

PERSONAL INFORMATION

Octavian Mădălin Bunoiu



📍 Faculty of Physics, West University of Timișoara (Romania)



✉ madalin.bunoiu@e-uvv.ro

WORK EXPERIENCE

2018 – present

2012 – 2016

**Pro – rector in charge with the Academic Strategy**

West University of Timișoara, V. Pârvan Ave., no. 4, 300223, Timișoara

- coordinate quality assurance activities on the entire West University of Timisoara level
- elaborate the professional development strategy for the academic staff
- coordinate the strategy regarding the graduate and undergraduate studies
- coordinate the students' activity regarding both academic and social aspects
- coordinate the academic staff development

**Business or sector** Higher Education

2016 – 2018

**Pro – rector in charge with the Research, Development and Innovation Strategy**

West University of Timișoara, V. Pârvan Ave., no. 4, 300223, Timișoara

- coordinate research activities on the entire West University of Timisoara level
- elaborate research, development and innovation strategies

**Business or sector** Higher Education

2005 – 2012

**Chancellor (Scientific Secretary)**

Faculty of Physics, West University of Timișoara, V. Pârvan Ave., no. 4, 300223, Timișoara

- coordinate quality assurance activities at the level of the Physics Faculty
- coordinate the legal and statutory functionality of Faculty council and the Council office
- coordinate the elaboration of the faculty's scientific research plan
- coordinate the organization of competitions for academic positions
- coordinate actions for promoting the image of the Physics Faculty

**Business or sector** Higher Education

2009 – present

**Associate Professor**

Faculty of Physics, West University of Timișoara, V. Pârvan Ave., no. 4, 300223, Timișoara

- Research and teaching activities in: Molecular Physics and Heat, Thermodynamics, Crystal Growth and Characterization, Solid State Physics, Scientific Research Management

**Business or sector** Higher Education

2003 – 2009

**Lecturer**

Faculty of Physics, West University of Timișoara, V. Pârvan Ave., no. 4, 300223, Timișoara

- Research and teaching activities in: Molecular Physics and Heat, Thermodynamics, Crystal Growth and Characterization, Solid State Physics, Scientific Research Management

**Business or sector** Higher Education

2000 – 2003

**Assistant Lecturer**

Faculty of Physics, West University of Timișoara, V. Pârvan Ave., no. 4, 300223, Timișoara

- Research and teaching activities in: Mechanics, Optics, Crystal Growth and Characterization, Structural defects, Laser crystals

**Business or sector** Higher Education

1998 – 2000

**Junior Assistant Lecturer**

Faculty of Physics, West University of Timișoara, V. Pârvan Ave., no. 4, 300223, Timișoara

- Research and teaching activities in: Mechanics, Optics, Crystal Growth and Characterization,

**Business or sector** Higher Education

**EDUCATION AND TRAINING**

- 1998 – 2003 **PhD in Physics / PhD in Materials Science**  
 West University of Timișoara (Romania) / National Polytechnic Institute of Grenoble (France)  
 ▪ Topics: Crystal Growth and Characterization
- 1996 – 1997 **Master of Science, Optics and Spectroscopy of Laser Materials**  
 West University of Timișoara (Romania)  
 ▪ Main topics studied: Laser crystals, Spectroscopy, X-ray diffraction
- 1995 – 1996 **TEMPUS grant**  
 Joseph Fourier University, Grenoble (France)  
 ▪ Main topics studied: Solid state physics, Crystallography, X-ray diffraction, Synchrotron radiation
- 1991 – 1996 **License in Physics, specialisation: Optics, Spectroscopy, Plasma, Lasers**  
 West University of Timișoara (Romania)  
 ▪ Main topics studied: Optics, Lasers, Spectroscopy, Plasma
- 1998 – 2000 **Highschool Studies, Bacalaureate**  
 Chemistry Highschool No. 1, Târgu Jiu (Romania)

**PERSONAL SKILLS**

Mother tongue Romanian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
French	C2	C2	C2	C2	C1
	self assessed				
English	C1	C2	C1	C1	B2
	self assessed				

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

Communication skills (social)

- Moderate medium and big conferences,
- Small workgroup facilitation,
- Work in multi – cultural communities,
- Team spirit (I was partner, as team member, in more than 10 research grants, I worked in different research centers: in universities – West University Timisoara, Joseph Fourier Grenoble, National Polytechnic Institute Grenoble, Pennsylvania State University, in research centers – Atomic Energy Center Grenoble, EPM – Madylam / CNRS Grenoble, Le Rubis SA, Jarrie, France, etc.).

Organisational / managerial skills

- Organization of medium and big national and international scientific conferences (chairman of TIM-11, TIM 12, TIM 13 conferences, member in the organizing committee of all of the 14 TIM Physics Conferences in Timisoara, member in the organizing committee of the International Conference On Crystal Growth, Grenoble 2004 – more than 1000 participants, organizer of the Timisoara Academic Days- last 4 editions, and of the International Conference under the High patronage of ES Klaus Iohannis, „Diaspora and it’s friends”) or educational conferences (chairman at 2 national student conferences, numerous physics symposia, etc.);
- Organization of Physics and Science conferences for the public audiences (November 2008 – LHC Experiment – 400 participants, May 2010 – Travel in space with Dumitru Prunariu – the first Romanian in space – 700 participants, November 2011 Arts&Physics – Transdisciplinary dialogues)
- Training organization,

- Financial management – I have coordinated in the last 7 years the acquisition of equipment worth more than 1.5 million Euros,
- Strategic and operational management;
- Lobby activities.

Job-related skills (technical)

- Technical and experimental skills and competences in the following domains:
- Crystal growth and characterization;
  - Nanotechnology;
  - Material characterization (spectroscopy, optical microscopy)
  - Molecular physics and heat;
  - Optics.

Digital competence

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
proficient	proficient	proficient	independent	proficient

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

Self assessed

- Numerical modelling (specialized software – Fidap, Fluent, CrysVun) of thermal field (temperature distribution), fluid flow, impurity distribution, chemical thermodynamics (Gemini 2 - Thermodata);
- Computer operation (E-mail, Internet, Databases, Microsoft Windows), document preparation (Microsoft Office).

Hobbies

- Philately and postcards collecting;
- Mineralogy;
- Sports.

Driving licence

B category

ADDITIONAL INFORMATION

Expert / evaluator

- CCCDI member and former president (Consultative Collage for Research, Development and Innovation)
- ARACIS expert (The Romanian Agency for Quality Assurance in Higher Education)
- CNATDCU member (National Council for the Recognition of Degrees, Diplomas and Certificates), commission for physics
- CNCS expert (National Scientific Council of Scientific Research from Romanian Higher Education);
- ACPART expert (Romanian Qualification for Higher Education Agency)
- QLHE expert (Quality and Leadership in Romanian Higher Education Project)

Affiliations (Member of professional associations)

- AACG (American Association of Crystal Growth)
- AIVELA (Associazione Italiana di Velocimetria Laser)
- RoMS-CGS (Romanian Materials Science - Crystal Growth Society)
- SRF (Romanian Physical Society)
- EPS (European Physical Society)
- ACM-V (Association for Multidisciplinary Research in West Region, Romania)
- AMPGAR (Association of Amateur Mineralogists, Paleontologists and Gemologists of Romania)

Specializations and qualifications in physics and materials science

- 03/1996 – 08/1996, Grenoble – France, Atomic Energy Center
- 04/1999 – 05/1999, Erlangen – Germany, Material Science Institute
- 11/1999 – 02/2000, Grenoble – France, Atomic Energy Center
- 1999 – 2003, Grenoble – France, CEA, INPG, Madylam Laboratory
- 06/2001 – Summer School - “Crystal Growth”, Doshisha University, Kyoto (Japan)
- 01/2004 – FT-IR Spectroscopy training, Bucharest (Romania)
- 06/2005 – “Particle Imaging Velocimetry and Laser Doppler Anemometry” - training, Ancona (Italy)
- 09/2009 – European School on Magnetism 2009, Timișoara (Romania)
- 08/2011 – 09/2011 – Medical Physics, Penn University, Philadelphia, USA

- Specializations and qualifications in educational politics**
- 03/1996 – 08/1996, Grenoble – France, Commission for Atomic Energy
  - 10/2013 – 11/2013- training programme for the utilization of attendance tracking and insertion of alumni in the labor market
  - 03/2010 – training module "Services and support for students", part of the project "Improvement of Academic Management"
  - 03/2011 – training "Management of the PhD schools: Novelties, Dilemmas, Utopias"
- Didactical activities (advisor and committee member)**
- advisor for 45 Bachelor theses and 45 Master dissertations
  - advisor for 22 theses for Didactical Degree I and committee president of 32 inspections for Degree I
  - member and president in committees of PhD theses
- Honors and awards**
- International Organization for Crystal Growth Award, 2001
  - International Organization of Crystallography Award, 2001
  - Romanian Association for Material Science and Crystal Growth Award, 2003
  - Romanian Academy Award - "Constantin Miculescu", Physics Domain, 2012
  - Knight in the "Palme Académiques" Order, awarded by the ambassador of France to Romania, Michèle Ramis
- Publications**
- 74 articles indexed in ISI journals
  - 19 articles in other scientific journals
  - 5 books or book chapters
  - 12 international conference volumes as editor
- Citations**
- 578 citations in 444 ISI indexed articles
  - 504 citations in 409 ISI indexed articles (excluding self-citations)
  - Hirsch factors: 13 (Web of Science), 15 (Scopus), 18 (Google Scholar)
- Projects**
- 18 research/infrastructure/educational projects as manager, deputy manager or coordinating director
  - 7 projects with local funding for organizing various events
  - 12 projects as team member
- Identifiers**
- ORCID: 0000-0003-1149-2066
  - ResearcherID: D-7619-2014
  - Scopus Author ID: 35178918500
  - UEFISCDI ID: U-1700-029R-9718

## PUBLICATION LIST

## ISI Journals

1. **Numerical simulation of the flow field in shaped crystal growth process**  
*Journal of Optoelectronics and Advanced Materials*, Vol. 2, No. 5, 474-480, 2000  
**Bunoiu O.**, Duffar T., Theodore F., Santailier J.L., Nicoară I.  
IF: 0.026, AIS: 0.03
2. **Numerical simulation of the flow field and solute segregation in Edge-defined Film-fed Growth**  
*Crystal Research and Technology*, Vol. 36, No. 7, 707-717, 2001  
**Bunoiu O.**, Duffar T., Theodore F., Santailier J.L., Nicoară I.  
IF: 0.536, AIS: 0.3
3. **Factors affecting the isotherm shape of semi-transparent BaF<sub>2</sub> crystals grown by Bridgman method**  
*Journal of Crystal Growth*, Vol. 237-239, Part 3, 1762-1768, 2002  
Barvinschi F., **Bunoiu O.**, Nicoară I., Nicoară D., Santailier J.L., Duffar T.  
IF: 1.529, AIS: 0.7
4. **Fluid flow and solute segregation in EFG crystal growth process**  
*Journal of Crystal Growth*, Vol. 275, 799-805, 2005  
**Bunoiu O.**, Nicoară I., Santailier J.L., Duffar T.  
IF: 1.681, AIS: 0.7
5. **Thermodynamic analysis of gas formed during shaped sapphire growth**  
*Journal of Crystal Growth*, Vol. 275, 707-713, 2005  
**Bunoiu O.**, Defoort F., Santailier J.L., Duffar T., Nicoară I.  
IF: 1.681, AIS: 0.7
6. **Solute distribution in shaped sapphire crystals obtained by EFG method**  
*Journal of Optoelectronics and Advanced Materials*, Vol. 7, Nr. 2, 615-618, 2005  
**Bunoiu O.**, Nicoară I., Duffar T.  
IF: 1.138, AIS: 0.1
7. **On the voids distribution and size in shaped sapphire crystals**  
*Crystal Research and Technology*, Vol 40, No. 9, 952-959, 2005  
**Bunoiu O.**, Nicoară I., Santailier J.L., Theodore F., Duffar T.  
IF: 0.833, AIS: 0.3
8. **Void engulfment in shaped sapphire crystals**  
*Journal of Crystal Growth*, Vol. 287, Nr. 2, 291-295, 2006  
Nicoară I., **Bunoiu O.**, Vizman D.  
IF: 1.809, AIS: 0.6
9. **Concentration distribution of Yb<sup>2+</sup> and Yb<sup>3+</sup> ions in YbF<sub>3</sub>:CaF<sub>2</sub> crystals**  
*Journal of Crystal Growth*, Vol. 310, No. 7-9, 1476-1481, 2008  
Nicoară I., Pecingina-Gârjoaba N., **Bunoiu O.**  
IF: 1.950, AIS: 0.582
10. **Segregation coefficient of Pb<sup>2+</sup> ions in CaF<sub>2</sub> Crystals**  
*AIP Conference Proceedings*, Vol. 1131, 112-116, 2009  
Stef M., **Bunoiu O.**, Paraschiva M., Pruna A., Nicoara I.
11. **Some considerations on the dynamics of nanometric suspensions in fluid media**  
*AIP Conference Proceedings*, Vol. 1131, 164-168, 2009  
Lungu M., Neculae A., **Bunoiu M.**
12. **Gas bubbles in shaped sapphire**  
*Progress in Crystal Growth and Charact. of Materials*, Vol. 56, No. 3-4, 123-145, 2010  
**Bunoiu O.M.**, Duffar T., Nicoară I.  
IF: 6.750, AIS: 1.442
13. **Numerical simulation of bioparticle manipulation using dielectrophoresis**  
*AIP Conference Proceedings*, Vol. 1262, 144-149, 2010  
Neculae A., **Bunoiu O.M.**, Lungu M.

## PUBLICATION LIST

## ISI Journals

14. **Distribution of Pb<sup>2+</sup> ions in PbF<sub>2</sub>-Doped CaF<sub>2</sub> Crystals**  
*Acta Physica Polonica A*, Vol. 117, Issue: 3, 466-470, 2010  
 Paraschiva M., Nicoară I., Ștef M., **Bunoiu O. M.**  
 IF: 0.467, AIS: 0.117
  
15. **Effective segregation coefficient of Er<sup>3+</sup> ions in ErF<sub>3</sub>-doped CaF<sub>2</sub> crystals**  
*Physica Scripta*, Vol. 81, Issue: 3, Article Number: 035602, 2010  
 Munteanu M., Ștef M., **Bunoiu O.**, Nicoară I.  
 IF: 0.985, AIS: 0.335
  
16. **Some considerations on the dielectrophoretic manipulation of nanoparticles in fluid media**  
*Journal of Optoelectronics and Advanced Materials*, Vol. 12, No. 12, 2423-2426, 2010  
 Lungu M., Neculae A., **Bunoiu M.**  
 IF: 0.412, AIS: 0.113
  
17. **Some Considerations on the Nanoparticles Manipulation in Fluid Media Using Dielectrophoresis**  
*Romanian Journal of Physics*, Vol. 56, No. 5-6, 749-756, 2011  
 Lungu M., Neculae A., **Bunoiu M.**, Strambeanu N.  
 IF: 0.414, AIS: 0.095
  
18. **Interface shape studies in Bridgman growth of multicrystalline silicon**  
*AIP Conference Proceedings*, Vol. 1387, 226-231, 2011  
**Bunoiu O.**, Ștef M., Popescu A., Vizman D.
  
19. **Numerical study regarding the influence of electrodes' geometry on the dielectrophoretic forces**  
*AIP Conference Proceedings*, Vol. 1387, 270-275, 2011  
 Neculae A., Lungu M., Nicolici-Schultz T., **Bunoiu M.**
  
20. **Electrohydrodynamic modeling for manipulation of micro/nano particles in microfluidic systems**  
*AIP Conference Proceedings*, Vol. 1472, 155-161, 2012  
 Neculae A., Lungu M., **Bunoiu M.**, Giugiulan R.
  
21. **Influence of growth rate on interface shape and grains structure in multicrystalline silicon growth by Bridgman method**  
*AIP Conference Proceedings*, Vol. 1472, 210-214, 2012  
 Pupăzan V., Popescu A., **Bunoiu O.M.**, Vizman D.
  
22. **Numerical analysis of nanoparticle behavior in a microfluidic channel under dielectrophoresis**  
*Journal of Nanoparticle Research*, Vol. 14, No. 10, 1154, 2012  
 Neculae A., Biriș C.G., **Bunoiu M.**, Lungu, M.  
 IF: 2.175, AIS: 0.676
  
23. **Submicron particle trapping using traveling wave dielectrophoresis**  
*AIP Conference Proceedings*, Vol. 1564, 111-116, 2013  
 Lungu M., Giugiulan R., **Bunoiu M.**, Strambeanu M., Neculae A.
  
24. **Effects of fluid flow velocity upon nanoparticle distribution in microfluidic devices under dielectrophoresis**  
*Romanian Reports in Physics*, Vol. 66, No. 3, 754-764, 2014  
 Neculae A., Giugiulan R., **Bunoiu M.**, Lungu M.  
 IF: 1.517, AIS: 0.210
  
25. **Study of a 3D DEP-based Microfluidic System for Selective Nanoparticle Manipulation**  
*AIP Conference Proceedings*, Vol. 1634, 89-94, 2014  
 Lungu M., Balasiu S., Bunoiu M.O., Neculae A.
  
26. **Segregation coefficient of Yb<sup>3+</sup> and Yb<sup>2+</sup> ions in YbF<sub>3</sub> Doped BaF<sub>2</sub> Crystals**  
*AIP Conference Proceedings*, Vol. 1634, 111-114, 2014  
 Nicoara I., Buse G., Bunoiu M.

## PUBLICATION LIST

## ISI Journals

27. **Effects of crucible coating on the quality of multicrystalline silicon grown by a Bridgman technique**  
*Journal of Crystal Growth*, Vol. 401, 720-726, 2014  
 Pupazan V., Negrița R., **Bunoiu O.**, Nicoară I., Vizman D.  
 IF: 1.698, AIS: 0.401
28. **Hybrid magnetorheological elastomer: Influence of magnetic field and compression pressure on its electrical conductivity**  
*Journal of Industrial and Engineering Chemistry*, Vol. 20, No. 6, 3994-3999, 2014  
 Bica I., Anitas E.M., **Bunoiu M.**, Vatzulik B., Juganaru I.  
 IF: 3.512, AIS: 0.492
29. **Structural Properties of Composite Elastomeric Membranes Using Small-Angle Neutron Scattering**  
*Romanian Journal of Physics*, Vol. 60, 653-657, 2015  
 Anitas E.M., Bica I., Erhan R.V., **Bunoiu M.**, Kuklin A.I.  
 IF: 1.398, AIS: 0.173
30. **Nanoparticles trapping from flue gas using dielectrophoresis**  
*AIP Conference Proceedings*, Vol. 1694, 040004, 2015  
 Neculae A., Strambeanu M., Lungu A., **Bunoiu M.**, Lungu M.
31. **Promoting an English and Science Summer Programme through Social Media SMART 2014 - Social Media in Academia: Research and Teaching**, 119-123, 2015  
 Craciun D., Oprescu M., **Bunoiu M.**
32. **Why Blended Learning Models in Romanian Science Education?**  
*Rethinking Education by Leveraging the Elearning Pillar of the Digital Agenda for Europe! vol. III of Book Series: eLearning and Software for Education*, 460-468, 2015  
 Craciun D., **Bunoiu M.**
33. **Magnetodielectric effects in composite materials based on paraffin, carbonyl iron and graphene**  
*Journal of Industrial and Engineering Chemistry*, Vol. 21, 1323-1327, 2015  
 Bica I., Anitas E.M., Averis L.M.E., **Bunoiu M.**  
 IF: 4.179, AIS: 0.568
34. **Magnetodielectric effects in hybrid magnetorheological suspensions**  
*Journal of Industrial and Engineering Chemistry*, Vol. 22, 53-62, 2015  
 Bica I., Anitas E.M., Chirigiu I., **Bunoiu M.**, Juganaru I., Tatu R.F.  
 IF: 4.179, AIS: 0.568
35. **Influence of the longitudinal magnetic field on the turning angle of a cylindrical bar-shaped magnetorheological elastomer**  
*Journal of Optoelectronics and Advanced Materials*, Vol. 17, 1379-1384, 2015  
 Bica I., Bălășoiu M., **Bunoiu M.**, Iordaconiu L., Cirtina G.  
 IF: 0.383, AIS: 0.078
36. **Training Teachers for the Knowledge Society: Social Media in Science Education**  
*Brain-Broad Research in Artificial Intelligence and Neuroscience*, vol. 6, 82-83, 2015  
 Craciun D., **Bunoiu M.**
37. **Mechanisms of micropore formation in silicone rubber based membranes**  
*Romanian Journal of Physics*, Vol. 61, 464-472, 2016  
 Bica I., Anitas E.M., **Bunoiu M.**, Iordaconiu L., Bortun C.M., Averis L.M.E.  
 IF: 1.758, AIS: 0.243
38. **Microparticles and Electroconductive Magnetorheological Suspensions**  
*Romanian Journal of Physics*, Vol. 61, 926-945, 2016  
 Bica I., Balasoiu M., **Bunoiu M.**, Iordaconiu L.  
 IF: 1.758, AIS: 0.243



## PUBLICATION LIST

## ISI Journals

39. **Digital Storytelling as a Creative Teaching Method in Romanian Science Education**  
*AIP Conference Proceedings*, 1722, 310001, 2016  
 Craciun D., Craciun P., **Bunoiu M.**
40. **Filtration of flue in microfluidic devices using dielectrophoresis**  
*Romanian Journal of Physics*, Vol. 61, No. 5-6, 957-969, 2016  
 Neculae A., **Bunoiu M.**, Lungu A., Lungu M.  
 IF: 1.758, AIS: 0.243
41. **Filtration of flue gas by retaining of nanoparticles in microfluidic devices using dielectrophoresis**  
*Romanian Reports in Physics*, Vol. 68, No. 3, 2016  
 Neculae A., **Bunoiu M.**, Lungu A., Lungu M.  
 IF: 1.467, AIS: 0.242
42. **Augmented Reality in Romanian Science Education – Pros and Cons**  
*The International Scientific Conference eLearning and Software for Education 3: 193-199. Bucharest: "Carol I" National Defence University, 2016*  
 Craciun D., **Bunoiu M.**
43. **Shear bond strength tests of zirconia veneering ceramics after chipping repair**  
*Journal of Adhesion Science and Technology*, Vol. 30, 666-676, 2016  
 Craciunescu E., Sinescu C., Negrutiu M.L., Popa D.M., Lauer H.C., Rominu M., Hutiu G., **Bunoiu M.**,  
 Duma V.F., Antoniac I.  
 IF: 1.073, AIS: 0.252
44. **Magnetorheological elastomer based on silicone rubber, carbonyl iron and Rochelle salt: Effects of alternating electric and static magnetic fields intensities**  
*Journal of Industrial and Engineering Chemistry*, vol. 37, 312–318, 2016  
**Bunoiu M.**, Bica I.  
 IF: 4.421, AIS: 0.606
45. **Influence of polyols on the formation of nanocrystalline nickel ferrite inside silica matrices**  
*Journal of Crystal Growth*, Vol.: 457, Special Issue, 294-301, 2017  
 Stoia M., Barvinschi P., Barbu-Tudoran L., **Bunoiu M.**  
 IF: 1.742, AIS: 0.358
46. **A finite element method model to simulate the thermal response of vascularized tissue to laser irradiation**  
*Romanian Reports in Physics*, Vol. 69, No. 3, 610, 2017  
 Barvinschi P., **Bunoiu O.M.**  
 IF: 1.582, AIS: 0.255
47. **Magnetodielectric Membranes: Effects of the Magnetic Field on the Dielectric Loss Tangent**  
*AIP Conference Proceedings*, 1916, 040007, 2017  
 Bălășoiu M., **Bunoiu M.**, Chirigiu L., Chirigiu L.M.E., Pascu G., Bica I.
48. **Boosting physics education through mobile augmented reality**  
*AIP Conference Proceedings*, 1916, 050003, 2017  
 Crăciun D., **Bunoiu M.**
49. **Silicone rubber based magnetorheological elastomer: magnetic structure tested by means of neutron depolarization and magnetic force microscopy methods**  
*Journal of Physics: Conference Series*, Vol. 848, 012016, 2017  
 Balasoiu M., Kozhevnikov S.V., Nikitenko Yu. V., Iacobescu G.E., **Bunoiu M.**, Bica I.
50. **The implicit effect of texturizing field on the elastic properties of magnetic elastomers revealed by SANS**  
*Journal of Magnetism and Magnetic Materials*, Vol.: 431, 126-129, 2017  
 Bălășoiu M., Lebedev V.T., Raikher Yu.L., Bica I., **Bunoiu M.**  
 IF: 3.046, AIS: 0.466



## PUBLICATION LIST

## ISI Journals

51. **Generation of Iron Nano-microparticles for Bio-medical Applications Using Plasma Processes**  
*Revista de Chimie*, Vol. 68, No. 6, 1204-1209, 2017  
Bunoiu M., Anitas E.M., Neamtu J., Bica I., Chirigiu L., Chirigiu L.M.E.  
 IF: 1.412, AIS: 0.047
  
52. **Hybrid Magnetorheological Elastomers: Effects of the magnetic field on some electrical properties**  
*Applied Surface Science*, Vol. 424, Part 3, Special Issue, 282-289, 2017  
Bunoiu M., Neamtu J., Chirigiu L., Bălăsoiu M., Pascu G., Bica I., Chirigiu L.M.E.  
 IF: 4.439, AIS: 0.627
  
53. **A study case for the accreditation of doctoral studies. Preliminary approaches**  
*EDULEARN18: 10TH International Conference on Education and New Learning Technologies, EDULEARN Proceedings*, 3146-3154, 2018  
 Cojocar D., Petrescu I., Bunoiu M., Gogu E., Stanciu S., Tanasie A.
  
54. **Experimental dosimetric checkup under positioning errors according to gamma criterion**  
*UPB Scientific Bulletin, Series A: Applied Mathematics and Physics*, Vol. 80, No. 1, 271-280, 2018  
 Scarlatescu I., Spunei M., Chis A., Negru S., Bunoiu M., Avram N.  
 IF: 0.478, AIS: 0.094
  
55. **Teacher Training in the Context of Open Science and Science Education**  
*eLearning Challenges and New Horizons*, Vol. 4, Book Series: eLearning and Software for Education, pp. 319-326, 2018  
 Craciun D., Bunoiu M.
  
56. **Learning Science outside the Classroom: A Summer School Experience**  
*AIP Conference Proceedings*, Vol. 2071, 050002, 2019  
 Craciun D., Bunoiu M.
  
57. **"Digital Storytelling" in Teaching: Lessons Learned at WUT**  
*New Technologies and Redesigning Learning Spaces, Vol.II, Book Series: eLearning and Software for Education*, pp. 313-322, 2019  
 Grosseck G., Craciun D., Bunoiu M.
  
58. **Magnetorheological Hybrid Elastomers Based on Silicone Rubber and Magnetorheological Suspensions with Graphene Nanoparticles: Effects of the Magnetic Field on the Relative Dielectric Permittivity and Electric Conductivity**  
*International Journal of Molecular Sciences*, Vol. 20, No. 17, Art. no. 4201, pp. 1-9, 2019  
 Bica I., Bunoiu O.M.  
 IF: 4.556, AIS: 0.943
  
59. **Digital Comics, a Visual Method for Reinvigorating Romanian Science Education**  
*Revista Românească pentru Educație Multidimensională*, Vol. 11, No. 4, pp. 321-341, 2019  
 Craciun D., Bunoiu M.
  
60. **Nano-ZrO<sub>2</sub> filled high-density polyethylene composites: Structure, thermal properties, and the influence  $\gamma$ -irradiation**  
*Polymer Degradation and Stability*, Vol. 171, Art. No. 109042, 2020  
 Nabiye A.A., Olejniczak A., Pawluko A., Balasoiu M., Bunoiu M., Maharramov A.M., Nuriyev M.A., Ismayilova R.S., Azhibekov A.K., Kabyshev A.M., Ivankov O.I., Vlase T., Linnik D.S., Shukurova A.A., Ivanshina O.Y., Turchenko V.A., Kuklin A.I.  
 IF: 5.030, AIS: 0.666
  
61. **Magneto-Optical Transmittance Observed in Magnetorheological Suspensions Films**  
*AIP Conference Proceedings*, Vol. 2218, Art. No. 030016, 2020  
 Anitas E., Bica I., Bunoiu M., Malaescu I., Marin C.N., Ercuta A., Balasoiu M., Lungu M., Pascu G.
  
62. **Game-Based Storytelling in Non-Formal Romanian Science Education**  
*AIP Conference Proceedings*, Vol. 2218, Art. No. 060009, 2020  
 Craciun D., Grosseck G., Bunoiu M.

## PUBLICATION LIST

## ISI Journals

63. **Influence of a transverse magnetic field and of hydrostatic pressure on the elasticity state of anisotropic magnetorheological elastomers**  
*Romanian Reports in Physics, Vol. 72, No. 3, 505, 2020*  
 Bica I., Anitas E.M., **Bunoiu M.**  
 IF: 1.785, AIS: 0.268
64. **Investigation of some thermal parameters of ferrofluids in the presence of a static magnetic field**  
*Journal of Magnetism and Magnetic Materials, Vol. 498, Art. No. 166132, 2020*  
**Bunoiu O.M.**, Matu G., Marin C.N., Malaescu I.  
 IF: 2.993, AIS: 0.459
65. **Investigation of therapeutic-like irradiation effect on magnetic hyperthermia characteristics of a water-based ferrofluid with magnetite particles**  
*Journal of Magnetism and Magnetic Materials, Vol. 502, Art. No. 166605, 2020*  
 Lazič D, Malaescu I., **Bunoiu O.M.**, Marin I., Popescu F.G., Socoliuc V., Marin C.N.  
 IF: 2.993, AIS: 0.459
66. **Analytical investigations of adornment pieces from Susani (Timiș County, Romania)**  
*Journal of Thermal Analysis and Calorimetry, Vol. 141, 3, 1067-1074, 2020*  
 Vlase D., Diaconescu D., Bunoiu V., **Bunoiu M.**, Vlase G., Sfârloagă P., Vlase T.  
 IF: 4.626, AIS: 0.366
67. **Electrical and Magnetodielectric Properties of Magneto-Active Fabrics for Electromagnetic Shielding and Health Monitoring**  
*International Journal of Molecular Sciences, Vol. 21, No. 13, 4785, 2020*  
**Bunoiu M.**, Anitas E.M., Pascu G., Chirigiu L.M.E., Bica I.  
 IF: 5.924, AIS: 1.123
68. **Formulation and Characterization of Alginate-Based Membranes for the Potential Transdermal Delivery of Methotrexate**  
*Polymers, Vol. 13, 161, 2021*  
 Bajas D., Vlase G., Mateescu M., Grad O.A., **Bunoiu M.**, Vlase T., Avram C.  
 IF: 4.967, AIS: 0.612
69. **Preliminary Study for the Preparation of Transmucosal or Transdermal Patches with Acyclovir and Lidocaine**  
*Polymers, Vol. 13, 3596, 2021*  
 Marioane C.A., **Bunoiu M.**, Mateescu M., Sfîrloagă P., Vlase G., Vlase T.  
 IF: 4.967, AIS: 0.612
70. **Study of Thermal Stability of Some Magnetorheological Elastomers**  
*Romanian Reports in Physics, Vol. 73, 503, 2021*  
**Bunoiu M.**, Vlase G., Bica I., Balasoiu M., Pascu G., Vlase T.  
 IF: 2.085, AIS: 0.202
71. **Electrical Devices based on Hybrid Magnetorheological Suspensions: Realization, Phenomenological Modeling and Technical Characteristics**  
*Romanian Journal of Physics, Vol. 66, 604, 2021*  
 Bălășoiu M., **Bunoiu M.**, Chirigiu L.M.E., Bica I.  
 IF: 1.662, AIS: 0.172
72. **Magnetically tuning microwave propagation parameters in ferrofluids**  
*The European Physical Journal E, Vol. 44, Art. No. 83, 2021*  
 Fannin P.C., **Bunoiu O.M.**, Malaescu I., Marin C.N., Ursu D.  
 IF: 1.624, AIS: 0.491
73. **Magnetic Field Effects Induced in Electrical Devices Based on Cotton Fiber Composites, Carbonyl Iron Microparticles and Barium Titanate Nanoparticles**  
*Nanomaterials, Vol. 12, Art. No. 888, 2022*  
 Pascu G., **Bunoiu O.M.**, Bica I.  
 IF: 5.719, AIS: 0.738

## PUBLICATION LIST

## ISI Journals

74. **Characteristics of late Neolithic pottery of the Zau culture: analysis of pottery samples from Iernut-Site II (Mures County, Romania)**

*Journal of Thermal Analysis and Calorimetry*, Vol. 147, No. 9, 5351-5363, 2022

Vlase D., Vlase T., Bunoiu M., Sfirloagă P., Ursuț A.G., Vlase G.,  
IF: 4.755, AIS: 0.438

## PUBLICATION LIST

## Other Journals

1. **Morfologia gropilor de atac in monocristalele de CaF<sub>2</sub>**  
*Analele Universitatii din Oradea*, Vol. VII, 155-161, 1997.  
Budașcă S.C., Nicoară I., **Bunoiu M.**
2. **Metoda Edge defined Film fed Growth de creștere a cristalelor artificiale profilate (EFG crystal growth method)**  
*Analele Universitatii din Oradea*, Vol. VIII, 322-333, 1998.  
Budașcă S.C., Nicoară I., **Bunoiu M.**
3. **Obținerea monocristalelor profilate de CaF<sub>2</sub> prin metoda de creștere necapilara (NCS)**  
*Analele Universitatii din Oradea*, Vol. IX, 149-160, 1999.  
Nicoară D., **Bunoiu M.**, Licz A., Budașcă C.
4. **The effects of crucible tilting in the vertical Bridgman crystal growth method**  
*Balkan Physics Letters*, Vol. 7, No. 2, 109-113, 1999.  
Vizman D., Stelian C., **Bunoiu M.**
5. **Shaped calcium fluoride crystals obtained using the noncapillary method (NCS)**  
*Analele Universitatii de Vest Timisoara*, Vol. 39, 113-121, 1999.  
Nicoară I., Nicoară D., **Bunoiu M.**, Licz A., Budașcă C., Dimofte A., Boltoși S.
6. **Etch pits morphology and dislocation distribution in shaped CaF<sub>2</sub> single crystal obtained using the Edge-defined Film-fed Growth method (EFG)**  
*Analele Universitatii din Oradea*, 137-151, 2000.  
Budașcă S.C., **Bunoiu M.**
7. **On Gases Engulfment in Shaped Sapphire Crystals,**  
*Analele Universitatii de Vest Timisoara*, Vol. 44, 248-255, 2003.  
**Bunoiu M.**, Nicoara I., Lighezan L., Mergea C.
8. **Gas bubbles nucleation during shaped sapphire single crystal growth**  
*Analele Universitatii de Vest Timisoara*, Vol. 45, 103-106, 2004.  
**Bunoiu M.**, Duffar T., Nicoara I.
9. **Images processing and analyse for identification and determination of structure defects**  
*Analele Universitatii de Vest Timisoara*, Vol. 47, 14-17, 2005.  
**Bunoiu M.**, Nicoara I., Nistor M.
10. **Temperature distribution in Bridgman equipment used to obtain calcium fluoride single crystals**  
*Analele Universitatii de Vest Timisoara*, Vol. 48, 212-216, 2006.  
**Bunoiu O.**, Faina B., Biris C., Vizman D., Nicoara I.
11. **Dopant concentration distribution of rare-earth doped CaF<sub>2</sub> crystals**  
*Analele Universitatii de Vest Timisoara*, Vol. 51, 141-144, 2007.  
**Bunoiu O.**, Munteanu M., Preda E., Nicoara I., Stef M.

## PUBLICATION LIST

## Other Journals

12. **Numerical study on nanoparticles manipulation in fluid media using dielectrophoresis**  
*Analele Universitatii de Vest Timisoara, Vol. 54, 94- 99, 2010.*  
Lungu M., Neculae A., **Bunoiu O.M.**
13. **Cavitation iron microparticles generation by plasma procedures for medical applications**  
*Analele Universitatii de Vest Timisoara, Vol. 56, 9-14, 2012*  
Bica I., **Bunoiu M.**, Chirigiu L., Spunei M., Juganaru I.
14. **Flue gas filtration by entrapment of nanoparticles in a microfluidic device using dielectrophoresis**  
*Analele Universitatii de Vest Timisoara, Vol. 57, 2013*  
Lungu M., Giugiulan R., Lungu A., **Bunoiu M.**, Neculae A.
15. **Flue gas filtration by entrapment of nanoparticles in a microfluidic device using dielectrophoresis**  
*Analele Universitatii de Vest Timisoara, Vol. 57, 2013*  
Lungu M., Giugiulan R., Lungu A., **Bunoiu M.**, Neculae A.
16. **ICT resources, Web 2.0 based activities and student learning styles in medical physics education**  
*Rev. Șt. „V. Adamachi”, vol. XXIII, nr. 1-4, 12-15, 2014*  
Crăciun D., **Bunoiu M.**
17. **Magnetorheological elastomer elasticity-based capacitor**  
*Studia UBB Physica, Vol. 60 (LX), No. 1, 45-52, 2015*  
**Bunoiu O.M.**, Bica I., Chirigiu L., Cirtina G., Iordaconiu L.
18. **Ways to improve students' decision for academic studies**  
*Acta Didactica Napocensia, Vol. 10, No.4, 109-120, 2017*  
Sava S., **Bunoiu M.**, Malita L.
19. **Developing Pre-Service Science Teachers TPACK Confidence Through Web Based Comics**  
*eLearning & Software for Education, Vol. 2, pp. 352-359, 2017*  
Craciun D., **Bunoiu M.**

## PUBLICATION LIST

## Books and Book Chapters

1. **Metode de obținere și caracterizare a cristalelor**  
*Editura Universității de Vest, Timișoara, 2008*  
**Bunoiu, O.M.**
2. **Influența condițiilor termodinamice și hidrodinamice asupra prezenței și distribuției bulelor de gaz în cristalele profilate de safir**  
*Editura Universității de Vest, Timișoara, 2008*  
**Bunoiu, O.M.**
3. **Fizică Moleculară și Căldură- Lucrări de laborator**  
*Editura Universității de Vest, Timișoara, 2008*  
Susan-Resiga D., Isvoran A., **Bunoiu M.**
4. **Dielectrophoresis Used for Nanoparticle Manipulation in Microfluidic Devices**  
capitol in *Nanoparticles' Promises and Risks- Characterization, Manipulation, and Potential Hazards to Humanity and the Environment, 271-301, Springer International Publishing, 2014*  
Lungu M., **Bunoiu, M.**, Neculae A.
5. **Elements of Materials Technology in DC Plasma**  
*Technosphera, Moscow, 2017*  
Bica I., Balasoiu M., **Bunoiu M.**

## PUBLICATION LIST

## Edited volumes

1. **AIP Conference Proceedings, Vol. 1131, 2009**  
Malaescu I., **Bunoiu, M.**
2. **AIP Conference Proceedings, Vol. 1262, 2010**  
**Bunoiu, M.**, Malaescu I.
3. **AIP Conference Proceedings, Vol. 1387, 2011**  
**Bunoiu, M.**, Malaescu I.
4. **AIP Conference Proceedings, Vol. 1472, 2012**  
**Bunoiu, M.**, Avram N., Biris C.G.
5. **AIP Conference Proceedings, Vol. 1564, 2013**  
**Bunoiu, M.**, Biris C.G., Avram N.
6. **AIP Conference Proceedings, Vol. 1634, 2014**  
**Bunoiu, M.**, Avram N, Popescu A.
7. **Book of Abstracts: 2nd International Summer School and Workshop "Complex and Magnetic Soft Matter Systems: Physico-Mechanical properties and Structure"**, Dubna, 2014  
Balasoiu M., **Bunoiu M.**, Ivankov O.I., Kuklin A.I., Raikher Yu.L.
8. **Nanoparticles' Promises and Risks- Characterization, Manipulation, and Potential Hazards to Humanity and the Environment**  
*Springer International Publishing, 2014*  
Lungu M., Neculae A., **Bunoiu, M.**, Biris C.
9. **Book of Abstracts: Conferința Internațională Eco Energy: „Echipamente, Tehnologii, Soluții de Mediu și Energie Regenerabilă”**, Universitatea de Vest, Timișoara, iunie 2016  
*Editura Universității de Vest, 2016, ISBN:978-973-125-495-1*  
Paulescu M., **Bunoiu, O. M.**
10. **Preface: CMSMS17 - 3rd International School and Workshop on Complex and Magnetic Soft Matter Systems: Structure and Physico -Mechanical Properties**  
*Journal of Physics: Conference Series, Vol. 994, No. 1, Art. no. 011001, 2018*  
Raikher Y., Balasoiu M., Rogachev A., **Bunoiu M.**
11. **Complex and Magnetic Soft Matter Systems**  
*Journal of Physics: Conference Series, Vol. 994, No. 1, Art. no. 011001, 2018*  
Raikher Y., Balasoiu M., **Bunoiu O.M.**, Kučerka N., Rogachev A.,
12. **Complex and Magnetic Soft Matter Systems**  
*Soft Materials, Volume 20, Issue sup1, 2022*  
Raikher Y., Balasoiu M., **Bunoiu O.M.**, Kučerka N., Rogachev A.,