


## INFORMATII PERSONALE

## Cristina Cirtoaje



 Universitatea Politehnica din București

 0040728193185

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[cristina\\_cirtoaje@yahoo.com](mailto:cristina_cirtoaje@yahoo.com)

Data nașterii 29/07/1977 | Nationalitate Romana

 EXPERIENȚA  
PROFESIONALĂ

2002- prezent

Octombrie 2022 prezent Director Departament

Departamentul de Fizica,  
Facultatea de Științe Aplicate  
Universitatea Politehnica din București,

2020-2022 Prodecan

Facultatea de Științe Aplicate  
Universitatea Politehnica din București,

2019 -prezent Conferențiar universitar

Universitatea Politehnica din București, Facultatea de Științe Aplicate,  
Departamentul de Fizică

2012- 2019 Șef lucrări

Universitatea Politehnica din București, Facultatea de Științe Aplicate,  
Departamentul de Fizică

 2006- 2012 Asistent universitar Universitatea Politehnica din București,  
Facultatea de Științe Aplicate
 2002- 2006 Preparator universitar Universitatea Politehnica din București,  
Facultatea de Științe Aplicate

**Atribuții:** instruirea studenților în fizica generală și discipline de specialitate  
(Biofizica alimentara), cercetare științifică

Sector de activitate Academic, învățământ universitar, cercetare științifică

## EDUCAȚIE

2002 - 2010

Doctor în fizică ,

Universitatea Politehnica din București

Domenii aprofundate

- Fizica cristalelor lichide
- Proprietățile magneto-optice ale cristalelor lichide
- Amestecuri de cristale lichide cu nanoparticule

2001 - 2002

Master in Fizică

Universitatea din Bucuresti, Facultatea de Fizică

Cursuri seminificative

- Semiconductori organici

- Metrologie
- Metrologie cuantică
- Sisteme cu microprocesoare

1996 - 2001

**Inginer diplomat, domeniul  
Metrologie-Defectoscopie**

Universitatea din Bucuresti, Facultatea de Fizică

**Cursuri semnificative**

- Fizică fundamentală și modernă
- Matematică
- Metrologie
- Metode de control nedistructiv
- Nanomateriale electronice organice.

**ABILITĂȚI  
PERSONALE**

Limba maternă Romanian

Alte limbi străine cunoscute)

	INTELEGERE		VORBIRE		SCRIERE
	Ascultare	Citire	Conversatie	Discurs oral	Exprimare scrisă
Engleza	C1	C2	C1	C1	C1
Rusa	A1	B1	A1	A1	A1

 Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user  
[Common European Framework of Reference for Languages](#)
**Abilități de comunicare** ▪ colaborare buna cu colegii în timpul activității didactice și in cadrul proiectelor de cercetare

**Competențe și aptitudini organizatorice** ▪ - experiență în coordonarea activitatii grupelor de studenti in orele de aplicatii teoretice sau practice și in diferite proiecte de cercetare , coordonarea unor grupuri de cercetare in diferite proiecte

**Competențe și aptitudini tehnice** ▪ - utilizarea dispozitivelor electrice, optice, magnetice utilizate in practica studenteasca si in laboratoarele de cercetare, asamblarea și punerea in funcțiune a unor dispozitive de laborator

Competențe digitale

AUTOEVALUARE

 Procesarea  
informatiei

Comunicare

 Redactare  
documente

 Securitatea  
datelor

 Rezolvarea  
problemelor

 Utilizator  
experimentat

 Utilizator  
experimentat

 Utilizator  
independent

 Utilizator  
independent

 Utilizator  
experimentat

 Levels: Basic user - Independent user - Proficient user  
[Digital competences - Self-assessment grid](#)
**INFORMAȚII  
SUPLIMENTARE**
**Publicații** 34 publicații indexate Web of Science (28 articole +3 ISI Proceedings)  
**Proiecte** 6 proiecte de cercetare ca responsabili, 9 proiecte ca membru al echipei

Referințe bibliografice	4 cărți (cursuri si culegeri)
Citări	170 citări in lucrări Web of Science

## A1 Publicații

### Articole ISI

		AIS	FI
1	<b>Cirtoaje, Cristina</b> Ferroelectric Particles in Nematic Liquid Crystals with Soft Anchoring MOLECULES Volume: 26 Issue: 4 Article Number: 1166 Published: FEB 2021		
2	<b>Cirtoaje, Cristina;</b> Iacobescu, Gabriela; Petrescu, Emil Freedericksz Transitions in Twisted Ferrofluids Subjected to Magnetic and Laser Field CRYSTALS Volume: 10 Issue: 7 Article Number: 567 Published: JUL 2020		
3	<b>Cirtoaje, Cristina;</b> Petrescu, Emil 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		
4	<b>Cirtoaje, Cristina;</b> Petrescu, Emil; Stan, Cristina; Andrey Rogachev Electric Freedericksz transition in nematic liquid crystals with graphene quantum dot mixture Conference: 12th International Conference on Physics of Advanced Materials (ICPAM) Location: Heraklion, GREECE Date: SEP 22-28, 2018 APPLIED SURFACE SCIENCE Volume: 487 Pages: 1301-1306 Published: SEP 1 2019		
5	<b>Cirtoaje, Cristina</b> <i>New method to detect low tritium concentration in metals</i> UPB Scientific Bulletin Series A, Applied Mathematics and Physics Volume: 81 Issue: 1 Pages: 229-240 WOS:000461794200023 <b>2019</b>	0.094	0.461
6	Emil Petrescu, <b>Cristina Cirtoaje</b> and Octavian Danila, <i>Dynamic behaviour of nematic liquid crystal mixtures with quantum dots in electric fields</i> , Beilstein J. Nanotechnol. Beilstein J. Nanotechnol. 2018, 9, 399–406, doi:10.3762/bjnano.9.39 , WOS:000424048500002 <b>2018</b>	0.745	2.968
7	Emil Petrescu, <b>Cristina Cirtoaje</b> , <i>Dynamic behaviour of a nematic liquid crystal with added carbon nanotubes in an electric field</i> , Beilstein J. Nanotechnol. 2018, 9, 233–241, doi:10.3762/bjnano.9.25, WOS:000423192400001 <b>2018</b>	0.745	2.968
8	Cirtoaje, Cristina; Petrescu, Emil <i>The influence of graphene nanoplatelets on the Freedericksz transition threshold in nematic liquid crystals</i> ADVANCED TOPICS IN OPTOELECTRONICS, MICROELECTRONICS, AND NANOTECHNOLOGIES IX Book Series: Proceedings of SPIE Volume: 10977 Article Number: UNSP 109770J , WOS:000458717900018 <b>2018</b>		
9	Emil Petrescu, <b>Cristina Cirtoaje</b> and Cristina Stan, <i>Dynamic behaviour of a nematic liquid crystal mixed with CoFe<sub>2</sub>O<sub>4</sub> ferromagnetic nanoparticles in a magnetic field</i> , Beilstein J. Nanotechnol. 2017, 8, 2467–2473. doi:10.3762/bjnano.8.246, WOS:000416166400001 <b>2017</b>	0.745	2.968
10	E.C. Niculescu, C. Stan, C D. Bejan, <b>C. Cirtoaje</b> <i>Impurity and eccentricity effects on the nonlinear optical rectification in a quantum ring under lateral electric fields</i> JOURNAL OF APPLIED PHYSICS Volume: 122 Issue: 14 Article Number: 144301, DOI: 10.1063/1.4999673, WOS:000413038500020 <b>2017</b>	0.561	2.176
11	Manaila-Maximean, D.; <b>Cirtoaje, C.</b> ; Danila, O.; Donescu, D. <i>Novel colloidal system: Magnetite-polymer particles/lyotropic liquid crystal under magnetic field</i> JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS Volume: 438 Pages: 132-137 , DOI: 10.1016/j.jmmm.2017.02.034, WOS:000402480500021 <b>2017</b>	0.466	3.046
12	<b>Cristina Cirtoaje</b> , Emil Petrescu, <i>Measurement of magnetic anisotropy of multiwalled carbon nanotubes in nematic</i> , Physica E, 84, pag. 244-248, (2016), DOI: 10.1016/j.physe.2016.06.011, WOS:000370089900006 <b>2016</b>	0.446	2.221
13	<b>Cristina Cirtoaje</b> , Emil Petrescu , Cristina Stan, Dorina Creangă <i>Ferromagnetic nanoparticles suspensions in twisted nematic</i> , Physica E, 79, pag 38-43, (2016) DOI: 10.1016/j.physe.2015.12.006 WOS:000370089900006	0.446	2.221

- 2016**
- 14** **Cristina Cîrtoaje**, 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 0.454 1.904
- 2015**
- 15** 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), DOI: 10.1117/12.2178320, WOS:000356606800018
- 2015**
- 16** **Cristina Cîrtoaje**, Victor Stoian, Emil Petrescu, Cornelia Moțoc, *Relaxation phenomena in nematic liquid crystals with multiwall carbon nanotubes adding*, Proc. Of SPIE Microtechnologies, Vol. 9517, 95171G-10 2015, DOI: 10.1117/12.2178333, WOS:000357978500043
- 2015**
- 17** Petrescu, Emil; Calin, Mihaela Antonina; Marinescu, Bogdan; Cirtoaje, Cristina *In vivo study of mal-pdt using fluorescence spectra* , U.P.B. Sci. Bull., Series A, Volume: 77 Issue: 2 Pages: 269-276, WOS:000355574100026 0.064 0.365
- 2015**
- 18** **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 0.051 0.405
- 2014**
- 19** **Cristina Cîrtoaje**, *Ferrocholesteric - ferromagnetic transition in magnetic and laser field*, U.P.B. Sci. Bull., Series A, Volume: 76 Issue: 1 Pages: 187-196 , WOS:000332914700019 0.094 0.405
- 2014**
- 20** **Cristina Cîrtoaje**, Emil Petrescu, Cornelia Moțoc, *Electric field effects in nematic liquid crystals doped with carbon nanotubes* Physica E, Volume: 54, Pages: 242-246, (2013), DOI: 10.1016/j.physe.2013.07.005, WOS:000325385100043 0.399 1.856
- 2013**
- 21** 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 0.392 1.542
- 2013**
- 22** Emil Petrescu, Bena Rodica, **Cîrtoaje Cristina**, *Polarisation gratings using ferromagnetics-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 0.506 2.002
- 2013**
- 23** Motoc, Cornelia; **Cirtoaje, Cristina**; Stoica, Adriana; Stoian, Victor Albu, Ana Maria *RELAXATION PHENOMENA IN NEMATIC- POLYMER MIXTURES* , U.P.B. Sci. Bull., Series A , Volume: 75 Issue: 3 Pages: 181-186 WOS:000322847600018 0.067 0.28
- 2013**
- 24** **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 0.067 0.192
- 2011**
- 25** **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 0.053 0.304
- 2011**
- 26** **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 0.067 0.253

- 2010**
- 27** Rosu, C.; Cartoaje, C.; Paun, A. L. Magneto-optical effects in nematic liquid crystal doped with Prussian Blue, OPTOELECTRONICS AND ADVANCED MATERIALS-RAPID COMMUNICATIONS Volume: 3 Issue: 2 Pages: 127-131 Published: FEB, WOS:000264239300010 0.107 0.451
- 2009**
- 28** Bena, Eleonora - Rodica; Cirtoaje, Cristina *Surface influence on the optical freedericksz transition in nematic liquid crystals cells*, UPB Scientific Buletin Series A Volume: 71 Issue: 2 Pages: 85-94 WOS:000266514200009 0.067 0.253
- 2009**
- 29** Iacobescu, Gabriela; Paun, Adrian Liviu; **Cartoaje, Cristina** *Magnetically induced Freedericksz transition and relaxation phenomena in nematic liquid crystals doped with azo-dyes* JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS Volume: 320 Issue: 17 Pages: 2180-2184 DOI: 10.1016/j.jmmm.2008.03.050, WOS:000256378000009 0.460 1.283
- 2008**
- 30** 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, Issue: 1, Pages: 77–85, (2008), ISSN 1223-7027, WOS:000262922900007 0.067 0.253
- 2008**
- 31** Cirtoaje, Cristina; Plonski, Ileana-*Hanta Macroscopic potential energy surfaces of heavy and superheavy nuclei*, ROMANIAN REPORTS IN PHYSICS Volume: 59 Issue: 2 Pages: 387-396 , WOS:000254995900017 0.125 0.458
- 2007**
- 32** 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, 0.067 0.253
- 2007**

## A2. Proiecte

### *Ca responsabil:*

1. Research project 13/ 02-1-1107-2011-2019 The study of carbon nanotubes alignment in thermotropic nematic liquid crystals between JINR and the institutions in Romania based on JINR Order No 322/21.05.2018 **3000 USD**

#### *Articole publicate:*

- a. Cirtoaje, Cristina; Petrescu, Emil The influence of graphene nanoplatelets on the Freedericksz transition threshold in nematic liquid crystals ADVANCED TOPICS IN OPTOELECTRONICS, MICROELECTRONICS, AND NANOTECHNOLOGIES IX Book Series: Proceedings of SPIE Volume: 10977 Article Number: UNSP 109770J , WOS:000458717900018, 2018
  - b. Cristina Cirtoaje, Emil Petrescu, Cristina Stan, Andrey Rogachev Electric Freedericksz transition in nematic liquid crystals with graphene quantum dot mixture, May 2019 Applied Surface Science, DOI: 10.1016/j.apsusc.2019.05.073
2. Research project 64/ 04-4-1121-2015/2017 The physical properties study of micro-particles organized with nematic liquid crystals between JINR and the institutions in Romania based on JINR Order No 96/15.02.2016 **1800 USD**
  3. Research project 61/ 04-4-1069-2009/2014 Investigation of DESO/LIPID membranes interaction by X-ray scattering between JINR and the institutions in Romania based on JINR Order No 96/17.02.2014 - **2000 USD**
  4. Research project 61/tema 04-4-1069-2009/2014 Investigation of DESO/LIPID membranes interaction by X-ray scattering between JINR and the institutions in Romania based on JINR Order No 82/18.02.2013 - **2000 USD**
  5. 'Excellence Research Grants' Program, UPB–GEX. Identifier: UPB–EXCELENȚĂ–2016 Research project title Phase modulation in nematic liquid crystals subjected to magnetic field. Contract number 24/26.09.2016. 22000 RON

#### *Articole publicate:*

- a. 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 2018
- b. 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 2018
- c. Emil Petrescu, Cristina Cirtoaje and Cristina Stan, Dynamic behaviour of a nematic liquid crystal mixed with CoFe<sub>2</sub>O<sub>4</sub> ferromagnetic nanoparticles in a magnetic field, Beilstein J. Nanotechnol. 2017, 8, 2467–2473. doi:10.3762/bjnano.8.246, WOS:000416166400001 2017

### *Ca membru al echipei:*

1. Project CERES/ 6104/2.10.2005, Ultra-sensitive AMS analysis for tritium and deuterium deep concentrations with important applications in environmental physics and nuclear fusion diagnosis. participant (2005-2008), valoare 50.000 RON
2. Project CEEEX/2-Cex06-10-79/1.08.2006 Fundamental approach of nuclear physics applications, 90.000 RON
3. Project CENVIT, (292/2006) CEEEX- RELANSIN researches of structure-material properties relationship during the high-speed implementations of these technologies in industry and its effects in national economy competitiveness 100.000 RON
4. Project CEEEX 283/13.09.2006 AMS – Nuclear monitoring method for environmental protection 60.000 RON

5. Project PN II, 72185/01.10.2008 A study of tritium behaviour using AMS nanotechnology in material used in tritium remover from the water used in nuclear power stations in order to protect the environment and the personnel 130.000 RON

**Articole publicate**

- a. Cirtoaje, Cristina New method to detect low tritium concentration in metals UPB Scientific Buletin Series A, Applied Mathematics and Physics Volume: 81 Issue: 1 Pages: 229-240 WOS:000461794200023, 2019
6. Project CEX-05-D10-74 / 14.10.2005 The dynamics of binary quantum systems 20.000 RON
7. Project PN II, 62074/01.10.2008 The development of the SIFROC method in photodynamic therapy with MAL-PDT of pre-malign and non melanocitar malign skin disease. 300.000 RON
8. Project PN II 126/14.09.2007 Advanced materials and technologies for optoelectronic applications participant (2007-2009), valoare 600.000
9. Project PN II 91038/14.09.2007 The developement of the interdisciplinary academic research for the improvement of the internetional competitiveness of the romanian universities. 1.552.947 RON
10. Sectorial Operational Program Human Resources Development 2007–2013 of the Ministry of European Funds through the Financial Agreement POSDRU/159/1.5/S/132397 – cercetator postdoc

**Articole publicate**

- a. 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, 2016
- b. Cristina Cîrtoaje, 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, 2016
- c. Cristina Cîrtoaje, Emil Petrescu, Victor Stoian, Electrical Fredericksz 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, 2015
- d. 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), DOI: 10.1117/12.2178320, WOS:000356606800018, 2015
- e. Cristina Cîrtoaje, Victor Stoian, Emil Petrescu, Cornelia Moțoc, Relaxation phenomena in nematic liquid crystals with multiwall carbon nanotubes adding, Proc. Of SPIE Microtechnologies, Vol. 9517, 95171G-10 2015, DOI: 10.1117/12.2178333, WOS:000357978500043, 2015
- f. Petrescu, Emil; Calin, Mihaela Antonina; Marinescu, Bogdan; Cirtoaje, Cristina In vivo study of mal-pdt using fluorescence spectra, U.P.B. Sci. Bull., Series A, Volume: 77 Issue: 2 Pages: 269-276, WOS:000355574100026, 2015
- g. 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, 2014



### A. 3 Cărți:

1. Gabriela Iacobescu, **Cristina Cîrtoaje**, Emil Petrescu, *Introducere în biofizică*, Editura Universitaria Craiova ISBN: 976-606-140-288-5, Craiova, 2011
2. **Cristina Cîrtoaje**, Emil Petrescu *Probleme rezolvate de fizică clasică*, Editura Politehnica Press ISBN: 978-606-515-332-5, București, 2011
3. Emil Petrescu, **Cristina Cîrtoaje** *Radiatii ionizante si elemente de dozimetrie* Editura Politehnica Press ISBN: 978-606-515-656-2, București, 2016
4. Emil Petrescu, **Cristina Cîrtoaje** *Elemente de termodinamica si Fizica Statistica* Editura Politehnica Press ISBN: 978-606-515-657-9, București, 2016

### A4. Citări

- 1 **Cirtoaje, Cristina** *New method to detect low tritium concentration in metals* UPB Scientific Bulletin Series A, Applied Mathematics and Physics Volume: 81 Issue: 1 Pages: 229-240 WOS:000461794200023  
**2019**
- 2 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  
**2018**
  1. D.P.Singh, A.K. Misra, A.S. Achalkumar, C.V. Yelamaggad, M.; Depriester, *Transmuting the blue fluorescence of hekaetes mesogens derived from tris(N-salicylideneaniline)s core via ZnS/ZnS:Mn<sup>2+</sup> semiconductor quantum dots dispersion*, JOURNAL OF LUMINESCENCE, Volume: 210 Pages: 7-13, 2-19, DOI: 10.1016/j.jlumin.2019.02.009,
  2. D.M. Maximean, A. Barar, C.P. Ganea, P.L. Almeida, O. Danila, *Impedance spectroscopy and electro-optic switching times of a liquid crystal-hydroxypropylcellulose network composite*, ADVANCED TOPICS IN OPTOELECTRONICS, MICROELECTRONICS, AND NANOTECHNOLOGIES IX, Conference: 9th International Conference on Advanced Topics in Optoelectronics, Microelectronics, and Nanotechnologies (ATOM-N), Constanta, ROMANIA, AUG 23-26, 2018, Vol. 10977, Article Number: UNSP 109770P, DOI: 10.1117/12.2326224, WOS:000458717900024
- 3 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  
**2018**
  3. Mrukiewicz, M; Kowiorski, K; Perkowski, P; Mazur, R; Djas, M, *Threshold voltage decrease in a thermotropic nematic liquid crystal doped with graphene oxide flakes*, BEILSTEIN JOURNAL OF NANOTECHNOLOGY, Volume: 10 Pages: 71-78, 2019, DOI: 10.3762/bjnano.10.7, WOS:000455089600002, Accession Number: WOS:000462774900002
  4. CR Chang , Y Zhao, Y Liu, LB An, *Liquid crystallinity of carbon nanotubes*, RSC ADVANCES, Volume: 8 Issue: 28 Pages: 15780-15795, 2018 DOI: 10.1039/c8ra00879e, WOS:000431813800057
- 4 Cirtoaje, Cristina; Petrescu, Emil *The influence of graphene nanoplatelets on the Fredericksz transition threshold in nematic liquid crystals* ADVANCED TOPICS IN OPTOELECTRONICS,

MICROELECTRONICS, AND NANOTECHNOLOGIES IX Book Series: Proceedings of SPIE  
Volume: 10977 Article Number: UNSP 109770J , WOS:000458717900018

2018

- 5 Emil Petrescu, **Cristina Cirtoaje** and Cristina Stan, *Dynamic behaviour of a nematic liquid crystal mixed with CoFe<sub>2</sub>O<sub>4</sub> ferromagnetic nanoparticles in a magnetic field*, Beilstein J. Nanotechnol. 2017, 8, 2467–2473. doi:10.3762/bjnano.8.246, WOS:000416166400001

2017

5. Tang, Xiuzhen; Xu, Yanjun; Chen, Jie; et al. *Intermittent time-set technique controlling the temperature of magnetic-hyperthermia-ablation for tumor therapy*, RSC ADVANCES, Volume: 8 Issue: 30 Pages: 16410-16418, 2018, DOI: 10.1039/c8ra01176a, WOS:000431814500002

- 6 E.C. Niculescu, C. Stan, C D. Bejan, **C. Cirtoaje** *Impurity and eccentricity effects on the nonlinear optical rectification in a quantum ring under lateral electric fields* JOURNAL OF APPLIED PHYSICS Volume: 122 Issue: 14 Article Number: 144301, DOI: 10.1063/1.4999673, WOS:000413038500020

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