

LISTA DE LUCRĂRI

Prof. dr. PETRESCU D. EMIL

1^o Teza de doctorat

- T1 **Diplomă de doctor** *Influența Câmpului Magnetic și a Radiației Laser Asupra Unor Cristale Lichide Nematice și Feronematice* **Ramura de știință: Fizică, Specialitatea: Cristale Lichide**

2^o Cărți publicate, îndrumare publicate

- Ca1 **EMIL PETRESCU**, Cristina Cîrtoaje, *Radiații ionizante și elemente de dozimetrie*, Ed. Politehnica Press, ISBN: 978-606-515-656-2, București, 2016, 181 pagini
- Ca2 **EMIL PETRESCU**, Cristina Cîrtoaje, *Elemente de termodinamică și fizică statistică*, Ed. Politehnica Press, ISBN: 978-606-515-657-9, București, 2016, 163 pagini
- Ca3 Gacriela Iacobescu, Cristina Cîrtoaje, **EMIL PETRESCU**, *Introducere în biofizică*, Ed. Universitatea Craiova, ISBN: 976-606-140-288-5, București, 2011, xxx pagini
- Ca4 **EMIL PETRESCU**, *Biofizică*, Ed. BREN, ISBN: 978-973-648-756-9, București, 2008, 350 pagini
- Ca5 **EMIL PETRESCU**, *Fizică – Vol. II*, Ed. BREN, ISBN: 973-648-118-2, București, 2003, 502 pagini
- Ca6 Cornelia Moțoc, **EMIL PETRESCU**, *Introducere în Fizica Semiconductorilor*, Ed. ELECTRA, ISBN: 973-8067-63-4, București, 2002, 260 pagini
- Ca7 **EMIL PETRESCU**, *Fizică – Vol. I*, Ed. BREN, ISBN: 973-9493-10-6, București, 2001, 354 pagini
- Cb1 **EMIL PETRESCU**, Rodica Eleonora Bena, *Tranziții Freedericksz în cristale lichide*, Ed. BREN, ISBN: 978-973-648-758-3, București, 2008, 175 pagini
- Cb2 D. Buzatu, **EMIL PETRESCU**, F. D. Buzatu *Optical and Electronical Methods Applied to Ternary Protein Solutions*, Ed. BREN, ISBN: 978-973-648-641-8, Bucharest, 2007, 107 pagini, (Editia II)
- II Cristina Cîrtoaje, **EMIL PETRESCU**, *Probleme rezolvate de fizică clasică*, Ed. Politehnica Press, ISBN: 978-606-515-332-5, București, 2011,
- I2 **EMIL PETRESCU**, D. Buzatu, *Probleme de Fizică Modernă (pentru studenți)*, Ed. BREN, ISBN: 973-648-415-7, București, 2005, 310 pagini
- I3 **EMIL PETRESCU**, D. Buzatu, *Probleme de Fizică (pentru studenți)*, Editura BREN, ISBN 973-648-241-3, București, 2004, 235 pagini
- I4 **EMIL PETRESCU**, Păun Viorel *Fizică, Probleme rezolvate*, Ed. BREN – ISBN: 973-8143-43-8. București, 2001, 247 pagini

- 15 **EMIL PETRESCU**, Păun Viorel, *Culegere de Probleme de Termodinamică și Fizică Statistică* – Universitatea Politehnică din București, 1997, 150 pagini

3^o Articole/studii publicate:

- Ris1 Cristina Cirtoaje, Gabriela Iacobescu, **Emil Petrescu**, Freedericksz Transitions in Twisted Ferronematics Subjected to Magnetic and Laser Field, CRYSTALS, Volume: 10 Issue: 7 Article Number: 567, DOI: 10.3390/cryst10070567, Published: JUL 2020 WOS:000554207900001
- Ris2 Cristina Cirtoaje, **Emil Petrescu**, *The Influence of Single-Walled Carbon Nanotubes on the Dynamic Properties of Nematic Liquid Crystals in Magnetic Field*, MATERIALS, Volume: 12 Issue: 24, Article Number: 4031, Published: DEC 2 2019, DOI: 10.3390/ma12244031, WOS:000507308200009
- Ris3 Cristina Cirtoaje, **Emil Petrescu**, Cristina Stan, Andrey Rogachev, *Electric Freedericksz transition in nematic liquid crystals with graphene quantum dot mixture*, APPLIED SURFACE SCIENCE, Volume: 487 Pages: 1301-1306, DOI: 10.1016/j.apsusc.2019.05.073, Published: SEP 1 2019, WOS:000471996400146
- Ris4 **Emil Petrescu**, Cristina Cirtoaje and Octavian Danila, *Dynamic behaviour of nematic liquid crystal mixtures with quantum dots in electric fields*, Beilstein J. Nanotechnol. Beilstein J. Nanotechnol. 2018, 9, 399–406, doi:10.3762/bjnano.9.39, WOS:000424048500002
- Ris5 **Emil Petrescu**, Cristina Cirtoaje, *Dynamic behaviour of a nematic liquid crystal with added carbon nanotubes in an electric field*, Beilstein J. Nanotechnol. 2018, 9, 233–241, doi:10.3762/bjnano.9.25, WOS:000423192400001
- Ris6 **Emil Petrescu**, Stefan Teodorescu, Emilian Iuciu, Voicu Alexandru, *Temperature dependence of Freedericksz transition in nematic liquid crystals with quantum dots*, University Politehnica of Bucharest Scientific Bulletin- Series A - Applied Mathematics and Physics, Volume: 80, Issue: 2, 281-288, Published: 2018, WOS:000435265100028
- Ris7 **Emil Petrescu**, Cristina Cirtoaje and Cristina Stan, *Dynamic behaviour of a nematic liquid crystal mixed with CoFe₂O₄ ferromagnetic nanoparticles in a magnetic field*, Beilstein J. Nanotechnol. 2017, 8, 2467–2473. doi:10.3762/bjnano.8.246, WOS:000416166400001
- Ris8 Mihaela Antonina Calin, Sorin Viorel Parasca, Marian Romeo Calin, **Emil Petrescu**, *An Analysis of Human Dorsal Hand Skin Texture Using Hyperspectral Imaging Technique for Assessing the Skin Aging Process*, Applied Spectroscopy, Volume: 71 Issue: 3 Pages: 391-400 Published: MAR 2017, DOI: 10.1177/0003702816659667 WOS:000399925900004
- Ris9 Cristina Cirtoaje, **Emil Petrescu**, *Measurement of magnetic anisotropy of multiwalled carbon nanotubes in nematic*, Physica E, 84, pag. 244-248, (2016), DOI: 10.1016/j.physe.2016.06.011, WOS:000370089900006
- Ris10 Cristina Cirtoaje, **Emil Petrescu**, Cristina Stan, Dorina Creangă *Ferromagnetic nanoparticles suspensions in twisted nematic*, Physica E, 79, pag 38-43, (2016) DOI: 10.1016/j.physe.2015.12.006 WOS:000370089900006
- Ris11 Cristina Cirtoaje, **Emil Petrescu**, Victor Stoian, *Electrical Freedericksz transitions in nematic liquid crystals containing ferroelectric nanoparticles*, Physica E: Low-dimensional Systems and Nanostructures, Volume 67, Pages 23-27 (March 2015), DOI: 10.1016/j.physe.2014.11.004, WOS:000348266500005
- Ris12 **Emil Petrescu**, Mihaela Antonina Călin, Bogdan Marinescu, Cristina Cirtoaje, *In vivo study of mal-pdt using fluorescence Spectra*, U.P.B. Sci. Bull., Series A, Vol. 77, Issue. 2, 269-274, 2015, WOS:000355574100026

- Ris13** Cristina Cîrtoaje, **Emil Petrescu**, Mihaela Antonina Călin, Gina Izvoranu, *Spectral analysis of methyl-aminolevulinic acid based photodynamic therapy using fractionated light*, U.P.B. Sci. Bull., Series A, Vol. 76, Iss. 4, 2014, WOS:000346133600019
- Ris14** Calin Mihaela Antonina, Calin Marian Romeo, **Emil Petrescu**, Neagu Monica, *Increased number of fractionated irradiation sessions does not improve the cellular response to methyl aminolevulinic acid-mediated photodynamic therapy*- Photodiagnosis and Photodynamic Therapy, Volume: 10, Pages: 526—534 (2013), DOI:10.1016/j.pdpdt.2013.04.006, WOS:000328666900025
- Ris15** Stoian Victor, Cîrtoaje Cristina, **Emil Petrescu**, Cornelia Moțoc, *Nonlinearities induced by magnetic fields in nematic liquid crystals*, Optics Communications, Volumes: 309, Pages: 286-290 (2013) ISSN 0030-04018, DOI: 10.1016/j.optcom.2013.07.070, WOS:000328527800049
- Ris16** **Emil Petrescu**, Bena Rodica, Cîrtoaje Cristina, *Polarisation gratings using ferronematics-an elastic continuum theory*, Journal of Magnetism and Magnetic Materials, vol. 336, pages 44-48 (2013) ISSN 0304-8853, DOI: 10.1016/j.jmmm.2013.02.018, WOS:000316732400008
- Ris17** **Emil Petrescu**, Eleonora Rodica Bena *Surface anchoring energy and Freedericksz transition in ferronematics*, Journal of Magnetism and Magnetic Materials, vol. 321, issue 18, pages 2757–2762 (2009) ISSN 0304-8853, DOI: 10.1016/j.jmmm.2009.04.006, WOS:000266823200013
- Ris18** Cristina Cîrtoaje, Cornelia Moțoc, **Emil Petrescu**, *Transition induced by superposed electric and magnetic fields in cholesteric and ferrocholesteric liquid crystals*, University Politehnica of Bucharest Scientific Bulletin- Series A – Applied Mathematics and Physics, vol. 73, issue 3, pages 125-132 (2011) ISSN 1223-7027, WOS:000294238100011
- Ris19** Cristina Cîrtoaje, **Emil Petrescu**, Cornelia Moțoc, *Self-focusing in nematic liquid crystals subjected to magnetic fields*, Optoelectronics and Advanced Materials-Rapid Communications vol. 5, issue: 2, pages: 106-111 (2011) ISSN 1842-6573, WOS:000288625000023
- Ris20** Elena Slavnicu, Ghelmez Mihaela, **Emil Petrescu** Slavnicu, D *Studies of the mesomorphic state of the stearic acid* University Politehnica of Bucharest Scientific Bulletin- Series A- Applied Mathematics and Physics, Volume: 72, Issue: 3, Pages: 149–156, (2010), ISSN 1223-7027, WOS:000282020500013
- Ris21** Cristina Cîrtoaje, Cornelia Moțoc, **Emil Petrescu**, R.E. Bena *New magnetic methods for determining of elastic constants and rotational viscosity coefficient in nematic liquid crystals*, University Politehnica of Bucharest Scientific Bulletin- Series A – Applied Mathematics and Physics, vol. 72, issue 4, pages 233-246 (2010) ISSN 1223-7027, WOS:000286087500022
- Ris22** **Emil Petrescu**, Eleonora Rodica Bena *Surface anchoring energy and Freedericksz transition in ferronematics*, Journal of Magnetism and Magnetic Materials, vol. 321, issue 18, pages 2757–2762 (2009) ISSN 0304-8853, DOI: 10.1016/j.jmmm.2009.04.006, WOS:000266823200013
- Ris23** **Emil Petrescu**, Eleonora Rodica Bena *Influence of the magnetic and laser fields on the director structures of a ferrocholesteric liquid crystal in homeotropic cells*, Journal of Magnetism and Magnetic Materials, Volume: 320, Issue: 3-4, Pages: 299–303, (2008), ISSN 0304-8853, DOI: 10.1016/j.jmmm.2007.06.004, WOS:000251549100037
- Ris24** **Emil Petrescu**, Mihail Mirea, *Compound nucleus formation and de-excitation with neutrons*, University Politehnica of Bucharest Scientific Bulletin- Series A- Applied Mathematics and Physics, Volume: 70, Issue: 3, Pages: 59–72, (2008), ISSN 1223-7027, WOS:000262994500007
- Ris25** **Emil Petrescu**, Eleonora Rodica Bena, Cristina Cîrtoaje, Adrian Liviu Păun, *Laser-field-induced ferronematic-ferrocholesteric transition in homeotropic cells*, University Politehnica of Bucharest Scientific Bulletin- Series A- Applied Mathematics and Physics, Volume: 70,

- Ris25** I. Iovitz Popescu, Rudolf Emil Nistor, **Emil Petrescu** *On the energy transfer in an optical coupler*, Journal of Optoelectronics and Advanced Materials, Volume: 9, Issue: 8, Pages: 2413-2418 (2007), ISSN 1454-4164, WOS:000248583200023
- Ris27** M. Mirea, R. C. Bobulescu, **Emil Petrescu**, *Realistic s,pin-orbit operator for the supersymmetric two-center shell model*, Romanian Journal of Physics, Volume: 52, Issue: 1-2, Pages: 15–29, (2007) ISSN: 1221-146X, WOS:000254881100002
- Ris28** **EMIL PETRESCU**, Eleonora – Rodica Bena, C. Moțoc, C. Cârtoaje, *Magnetic -field-induced ferronematic-ferrocholesteric transition in homeotropic cells*, U.P.B. Sci. Bull., Series A, Vol. 69, No. 4, 89-97, (2007), ISSN 1223-7027, WOS:000409865300010
- Ris29** **Emil Petrescu**, Cornelia Moțoc, *A method for determination of rotational viscosity in nematic liquid crystals*, Revista de Chimie (București), Volume: 57, Issue: 5, Pages: 533–535, (2006) ISSN 0034-7752, WOS:000239132800019
- Ris30** Rudolf Nistor, **Emil Petrescu**, *Rapid Calculation method for wave-guide-imersed dielectric resonant frequencies*, Canadian Journal of Physics, Volume: 84, Pages: 289-297 (2006) ISSN 0008-4204, DOI: 10.1139/P06-060, WOS:000239655000003
- Ris31** Daniela Buzatu, O. Annunziata, **Emil Petrescu**, FD Buzatu, Carmen Popa, *Dynamic light scattering: a useful optical method to probe common-ion effects in protein-salt aqueous solutions*, Journal of Optoelectronics and Advanced Materials, Volume: 7, Issue: 6, Pages: 3161-3168, (2005), ISSN 1454-4164, WOS:000234027300056
- Ris32** Daniela Buzatu, **Emil Petrescu**, Carmen Popa, Florin D. Buzatu, *Determination of the diffusion coefficients for ternary system by gosting diffusiometer. Apparatus and method*, Journal of Optoelectronics and Advanced Materials, Volume: 7, Issue: 2, Pages: 1079-1090, (2005), ISSN 1454-4164, WOS:000228785700078
- Ris33** Daniela Buzatu, **Emil Petrescu**, Carmen Popa, Florin Buzatu, *Conductimetric method applied to ternary lysozime-KCl-water-solution and lysozime NH₄Cl- water solution*, Revue Roumaine de Chimie, Volume: 50, Issue: 3, 185-191, (2005), ISSN 0035-3930, WOS:000230799200004
- Ris34** Daniela Buzatu, **Emil Petrescu**, Carmen Popa, Florin Buzatu, *Conductimetric method applied to ternary lysozime-NaCl-water solution*, Revue Roumaine de Chimie, Volume: 50, Issue: 3, Pages: 193-199, (2005), ISSN 0035-3930 WOS:000230799200005
- Ris35** Daniela Buzatu, **Emil Petrescu**, Carmen Popa, Florin D. Buzatu, *Conductivity and viscosity measurements for binary lysozime chloride aqueous solution and ternary lysozime-salt-water solution*, Revista de Chimie , Vol: 56, Issue: 1, Pages: 61–65, (2005) WOS:000228443100014
- Ris36** Rudolf Nistor, **Emil Petrescu**, *Waveguide optogavanic device*, Czechoslovak Journal of Physics Volume: 54, Issue: 12, Pages: 1483-1493, (2004), ISSN 0011-4626, DOI: 10.1007/s10582-004-1205-x, WOS:000226108600005
- Ris37** Daniela Buzatu, **Emil Petrescu**, Carmen Popa, Florin Buzatu, Albright, JG *Extraction of Thermodynamic Data from Ternary Diffusion Coefficients of Lysozime Chloride in Water and Aqueous Na₂SO₄*, Revista de Chimie (Bucuresti), Volume: 55, Issue: 10, pages: 759-763, (2004), ISSN 0034-7752, WOS:000225068100007
- Ris38** Daniela Buzatu, **Emil Petrescu**, Carmen Popa, F.D. Buzatu, J.G. Albright, *Measurements of multicomponent diffusion coefficients for lysozime chloride in water and aqueous Na₂SO₄*, Revista de Chimie (București) , Volume: 55, Issue: 6, Pages: 435–438, (2004) ISSN 0034-7752, WOS:000222753600014
- Ris39** Doina Creanga, Cristina Stan, **Emil Petrescu**, *Fractal Dimension of some Tecto-Dendrimers*, Revista de Chimie (Bucuresti), Vol: 55, Issue: 5, Pages: 324-325, (2004), ISSN 0034-7752, WOS:000222576200011

- Ris40** Emil Petrescu, Cornelia Motoc, Camelia Petrescu, *Laser Induced Optical Nonlinearities in ferronematics*, Molecular Crystals and Liquid Crystals, Volume: 415, Pages : 197-210, (2004), IS N 1542-1406. DOI: 10.1080/15421400490478524, WOS:000224980300017
- Ris41** Rodica-Eleonora Bena, Emil Petrescu, *Surface effects on magnetic Fredericksz transition in ferronematics with soft particle anchoring*, Journal of Magnetism and Magnetic Materials, Volume: 263, Pages: 353-359, (2003), ISSN 0304-8853, DOI: 10.1016/S0304-8853(03)00113-6, WOS:000184038400016
- Ris42** Constantin Rosu, Doina Manaila-Maximean, Rodica Bena, Emil Petrescu, Stanislav Klosowicz, KL Czuprynski, *Thermally stimulated depolarization currents and optical transmission studies on uv cured polymer dispersed liquid crystal films*, Czechoslovak Journal of Physics, Volume: 53, Issue: 3, Pages: 235-247, (2003), ISSN 0011-4626, DOI: 10.1023/A:1022977014904, WOS:000182528800006
- Ris43** Rodica-Eleonora Bena, Emil Petrescu, *Ferronematics with soft particle anchoring in magnetic and laser fields*, Journal of Magnetism and Magnetic Materials, Volume: 248, Pages: 336-340, (2002), ISSN 0304-8853, DOI: 10.1016/S0304-8853(02)00362-1, WOS:000177190600022
- Ris44** Margareta Socaciu, Marcela Ursache, Emil Petrescu, Gabriela Iacobescu, *Order parameter from (p-ethoxybenzyliden)-p-n-butylaniline channeled spectra*, Modern Physics Letters B, Volume:15, Issue: 25, Pages: 1131-1139, (2001), ISSN 0217-9849, DOI: 10.1142/S0217984901002932, WOS:000172800000004
- Ris45** Emil Petrescu, Cornelia Motoc, *Behaviour of ferrocholesterics under external magnetic fields*, Journal of Magnetism and Magnetic Materials, Vol. 234, 142-147, (2001), ISSN 0304-8853, DOI: 10.1016/S0304-8853(01)00284-0, WOS:000170469600021
- Ris46** Emil Petrescu, Cornelia Moțoc, Doina Mănăilă, *A dynamical method for determining the elastic constants and relaxation parameters in nematic liquid crystals*, Modern Physics Letters B, Vol. 14, No. 4, 139-146, (2000), ISSN 0217-9849, DOI: 10.1142/S0217984900000203, WOS:000087197200004
- Ris47** Cornelia Moțoc, Emil Petrescu *Static and dynamic behaviour of ferronematics under magnetic fields*, Modern Physics Letters, Volume: 12, Issue: 13, Pages: 529-540, (1998) ISSN 0217-9849, DOI: 10.1142/S0217984998000639, WOS:000074804600004
- Rio1** Cătălin Stan – Sion, Mihaela Enăchescu, Cristina, EMIL PETRESCU, *An Introduction to Hypersensitive Analysis by AMS*, European Journal of Interdisciplinary Studies, Issue 3, pages: 67-79, 2010
- Rio2** Ion M. Popescu, Cristina Cirtoaje, EMIL PETRESCU, *Interdisciplinary Relationships in the "Politehnica" University of Bucharest* - European Journal of Interdisciplinary Studies - Issue 2, pages: 47-54, June 2010
- Rio3** C Calin, C. Cartoaje, EMIL PETRESCU, *Optical Technique for monitoring Tumor Response of Photodynamique Terapy* - European Journal of Interdisciplinary Studies - Issue 1, pages: 40-49 June 2009
- Rio4** Cornelia Moțoc, Rodica Bena, EMIL PETRESCU, *The behavior of ferronematics under magnetic and laser field*, U.P.B. Sci. Bull., Series A, Vol. 65, No. 1-4, 115-127, (2003), ISSN 1223-7027
- Rio5** EMIL PETRESCU, Eleonora - Rodica Bena, C. Moțoc, C. Cârtoaje, *Magnetic -field-induced ferronematic-ferrocholesteric transition in homeotropic cells*, U.P.B. Sci. Bull., Series A, Vol. 69, No. 4, 89-97, (2007), ISSN 1223-7027
- Rio6** D. Stângă, EMIL PETRESCU, *Measurement of ⁸⁵Kr by internal gas proportional counting*, U.P.B. Sci. Bull., Series A, Vol. 64, No. 4, 67-72, (2002), ISSN 1223-7027

- Rio7** D. Mănăilă Maximean, C. Roșu, R. Bena, **EMIL PETRESCU**, C. Moțoc, C. Vlaicu, S. Pistruț, *Electrical characteristics of Polymer Dispersed Liquid Crystal Films*, U.P.B. Sci. Bull., Series A, Vol. 62, No. 3, 81-89, (2000), ISSN 1223-7027
- Rio8** Cornelia Moțoc, **EMIL PETRESCU**, V. P. Păun, *Behaviour of ferronematics under magnetic field*, U.P.B. Sci. Bull., Series A, Vol. 61, No. 3-4, 135-140, (1999), ISSN 1223-7027
- Rio9** **Cornelia Moțoc**, **EMIL PETRESCU**, *The magnetic anisotropy of ferromagnetics*, U.P.B. Sci. Bull., Series A, Vol. 61, No.1-2, 161- 168, (1999), ISSN 1223-7027
- Rio10** V. P. Păun, C. Ghizdeanu, **EMIL PETRESCU**, *A new concept in predicting creep data for zirconium alloy tubes*, U.P.B. Sci. Bull., Series A, Vol. 61, No. 1-2, 219-223, (1999), ISSN 1223-7027
- Rio11** C. Moțoc, **EMIL PETRESCU**, *A new method for determining relaxation parameters and elastic constants of nematic liquid crystals*, U.P.B. Sci. Bull., Series A, Vol. 59, No. 1-4, 73-85, (1997), ISSN 1223-7027
- Rio12** C. Dascălu, C. Moțoc, **EMIL PETRESCU**, H. D. Koswing, U. Labes, *Temperature dependence of spontaneously induced ring structures in free standing films*, Proc. Suppl. Balkan Physics Letters, Vol. 5, 928-931, (1997), ISSN 1301-8329
- Rio13** Cornelia Moțoc, **EMIL PETRESCU**, Anca Alexe Ionescu, Constantin Roșu, *Dynamic behavior of a ferronematic in a magnetic field*, Proc. Suppl. Balkan Physics Letters, Vol. 5, 559-562, (1997), ISSN 1301-8329
- Rio14** C. Moțoc, **EMIL PETRESCU**, C. Roșu, *Magnetic and optical investigation in ferronematics*, U.P.B. Sci. Bull., Series A, Vol. 57-58, No.1-4, 93-100, (1996), ISSN 1223-7027
- Rns1** V. Păun, **EMIL PETRESCU**, *Second order approximation to stochastic differential equation for backward processes and Gaussian distribution*, Romanian Journal of Physics, Vol. 47, No. 3-4, 477-485, (2002), ISSN 1221-146-x
- Rns2** **EMIL PETRESCU**, C. Moțoc, *Optical nonlinearities in ferronematics*, Roum. J. Optoelectronics, ISSN 1454-4164, Vol. 6, No. 2, 47-52, (1998)
- Rns3** C. Moțoc, **EMIL PETRESCU**, *Laser induced diffractions rings and self-focusing ferronematics*, Roum. J. Optoelectronics, ISSN 1454-4164, Vol. 6, No. 2, 53-58, (1998)

4⁰ Articole/studii publicate în volumele unor manifestări științifice:

- Vi1** Cîrtoaje Cristina, **EMIL PETRESCU**, *The influence of graphene nanoplatelets on the Freedericksz transition threshold in nematic liquid crystals*. Proc. of SPIE Vol. 10977, Article number: NSP 109770J, 2018, doi: 10.1117/12.2502581, WOS:000458717900018 (Web of Science)
- Vi2** Victor Stoian, Cristina Cîrtoaje, **EMIL PETRESCU**, Cornelia Moțoc, *Optical nonlinearities induced by electric fields in nematic liquid crystals* Proc. of SPIE Optics+ Optoelectronics, 9503, 95030T-7 (2015) (Web of Science)
- Vi3** Cristina Cîrtoaje, Victor Stoiana, **EMIL PETRESCU**, Cornelia Moțoc, *Relaxation phenomena in nematic liquid crystals with multiwall carbon nanotubes adding*, Proc. of SPIE Microtechnologies, Vol. 9517, 95171G-10 2015 (Web of Science)
- Vi4** Cristina Ileana Covaliu, Gigel Paraschiv, Biriș Sorin Ștefan, Cristina Cîrtoaje, Ilie Filip, **EMIL PETRESCU**, *Chromium removal from wastewater using carbon nanotubes*, 4th International Conference of Thermal Equipment, Renewable Energy and Rural Development, pages: 199-

204, 2015 (Google Scholar)

- Vi5 Călin Ciufudean, Camelia Petrescu, **EMIL PETRESCU**, *Measuring bottleneck times in production lines with discrete event systems formalisms*, XVIII IMEKO WORLD CONGRESS Metrology for a Sustainable Development, September, 17 – 22, 2006, Rio de Janeiro, Brazil (Google Scholar)
- Vi6 Costin Cepisca, Horia Andrei, **EMIL PETRESCU**, Cristian Pirvu, Camelia Petrescu, *Remote Data Acquisition System for Hydro Power Plants*, Proceedings of the 6th WSEAS International Conference on Power Systems, Lisbon, Portugal, pages: 59-64, 2016 (Google Scholar)
- Vi7 **EMIL PETRESCU**, P. Penciu, Camelia Petrescu, M. Catrinciuc, *Studies upon the execution of the materials puncture inlet opening chemical metallizing*, Proc. SPIE București, Vol. 4068, pag. 219-225, (2000) (Web of Science)
- Vi8 C. Moțoc, **EMIL PETRESCU**, C. Dascălu, *Magneto-optical behaviour of ferronematics*, Proc. SPIE Bucuresti 1997, Vol. 3405, pag. 941-945, (1998) (Web of Science)
- Vi9 C. Dascălu, C. Moțoc, C. Roșu, **EMIL PETRESCU**, H. D. Koswing, U. Labes, *A study of the electro-optical response of some chiral liquid crystals with high spontaneous polarization*, Proc. SPIE București 1997, Vol. 3405, 796-800, (1998) (Web of science)
- Vi10 M. Honciuc, E. Sofron, M. Dumitru, **EMIL PETRESCU**, D. Covaci, *Behaviour of some fatty acids complex systems in external electric field*, Proc. of the 1st Gen. Conf. of the Balkan Phys. Union, Thessaloniki, Greece, 26-28 sept.1991 Vol.1, 1082-1084, (1993)
- Vn1 **EMIL PETRESCU**, C. Dascălu, R. Constantin, C. Motoc, *Ferronematic behavior of pyrolysed polyacrylonitrile in a liquid crystal matrix*, Lucrările simpozionului ECIT - 97, Pitești, noiembrie -1997, Vol. 3, 121- 124
- Vn2 C. Roșu, C. Moțoc, **EMIL PETRESCU**, D. Mănăilă, C. Dascălu, *The behavior of transient currents in nematic liquid crystals by using a time dependent thermodynamical model*, Lucrările simpozionului ECIT -97, Pitești, noiembrie 1997, Vol. 3, 110-116
- Vn3 C. Dascălu, **EMIL PETRESCU**, C. Roșu, C. Moțoc, *Electro-optical properties of the ferroelectric HL3*, Lucrările simpozionului ECIT -97, Pitești, noiembrie 1997, Vol. 3, 117-120
- Vn4 M. Honciuc, C. Petrescu, **EMIL PETRESCU**, *Microscopie electronică a sistemelor acid gras – cholesterol*, A Treia Conferință de Electronică, Telecomunicații, Automatică și Calculatoare - CNETAC 86, noiembrie 1986, pg. 189-194

5⁰ Brevete de invenție

- B1 Călin Marian Romeo **PETRESCU EMIL**, Enăchescu Mihaela, *Detector cu radiații ionizante*, Nr. Brevet invenție acordat: RO -118094-B1/2003 (Derwent Innovations Index)
- B2 **PETRESCU EMIL**, Enăchescu Mihaela, *Stilodozimetricu cu citire directă*, Nr. Brevet invenție acordat: RO113188-B1/1998 (Derwent Innovations Index)

6⁰ Proiecte de cercetare-dezvoltare-inovare:

DIRECTOR/RESPONSABIL DE PROIECT

- Pi1 Research project 22 /tema 04-4-1069 -2009/2014 *Dynamics of fluctuation of the magnetization in magnetic nanostructured materials by means of neutron scattering methotechniques* between JINR and the Institutions in Romania based on the JINR Order No. 96 din 17.02.2014, 2000 USD
- Pi2 Research project 76 /tema 04-4-1069-2009/2014 *Dynamics of fluctuation of the magnetization in magnetic nanostructured materials by means of neutron depolarised techniques* between JINR and the Institutions in Romania based on the JINR Order No. 82/18.02.2013, 2000 USD
- Pi3 Research project 36 /tema 04-4-1069-2009/2014 *Development of SAS methods of unpolarized*

neutrons for investigation of magnetic nanoscaled particles between JINR and the institutions in Romania based on JINR Order No. 82/06.02.2012, 3000 USD

- Pn1** *Aplicație software pentru conversia bazelor de date de tip IBM-DB2 într-o bază de date de tip ORACLE – versiunea 1-0*, PNCDI- Programul INFOSOC, 166/2004 24.000 (RON)
- Pn2** *Muzeu virtual – Aplicație multimedia inteligentă*, PNCDI – Program INFOSOC – Sisteme 133/2004 , 20.000 (RON)
- Pn3** *Sistem informatic de transformare a procesului aleatoriu de depunere a documentelor în vederea eliberării pașaportului, într-un proces ordonat*, PNCDI – Program INFOSOC – 170/2005, 24.000 lei
- Pn4** *Analize ultrasensibile AMS de profilare în adâncime a concentrației de tritium și deuteriu cu aplicații în fizica mediului la proceduri de detritiere și în diagnoza experimentelor de fisiune*, Cercetare de Excelență, Modul1, P-CD, 6104/2.10.2005 (10218/3.10.2005), 50.000 lei
- Pn5** *Promovarea principiilor românești de evaluare a institutelor de CD la criteriile ERA*, Cercetare de Excelență, Modul 3, P-INV-VIZ, 238/01.08.2006, 20.000 lei
- Pn6** *Cercetări privind relația dintre structură proprietăți material la prelucrarea cu viteze mari și implementarea acestor tehnologii în mediul industrial cu implicații în competitivitatea economiei naționale (CENVITAR)*, Cercetare de Excelență, Modul1, P-CD, 292/2006, 100000 lei
- Pn7** *AMS – Metodă de monitorizare a mediului*, Cercetare de Excelență, Modul1, P-CD, 283/2006, 60.000 lei
- Pn8** *Abordări fundamentale ale fisiunii nucleare pentru aplicații (ABOMA)*, Cercetare de Excelență, Modul1, P-CD, 06-10-79/1.08.2006, 90000 lei
- Pn9** *Tehnologie informatică complexă pe bază de cercetări multidisciplinare pentru monitorizarea infracționalității și activităților de combatere a acestora la nivel național conform cerințelor COMBINF*, Cercetare de Excelență, Modul 1, P-CD, 87/2006 180.000lei
- Pn10** *Dezvoltarea cercetării academice interdisciplinare în vederea creșterii competitivității universităților din România pe plan internațional*, Parteneriate în domeniile prioritare, Proiect complex, 838/1.09.2007, 197.225 lei
- Pn11** *Tehnologii și materiale avansate pentru aplicații în optoelectronică*, PN II, Capacități, Modul I, Tip PI, 126/14.09.2007 600.000 lei
- Pn12** *Studiul comportării tritiului prin nanotehnologia AMS, în materiale folosite la instalații de detriticele a apei utilizate în centrale nucleare, în scopul protejării personalului și a mediului înconjurător*, Parteneriate în domenii prioritare 72185/01.10.2008, 58960 lei
- Pn13** *Dezvoltarea schemelor de iradiere cu radiație optică coerentă multiplu fracționate (sifroc) în terapia fotodinamică cu metil-aminolevulinat (mal-pdt) a afecțiunilor cutanate premaligne și maligne nonmelanocitare*, Parteneriate în domenii prioritare 62074/01.10.2008, 300000 lei
- Pn14** *Analize ale concentrației izotopilor de hidrogen și a altor elemente din caramizi demontate din TPL de la Tore Supra Tokamak” (AMS analyses of concentrations of hydrogen isotopes and other elements in tiles dismantled from the Toroidal Pump Limiter at Tore Supra Tokamak.)*C2-04/2012 IFA-CEA, 65.000 lei
- Pn15** *Stilodozimetro cu citire directă SD-05*, Proiect din Program Național CNE (Centrala Nucleară Electrică), 5979/1987 (1987-1989), Finalizat cu omologare serie zero
- Pn16** *Stilodozimetro cu citire directă SD-100*, Proiect din Program Național CNE (Centrala Nucleară Electrică) 5980/1987, Finalizat cu omologare prototip

7⁰ Articole/studii, lucrări nepublicate

- E1 Cristina Cîrtoaje, **EMIL PETRESCU**, *Magnetic induced optical nonlinearities in hybrid nematic liquid crystal cells*, The 6th International Colloquium "Physics Of Materials" (Pm 6) 15-16 November, 2018 Bucharest, Romania)
- E2 **EMIL PETRESCU**, C. Cîrtoaje, E. Iuciuc, Ș. Teodorescu, A. Voicu, *Temperature influence on Freedericksz transition in NLC-GQD mixtures*, The 6th International Colloquium "Physics Of Materials" (Pm 6) 15-16 November, 2018 Bucharest, Romania
- E3 Cristina Cîrtoaje, **EMIL PETRESCU**, Cristina Stan, *Self-assembled cobalt ferrite nanoparticles in twisted nematic matrix*, 11th International Conference on Physics of Advanced Materials (ICPAM-11) September 8-14, 2016 Cluj-Napoca, Romania
- E4 C. Cîrtoaje, C. Moțoc, **EMIL PETRESCU**, *Aligned Nanoparticles in nematic liquid crystals*, Self-Assembly in the world of polymers 80th Meeting on macromolecules July, 10-14 , 2016, Prague, Czech Republic
- E5 V. Stoian, C. Cîrtoaje, C. Motoc, **EMIL PETRESCU**, *Magnetic Freedericksz transitions in nematic liquid crystals-carbon nanotubes mixtures*, International Colloquium 'Physics of Materials' - PM-4, November 13-14, 2014, Bucharest, Romania
- E6 V. Stoian, C. Cîrtoaje, C. Motoc, **EMIL PETRESCU**, *Diffraction phenomena in liquid crystals subjected to electric field*, International Colloquium 'Physics of Materials' - PM-4, November 13-14, 2014, Bucharest, Romania
- E7 Camelia Petrescu, **EMIL PETRESCU**, Mihaela Ilie, *Complex system with polariscope to be used in high school and universities*, First Hellenic-Turkish International Physics Conference Bodrum-Kos, pag. 264, (2001)
- E8 Doina Mănăilă-Maximean, Constantin Roșu, **EMIL PETRESCU**, Octavian Dănilă, Cristina Cîrtoaje, Dan Donescu, Vasile Eugeniu, *Polymer-magnetite particles/liquid crystal: study of optical transmission in magnetic field*. 12th International Balkan Workshop on Applied Physics, , July 08, 2011, Constanta, Romania
- E9 C. Cîrtoaje, C. Moțoc, **EMIL PETRESCU**, *Electric Field Effects In Nematic Liquid Crystals Doped With Carbon Nanotubes*, The 2nd International Colloquium "Physics of Materials" (PM-2) October 8-Th 2010 Politehnica University Of Bucharest Romania
- E10 Camelia Petrescu, **EMIL PETRESCU**, Mihaela Ilie, *Complex system with polariscope to be used in high school and universities*, First Hellenic-Turkish International Physics Conference Bodrum-Kos, pag. 264, (2001)
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- E12 **EMIL PETRESCU**, Doina Mănăilă, Cornelia Moțoc, *A method for determining viscosity coefficient in NLC*, XIII Conference on Liquid Crystals, Krynica Zdroj, Poland, pag. 183, (1999)
- E13 Doina Mănăilă, Constantin Roșu, Rodica Bena, Constantin Vlaicu, Cornelia Moțoc, **EMIL PETRESCU**, *Electrical characteristics of polmer dispersed liquid crystal films*, ECLC 99 - European Conference on Liquid Crystals 99, Hersonissos Crete, Greece, P-088, (1999)
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- E15 C. Moțoc, R. Bena, R. Mitroi, **EMIL PETRESCU**, V. Stoian, *A thermodielectric method for investigating phase transitions in polymer dispersed liquid crystal composites*, TFD 17, Proc. of 17th Physics Conf., Alanya, Turkey, pag. 445, (1998).

- E16 Viorel Păun, **EMIL PETRESCU**, Maria Honciuc, *Physical interpretation method in predicting creep data*, TFD 17, Proc. of 17th Physics Conf., Alanya, Turkey, pag. 348, (1998).
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- E18 Cornelia Moțoc, **EMIL PETRESCU**, Păun Viorel, *Nonlinear effects in ferronematics*, TFD 17, Proc. of 17th Physics Conf., Alanya, Turkey, pag. 446, (1998).
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- E24 I. Berceanu, I. Brânduș, A. Buță, C. Grama, I. Lazăr, I. Mihai, M. Petrașcu, V. Simion, A. Constantinescu, **EMIL PETRESCU**, S. Bădulescu, *Metodă pentru determinarea relativă a secțiunilor de fisiune în domeniul neutronilor termici*, Conferință națională de fizică, București, pag. 59-60, (1982)

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