semiconductors in thin films”
Progress in Organic Coatings **54 (3)** (2005) 175–181 (Review).
15. **L. Leontie**
“Photoconductivity characteristics of bismuth oxide in thin films”
Physics of Low-Dimensional Structures **2** (2006) 23–28.
16. **L. Leontie** and R. Danac
“Optical properties of some new synthesized organic semiconductors in thin films”
Scripta Materialia **54 (2)** (2006) 175–179.
17. I. Caraman, G. I. Rusu, **L. Leontie**
“Photoelectrical and optical properties of $\text{Cd}_{1-x}\text{Mn}_x\text{Te}$ single crystals and thin films”
Journal of Optoelectronics and Advanced Materials **8 (1)** (2006) 107–111.
18. E. Cuculescu, I. Evtodiev, M. Caraman, **L. Leontie**
“Study of generation-recombination processes of non-equilibrium charge carriers in single crystalline thin GaSe(Cu) films”
Journal of Optoelectronics and Advanced Materials **8 (1)** (2006) 112–118 (6th International Balkan Workshop on Applied Physics).
19. **L. Leontie**, I. Druta, R. Danac
“Electrical conduction mechanism in N -(p -R-phenacyl)-4,5-diazafluorenum-9-one bromides thin films”
Synthetic Metals **156 (2–4)** (2006) 224–229.
20. I. Caraman, G. I. Rusu, **L. Leontie**
“Fundamental absorption edge in thin films of $\text{Cd}_{1-x}\text{Mn}_x\text{Te}$ solid solutions”
Journal of Optoelectronics and Advanced Materials **8 (3)** (2006) 927–930.
21. **L. Leontie**
“Optical properties of bismuth oxide thin films prepared by reactive magnetron sputtering”
Journal of Optoelectronics and Advanced Materials **8 (3)** (2006) 1221–1224.

22. L. Leontie, I. Druta, A. Rotaru, C. Podaru and G. I. Rusu
“On the electronic transport properties of 4,4'-bipyridinium dibromides in thin films”
Materials Chemistry and Physics **97 (2–3)** (2006) 476–480.
23. L. Leontie, G. I. Rusu
“On the electronic transport properties of bismuth oxide thin films”
Journal of Non-Crystalline Solids **352 (9–20)** (2006) 1475–1478.
24. I. Căplănuș, Mihaela Rusu, G. G. Rusu and L. Leontie
“On the electronic transport properties of some thiosemicarbazide derivatives complexed with nickel cations”
Materials Chemistry and Physics **101 (1)** (2007) 77–80.
25. L. Leontie, I. Druta, B. Furdui, G.I. Rusu
“On the mechanism of electrical conduction in some new quaternary salts of bipyridine and indolizine pyridine in thin films”
Progress in Organic Coatings **58 (4)** (2007) 303–311 (Review).
26. G. Rusu, E. Rusu, L. Leontie, G. I. Rusu
“Electrical DC Conduction Mechanism in Some Newly Synthesized Nylon 6/12 Copolymers”
Journal of Polymer Science Part B: Polymer Physics **45 (7)** (2007) 794–799.
27. M. Prelipceanu, O.-S. Prelipceanu, O.-G. Tudose, L. Leontie, B. Grimm, S. Schrader
“Study of thermal conversion and patterning of a new soluble poly (*p*-phenylenevinylene) (PPV) precursor”
Materials Science in Semiconductor Processing **10 (2–3)** (2007) 77–89.
28. I. Caraman, G. I. Rusu, L. Leontie
“The photoluminescence of CdTe thin films in SnO₂-CdS/CdTe-Ni solar cells thermally treated in CdCl₂ solution”
Journal of Optoelectronics and Advanced Materials **9 (5)** (2007) 1546–1550.
29. M. Prelipceanu, O. S. Prelipceanu, L. Leontie, R. Danac
“Photoelectron spectroscopy investigations of pyrrolo[1,2-a][1,10]phenanthroline derivatives”
Physics Letters A **368 (3–4)** (2007) 331–335.
30. L. Leontie, R. Danac, I. Druta, G. I. Rusu
“Electronic transport properties of 1-(*p*-R-phenacyl)-4-[(1'-ethylcarboxylate)-(3'-*p*-R'-phenacyl)]-7'-indoliziny] pyridinium bromides in thin films”
Thin Solid Films **516 (7)** (2008) 1599–1603.
31. L. Leontie, M. Caraman, I. Evtodiev, E. Cuculescu, A. Mija
“Optical properties of bismuth oxide thin films prepared by reactive d.c. magnetron sputtering onto p-GaSe (Cu)”
Physica Status Solidi (a) **205 (8)** (2008) 2052–2056 (E-MRS 2007 Spring Meeting Symposium on Advances in Transparent Electronics: From Materials to Devices II).
32. M. Caraman, V. Chiricenco, L. Leontie, I. I. Rusu
“Photoelectrical properties of layered GaS single crystals and related structures”
Materials Research Bulletin **43 (12)** (2008) 3195–3201.
33. I. Evtodiev, L. Leontie, M. Caraman, M. Stamate, E. Arama
“Optical properties of p-GaSe single crystals doped with Te”
Journal of Applied Physics **105 (2)** 023524 (2009).
34. L. Leontie, I. Evtodiev, V. Nedeff, M. Stamate, M. Caraman
“Photoelectric properties of Bi₂O₃/GaSe heterojunctions”
Applied Physics Letters **94 (7)** 071903 (2009).
35. L. Leontie, I. Druta, A. Rotaru, N. Apetroaei, G. I. Rusu
“Electronic transport properties of some new monoquaternary salts of 4,4'-bipyridine in thin films”
Synthetic Metals **159 (7–8)** (2009) 642–648.

36. L. Leontie, I. Druta, B. Furdui, V. Nica, G.I. Rusu
“Electrical d.c. conduction mechanism in some newly synthesized mono- and dipyrindine quaternary salts in thin films”
Synthetic Metals **159 (17–18)** (2009) 1831–1836.
37. S. Condurache-Bota, G. I. Rusu, N. Tigau, L. Leontie
“Important physical parameters of Bi₂O₃ thin films found by applying several models for optical data”
Crystal Research and Technology **45 (5)** (2010) 503–511.
38. L. Leontie, R. Danac, I. Druta, A. Carlescu, G. I. Rusu
“Newly synthesized fused heterocyclic compounds in thin films with semiconductor properties”
Synthetic Metals **160 (11–12)** (2010) 1273–1279.
39. L. Leontie, R. Danac, I. Druta, A. Carlescu, G.I. Rusu
“Electron transport properties of some newly synthesized nonsymmetrical bisindolizines in thin films”
Synthetic Metals **160 (23–24)** (2010) 2526–2533.
40. L. Bibire, A. S. Ghenadi, A. Timofte, L. Leontie, M. Buzdugan, M. Agop
“Possible influences of aerosols on the Schumann frequency spectrum”
Journal of Environmental Protection and Ecology **12 (3A)** (2011) 1288–1294.
41. D. C. Bostan, A. Timofte, L. Leontie
“Temperature-humidity index. Recent meteorological measurements in the Moldavia region”
Journal of Environmental Protection and Ecology **12 (3A)** (2011) 1592–1597.
42. L. Leontie, R. Danac, N. Apetroaei, G. I. Rusu
“Study of electronic transport properties of some new N-(p-R-phenacyl)-1,7-phenanthroline bromides in thin films”
Materials Chemistry and Physics **127 (3)** (2011) 471–478.
43. M. Airimioaei, C. E. Ciomaga, N. Apostolescu, L. Leontie, A. R. Iordan, L. Mitoseriu, M. N. Palamaru
“Synthesis and functional properties of the, Ni_{1-x}Mn_xFe₂O₄ ferrites”
Journal of Alloys and Compounds **509 (31)** (2011) 8065–8072.
44. E. Cuculescu, I. Evtodiev, I. Caraman, L. Leontie, V. Nedeff, D.-I. Rusu
“Transport and generation-recombination mechanisms of nonequilibrium charge carriers in ZnO/In₂O₃/InSe:Cd heterojunctions”
Thin Solid Films **519 (21)** (2011) 7356–7359.
45. T. Slatineanu, A. Ralucalordan, M. N. Palamaru, O. F. Caltun, V. Gafton, L. Leontie
“Synthesis and characterization of nanocrystalline Zn ferrites substituted with Ni”
Materials Research Bulletin **46 (9)** (2011) 1455–1460.
46. S. Evtodiev, I. Caraman, L. Dmitroglu, L. Leontie, V. Nedeff, A. Dafinei, G. Lazar, I. Evtodiev
“Optical Properties of III–VI Lamellar Semiconductors Doped with Cu and Cd and of Related III–VI/Native Oxide Structures”
Journal of Nanoelectronics and Optoelectronics **6 (4)** (2011) 502–513.
47. I. Evtodiev, I. Caraman, L. Leontie, D.-I. Rusu, A. Dafinei, V. Nedeff, G. Lazar
“Recombination luminescence and trap levels in undoped and Al-doped ZnO thin films on quartz and GaSe (0001) substrates”
Materials Research Bulletin **47 (3)** (2012) 794–797.
48. R. Danac, L. Leontie, A. Carlescu, G. I. Rusu
“d. c. electric Conduction Mechanism of Some Newly Synthesized Indolizine Derivatives in Thin Films”
Materials Chemistry and Physics **134 (2–3)** (2012) 1042–1048.
49. L. Leontie, R. Danac, M. Girtan, A. Carlescu, A. P. Rambu, G. I. Rusu

“Electron transport properties of some new 4-tert-butylcalix[4]arene derivatives in thin films”

Materials Chemistry and Physics **135** (1) (2012) 123–129.

50. I. Vaiciulis, M. Girtan, A. Stanculescu, L. Leontie, F. Habelhames, S. Antohe
"On Titanium Oxide Spray Deposited Thin Films for Solar Cells Applications"

Proceedings of The Romanian Academy Series A **13** (4) (2012) 335–342.

51. M. Girtan, A. Vlad, R. Mallet, M. A. Bodea, J. D. Pedarnig, A. Stanculescu, D. Mardare, L. Leontie, S. Antohe

"On the properties of aluminium doped zinc oxide thin films deposited on plastic substrates from ceramic targets"

Applied Surface Science **274** (2013) 306–313.

52. A. C. Druc, A. I. Borhan, G. G. Nedelcu, L. Leontie, A. R. Iordan, M. N. Palamaru

"Structure-dielectric properties relationships in copper-substituted magnesium ferrites"

Materials Research Bulletin **48** (2013) 4647–4654.

53. L. Leontie, I. Evtodiev, N. Spalatu, M. Caraman, S. Evtodiev, O. Racovet, M. Girtan, C. Focsa

"Optical and photosensitive properties of lamellar nanocomposites obtained by Cd intercalation of GaTe"

Journal of Alloys and Compounds **584** (2014) 542–545.

54. C. Doroftei, P. D. Popa, F. Iacomi, L. Leontie

"The influence of Zn²⁺ ions on the microstructure, electrical and gas sensing properties of La_{0.8}Pb_{0.2}FeO₃ perovskite"

Sensors and Actuators B **191** (2014) 239–245.

55. R. Danac, L. Leontie, M. Girtan, M. Preliceanu, A. Graur, A. Carlescu, G. I. Rusu

"On the direct current electric conductivity and conduction mechanism of some stable disubstituted 4-(4-pyridyl)pyridiniumylides in thin films"

Thin Solid Films **556** (2014) 216–222.

56. A. C. Druc, A. I. Borhan, A. Diaconu, A. R. Iordan, G. G. Nedelcu, L. Leontie, M. N. Palamaru

"How cobalt ions substitution changes the structure and dielectric properties of magnesium ferrite?"

Ceramics International **40** (8) (2014) 13573–13578.

57. D. Untila, I. Caraman, I. Evtodiev, V. Cantser, N. Spalatu, L. Leontie, L. Dmitroglo, E. Luchian

"Crystalline structure, surface morphology and optical properties of nanolamellar composites obtained by intercalation of InSe with Cd"

Energy Procedia **84** (2015) 149–155.

(E-MRS Spring Meeting 2015, Symposium C - Advanced inorganic materials and structures for photovoltaics)

58. D. Untila, V. Cantser, M. Caraman, I. Evtodiev, L. Leontie, L. Dmitroglo

"Photoluminescent properties of lamellar nano-composites obtained by Cd intercalation of GaSe and GaSe:Eu single crystals"

Physica Status Solidi C **12** (1–2) (2015) 65–69.

59. I. Caraman, E. Vatavu, L. Leontie, M. Stamate, D. Untila

"Crystalline structure and optical properties of GaS-CdS nanocomposite"

Physica Status Solidi C **12** (1–2) (2014) 70–75.

60. C. M. Al Matarneh, R. Danac, L. Leontie, F. Tudorache, I. Petrila, F. Iacomi, A. Carlescu, G. Nedelcu, I. Mangalagiu

"Synthesis and electron transport properties of some new 4,7-phenanthroline derivatives in thin films"

Environmental Engineering and Management Journal **14** (2) (2015) 421–431.

61. A. M. Dumitrescu, G. Lisa, A. R. Iordan, F. Tudorache, I. Petrila, A. I. Borhan, M. N. Palamaru, C. Mihailescu, **L. Leontie**, C. Munteanu
"Ni ferrite highly organized as humidity sensors"
Materials Chemistry and Physics **156** (2015) 170–179.
62. J. Merigeon, O. Maalej, B. Boulard, A. Stanculescu, **L. Leontie**, D. Mardare, M. Girtan
"Studies on Pr³⁺-Yb³⁺ Codoped ZBLA as Rare Earth Down Converter Glasses for Solar Cells Encapsulation"
Optical Materials **48** (2015) 243–246.
63. M. M. Cazacu, O. G. Tudose, A. Timofte, O. Rusu, L. Apostol, **L. Leontie**, S. Gurlui
"A case study of the behavior of aerosol optical properties under the incidence of a saharan dust intrusion event"
Applied Ecology and Environmental Research **14** (3) (2016) 183–194.
64. A. I. Borhan, M. Gromada, G. G. Nedelcu, **L. Leontie**
"Influence of (CoO, CaO, B₂O₃) additives on thermal and dielectric properties of BaO–Al₂O₃–SiO₂ glass–ceramic sealant for OTM applications"
Ceramics International **2** (8) (2016) 10459–10468.
65. R. Danac, **L. Leontie**, A. Carlescu, S. Shova, V. Tiron, G. G. Rusu, F. Iacomi, S. Gurlui, O. Susu, G. I. Rusu
"Electric Conduction Mechanism of Some Heterocyclic Compounds, 4,4 -Bipyridine and Indolizine Derivatives in Thin Films"
Thin Solid Films **612** (2016) 358–368.
66. I. Caraman, L. Dmitroglou, I. Evtodiev, **L. Leontie**, D. Untila, S. Hamzaoui, M. Zerdali, O. Şuşu, G. Bulai, S. Gurlui
"Optical properties of ZnO thin films obtained by heat treatment of Zn thin films on amorphous SiO₂ substrates and single crystalline GaSe lamellas"
Thin Solid Films **617** B (2016) 103–107.
67. I. Caraman, N. Spalatu, I. Evtodiev, D. Untila, **L. Leontie**, M. Caraman
"Photoelectric and photoluminescence properties of CdTe–GaTe composite"
Physica Status Solidi B **253** (12) (2016) 2515–2522.
68. C. Doroftei, **L. Leontie**
"Synthesis and characterization of some nanostructured composite oxides for low temperature catalytic combustion of dilute propane"
RSC Advances **7** (2017) 27863–27871.
69. L. Hrostea, M. Boclinca, M. Socol, **L. Leontie**, A. Stanculescu, M. Girtan
"Oxide/Metal/Oxide Electrodes For Solar Cells Applications"
Solar Energy **146** (2017) 464–469.
70. C. Doroftei, **L. Leontie**, A. Popa
"The study on nanogranular system manganites La–Pb–Ca–Mn–O which exhibits a large magnetoresistance near room temperature"
Journal of Materials Science: Materials in Electronics **28** (17) (2017) 12891–12899.
71. **L. Leontie**, C. Doroftei
"Nanostructured Spinel Ferrites for Catalytic Combustion of Gasoline Vapors"
Catalysis Letters **147** (10) (2017) 2542–2548.
72. C. Doroftei, O. S. Prelipceanu, A. Carlescu, **L. Leontie**, M. Prelipceanu
"Porous spinel-type oxide semiconductors for high-performance acetone sensors"
14th International Conference on Development and Application Systems (DAS), (2018) 110–113.
73. L. Hrostea, M. Girtan, R. Mallet, **L. Leontie**
"Optical and Morphological Properties of P3HT and P3HT: PCBM Thin Films Used in Photovoltaic Applications"
Book Series: IOP Conference Series-Materials Science and Engineering **374** (2018) 012015 (EUROINVENT ICIR 2018).

74. **L. Leontie**, R. Danac, A. Carlescu, C. Doroftei, G. G. Rusu , V. Tiron, S. Gurlui, O. Susu
“Electric and optical properties of some new functional lower-rim substituted calixarenesderivatives in thin films”
Applied Physics A **124 (5)** (2018) 355.
75. S. Medeghri, M. Zerdali, **L. Leontie**, K. Itaka, S. Hamzaoui
“Chemical synthesis of nanostructured silica from Algerian diatomite”
Journal of New Technology and Materials **8 (1)** (2018) 37–41.
76. **L. Leontie**, C. Doroftei, A. Carlescu
“Nanocrystalline iron manganite prepared by sol–gel self-combustion method for sensor applications”
Applied Physics A **124 (11)** (2018) 750.
77. S. J. Edrissi, I. Zorkani, K. Rahmani, A. Mmadi, Y. Chrafi, A. Jorio, **L. Leontie**
“The effect of hydrostatic pressure on the diamagnetic susceptibility of a magneto-donor in a GaAs cylindrical quantum dot”
Optoelectronics and Advanced Materials–Rapid Communications **13 (1–2)** (2019) 111–115.
78. C. Doroftei, **L. Leontie**
“The influence of Sc³⁺ ions on the microstructure, electrical and gas sensing properties of Ni-Co-Sc ferrite”
Journal of Sol-Gel Science and Technology **91** (2019) 654–663.
79. **L. Leontie**, V. Sprincean, D. Untila, N. Spalatu, I. Caraman, A. Cojocaru, O. Şuşu, O. Lupan, I. Evtodiev, E. Vatavu, I. Tiginyanu, A. Carlescu, M. Caraman
“Synthesis and optical properties of Ga₂O₃ nanowires grown on GaS substrate”
Thin Solid Films **689** (2019) 137502.
80. L. Hrostea, **L. Leontie**, M. Girtan
“Characterization of PBDB-T-SF: Fullerene Blend Thin Films For Solar Cell Applications”
Romanian Reports in Physics **72 (2)** (2020) 504.
81. I. Boukhoubza, M. Khenfouch, M. Achehboune, **L. Leontie**, A. C. Galca, M. Enculescu, A. Carlescu, M. Gueroub, B. M. Mothudi, A. Jorio, I. Zorkani
“Graphene Oxide Concentration Effect on the Optoelectronic Properties of ZnO/GO Nanocomposites”
Nanomaterials Basel **10 (8)** (2020) 1532.
82. I. Boukhoubza, M. Khenfouch, M. Achehboune, **L. Leontie**, A. Carlescu, C. Doroftei, B. M. Mothudi, I. Zorkani, A. Jorio
“Graphene oxide coated flower-shaped ZnO nanorods: Optoelectronic properties”
Journal of Alloys and Compounds **831** (2020) 154874.
83. C. Doroftei, **L. Leontie**
“Nanocrystalline SrMnO₃ perovskite prepared by sol–gel self-combustion method for sensor applications”
Journal of Sol-Gel Science and Technology **97 (1)** (2021) 146–154.
84. L. Hrostea, **L. Leontie**, M. Dobromir, C. Doroftei, M. Girtan
“On the Electrical and Optical Properties Stability of P3HT Thin Films Sensitized with Nitromethane Ferric Chloride Solutions”
Coatings **10 (11)** (2020) 1074.
85. E. Vatavu, **L. Leontie**, I. Caraman, V. Sprincean, D. Untila, C. Doroftei, M. Caraman
“Optical and structural properties of n- and p-InSe/In₂O₃ heterostructures”
Journal of Luminescence **227** (2020) 117550.
86. L. Kadri, G. Bulai, A. Carlescu, G. Stoian, S. Gurlui, L. Leontie, C. Doroftei, M. Adnane
“Effect of Target Sintering Temperature on the Morphological and Optical Properties of Pulsed Laser Deposited TiO₂ Thin Films”
Coatings **11 (5)** (2021) 561.
87. L. Hrostea, P. Lisnic, R. Mallet, **L. Leontie**, M. Girtan

“Studies on the Physical Properties of TiO₂:Nb/Ag/TiO₂:Nb and NiO/Ag/NiO Three-Layer Structures on Glass and Plastic Substrates as Transparent Conductive Electrodes for Solar Cells”

Nanomaterials **11** (6) (2021) 1416.

88. A. Boualem, L. Leontie, S. A. G. Lopera, S. Hamzaoui

“Synthesis and Characterization of Mesoporous Silica from Algerian River Sand for Solar Grade Silicon: Effect of Alkaline Concentration on the Porosity and Purity of Silica Powder”

Silicon **14** (10) (2021) 5231–5240.

89. C. Doroftei, L. Leontie

“Porous Nanostructured Gadolinium Aluminate for High-Sensitivity Humidity Sensors”

Materials **14** (22) (2021) 7102.

90. I. Baba-Ahmed, D. Ghercă, A.-R. Iordan, M. N. Palamaru, C. Mita, M. A. Benamar, G. Ababei, N. Lupu, R. Baghdad, A. Abderrahmane, T. Roman, G. Bulai, L. Leontie and A. I. Borhan

“Sequential Synthesis Methodology Yielding Well-Defined Porous $_{75\%}\text{SrTiO}_3/_{25\%}\text{NiFe}_2\text{O}_4$ Nanocomposite”

Nanomaterials **12** (1) (2022) 138.

91. S. Garofalide, C. Postolachi, A. Cocean, G. Cocean, I. Motrescu, I. Cocean, B. S. Munteanu, M. Prelipceanu, S. Gurlui, L. Leontie

“Saharan Dust Storm Aerosol Characterization of the Event (9 to 13 May 2020) over European AERONET Sites”

Atmosphere **13** (3) (2022) 493.

92. C. Doroftei, A. Carlescu, L. Leontie, R. Danac, C. M. Al-Matarneh

“Structural, Electrical and Optical Properties of Pyrrolo[1,2-i][1,7] Phenanthroline-Based Organic Semiconductors”

Materials **15** (5) (2022) 1684.

93. M. Achehboune, M. Khenfouch, I. Boukhoubza, L. Leontie, C. Doroftei, A. Carlescu, G. Bulai, B. Mothudi, I. Zorkani, A. Jorio

“Microstructural, FTIR and Raman spectroscopic study of Rare earth doped ZnO nanostructures”

Materials Today: Proceedings **53** (2022) 319–323.

94. I. Boukhoubza, M. Khenfouch, L. Leontie, M. Achehboune, C. Doroftei, A. Carlescu, G. Bulai, B.M. Mothudi, I. Zorkani, A. Jorio

“Enhancement of the structural and morphological properties of ZnO/rGO nanocomposites synthesized by hydrothermal method”

Materials Today: Proceedings **53** (2022) 324–331.

95. M. Achehboune, M. Khenfouch, I. Boukhoubza, I. Derkaoui, L. Leontie, A. Carlescu, B.M. Mothudi, I. Zorkani, A. Jorio

“Optimization of the luminescence and structural properties of Er-doped ZnO nanostructures: effect of dopant concentration and excitation wavelength”

Journal of Luminescence **246** (2022) 118843.

96. V. Sprincean, L. Leontie, I. Caraman, D. Untila, M. Girtan, S. Gurlui, P. Lisnic, C. Doroftei, A. Carlescu, F. Iacomì, M. Caraman

“Optical and Photosensitive Properties of Flexible $n(p)\text{-InSe/In}_2\text{O}_3$ Heterojunctions”

Materials **15** (9) (2022) 3140.

97. P. Lisnic, L. Hrostea, L. Leontie, M. Girtan

“Fluorine-Doped SnO₂ Thin Films in Solar Cell Applications. Morphological, Optical and Electrical Properties”

Archives of Metallurgy and Materials **68** (2) (2023) 483–490.

98. C. Doroftei, L. Leontie, R. Danac, C.-M. Al Matarneh, A. Carlescu

“Exploring Pyrrolo-Phenanthrolines as Semiconductors for Potential Implementation in Organic Electronics”

Materials **16** (9) (2023) 3366.

99. L. Kadri, A. Abderrahmane, G. Bulai, A. Carlescu, C. Doroftei, I. Motrescu, S. Gurlui, **L. Leontie**, M. Adnane

“Optical and Structural Analysis of TiO₂–SiO₂ Nanocomposite Thin Films Fabricated by Pulsed Laser Deposition Technique”

Nanomaterials **13** (10) (2023) 1632.

100. R. En-nadir, H. El-ghazi, **L. Leontie**, M. Tihiti, S. E. Zaki, W. Belaid, A. Carlescu, I. Zorkani

“Tailoring optoelectronic properties of InGaN-based quantum wells through electric field, indium content, and confinement shape: a theoretical investigation”

Physica B-Condensed Matter **663** (2023) 414976.

101. V. Sprincean, **L. Leontie**, I. Caraman, O. Lupan, R. Adeling, S. Gurlui, A. Carlescu, C. Doroftei, M. Caraman

“Preparation, Chemical Composition, and Optical Properties of (β–Ga₂O₃ Composite Thin Films)/(GaS_xSe_{1-x} Lamellar Solid Solutions) Nanostructures”

Nanomaterials **13** (14) (2023) 2052.

102. L. Hrostea, M. Dumitras, **L. Leontie**

“Study of electrical properties of PBDB-T-2Cl based ternary thin films for photovoltaic applications”

Materials Science in Semiconductor Processing **166** (2023) 107743.

103. L. Hrostea, G.-A. Bulai, V. Tiron, **L. Leontie**

“Study of Tunable Dielectric Permittivity of PBDB-T-2CL Polymer in Ternary Organic Blend Thin Films Using Spectroscopic Ellipsometry”

Polymers **15** (18) (2023) 3771.

104. V. Sprincean, H. Qiu, T. Tjardts, O. Lupan, D. Untilă, C. Aktas, R. Adelung, **L. Leontie**, A. Carlescu, S. Gurlui, M. Caraman

“Composition and Surface Optical Properties of GaSe:Eu Crystals before and after Heat Treatment”

Materials **17** (2) (2024) 405.

105. Laura Hrostea, Anda Oajdea and **Liviu Leontie**

“Impact of PCBM as a Third Component on Optical and Electrical Properties in Ternary Organic Blends”

Polymers **16** (2024) 1324.

106. F. K. Mbakop, R. Z. Falama, F. Wu, A. Ayang, S. N. Essiane, **L. Leontie**, N. Djongyang, F. Iacomi

“Angular dependence of photonic band gap and omni-directional reflection in one-dimensional photonic crystal applied to a thermophotovoltaic device”

Results in Optics **14** (2024) 100594.

107. V. Sprincean, A. Macovei, **L. Leontie**, A. Carlescu, S. Gurlui, M. Caraman

“Preparation and Photoelectric Properties of Nanostructured Native Oxide of Gallium Monoselenide with Applications in Gas Sensors”

Journal of Composites Science **9** (2025) 194.

108. A. Zeboudj, S. Hamzaoui, M. Zeboudj, M. Adnane, **L. Leontie**, S. Gurlui, A. Carlescu

“Impact of hydrochloric acid (HCl) treatment on diatomite purity and structural modifications for advanced photovoltaic applications”

Romanian Journal of Physics **70** (2025) 608.

2-List of relevant grants

Project Name	Position	Period
Research and International Networking on Emerging Inorganic Chalcogenides for Photovoltaics (RENEW-PV).	Team member	2022–present

COST project No. OC-2021-1-25446.		
Structural studies of some new nanostructures and nanocomposites for dental applications JINR-RO grants, Project. no. 04-4-1141-2020/2022	<i>Responsible person from Romania</i>	2021–2022
Research center with integrated techniques for investigating atmospheric aerosols in Romania (RECENT AIR), MySMIS code: 127324 Competitiveness Operational Program 2014–2020	<i>Team member</i>	2021–present
Integrated Center for Studies in Environmental Sciences for the (Romanian) North-East Development Region (Acronym CERNESIM) National Program Capacities Project no. 257 / 28.09.2010	<i>Coordinating researcher (group head)</i>	2010–2014
Thin films and nanostructures for advanced optoelectronic, spintronics and sensor applications PN-II-CT-RO-FR-2012-1-0065 Romania-France bilateral project	<i>Team member</i>	2010–2014
Thin oxide/polymeric films devices and processes for electronics and transparent optoelectronics (Acronym ELOTRANSP) Grant no. 12128/01.11.2008-CNMP	<i>Team member</i>	2008–2011
Multifunctional advanced materials doped with Ag nanopowders (Acronym MATNANTECH) CEEX Project no. 26/2005	<i>Team member</i>	2006–2008
Preparation and characterization of nanostructured thin semiconducting films used in photovoltaic modules fabrication (Acronym: PRELASS) CEEX Project no. 89/2006	<i>Team member</i>	2006–2008
New semiconducting nanomaterials with possible applications in solid-state gas and vapor sensors for environmental protection CEEX Project no. 2-CEEX 06-11-51-1/ 01.08.2006	<i>Team member</i>	2006–2008
Development of mixed technologies for micro/nanostructures and integrated photonic systems with communications applications (Acronym FOTONTECH), CEEX Project PC-D, 16 03/07.10.2005	<i>Team member</i>	2005–2007
Researches on improvement of certain specific characteristics of oxide semiconductor materials, with a view of their application in gas/vapor detection CERES Project no. 4-64/2004	<i>Team member</i>	2004, 2005
Study of transport and optical properties of certain semiconducting compounds in thin films A-type grant tip A, CNCSIS code 1341/2003.	<i>Team member</i>	2003, 2004

Date: 16.01.2026

Prof. Liviu Leontie

