



Europass Curriculum Vitae

Personal information

First name/ Surname **Mihaela Baibarac**
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Work experience

Dates	2021 – at present
Occupation or position held	PhD supervisor
Main activities and responsibilities	PhD supervisor in Physics
Name and address of employer	University of Bucharest, Faculty of Physics
Dates	2010 – at present
Occupation or position held	Senior research scientist 1 st degree, Lab. Optical Process in Nanostructured Materials (LOPNM); Head of LOPNM
Main activities and responsibilities	Research in the field of optical properties of the nanostructured materials
Name and address of employer	National Institute of Materials Physics (NIMP)
Type of business or sector	Research
Dates	2008 - at present
Occupation or position held	Senior research scientist 1 st degree, Lab. Optics and Spectroscopy (LOS); Head of LOS
Main activities and responsibilities	Research in the field of optical properties of the nanostructured materials
Name and address of employer	National Institute of Materials Physics (NIMP)
Type of business or sector	Research
Dates	2006 - 2008
Occupation or position held	Senior research scientist 2 nd degree, LOS
Main activities and responsibilities	Research in the field of optical properties of the nanostructured materials
Name and address of employer	National Institute of Materials Physics (NIMP)
Type of business or sector	Research
Dates	1999 - 2006
Occupation or position held	Senior research scientist 3 rd degree, LOS
Main activities and responsibilities	Research in the field of optical properties of the nanostructured materials
Name and address of employer	National Institute of Materials Physics (NIMP)
Type of business or sector	Research
Dates	1997 - 1999
Occupation or position held	Researcher, LOS
Main activities and responsibilities	Research in the field of optical properties of the nanostructured materials
Name and address of employer	National Institute of Materials Physics (NIMP)
Type of business or sector	Research
Dates	1995 - 1997

Occupation or position held	Assistant researcher, LOS
Main activities and responsibilities	Research in the field of optical properties of the nanostructured materials
Name and address of employer	National Institute of Materials Physics (NIMP)
Type of business or sector	Research

Education and training

Dates	2020
Title of qualification awarded	Habilitation in Physics
Principal subjects/occupational skills covered	Optics and Spectroscopy
Name and type of organisation providing education and training	Faculty of Physics, University of Bucharest
Dates	1.01.2005 – 30.06.2006
Title of qualification awarded	Post-doctoral research stage
Principal subjects/occupational skills covered	The applications of the conducting polymers/carbon nanotubes composites in the supercapacitors and lithium rechargeable batteries field under the supervision of Prof. Pedro Gomez-Romero
Name and type of organisation providing education and training	Institut de Ciencia de Materials de Barcelona, Spain
Dates	17.02.2003 - 17.02.2004
Title of qualification awarded	Post-doctoral research stage
Principal subjects/occupational skills covered	Synthesis and characterization by optical spectroscopic methods of the polymer/carbon nanotube composites under the supervision of Prof. Dr. Olivier Chauvet and Prof. Dr. Serge Lefrant
Name and type of organisation providing education and training	Institut des Materiaux "Jean Rouxell", Nantes, France
Dates	1997-2002
Title of qualification awarded	Doctor in Physics (Ph.D.)
Principal subjects/occupational skills covered	Physics-Optics, Spectroscopy and Laser (with Summa cum Laude)
Name and type of organisation providing education and training	Faculty of Physics, University of Bucharest
Dates	1995-1996
Title of qualification awarded	Master of Science (M.Sc.)
Principal subjects/occupational skills covered	Chemistry - Thermodynamics and Applied Electrochemistry
Name and type of organisation providing education and training	Faculty of Industrial Chemistry, University Politehnica of Bucharest
Dates	1995
Title of qualification awarded	Engineer (Eng.)
Principal subjects/occupational skills covered	Chemistry - Polymer Science
Name and type of organisation providing education and training	Faculty of Industrial Chemistry, University Politehnica of Bucharest

Personal skills and competences

Organisational skills and competences	Project leader at 7 national projects and 6 international projects in the period 2005-at present; project responsible from NIMP at 5 national projects PhD supervisor at Buchrest University
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Technical skills and competences	Raman spectroscopy, surface enhanced Raman scattering (SERS), FTIR and UV-VIS-NIR spectroscopy, photoluminescence, cyclic voltammetry, electrochemical impedance spectroscopy, charge/discharge test for supercapacitors and batteries and synthesis of composite materials based on carbon nanoparticles (carbon nanotubes, fullerenes, graphene, etc) and, conducting and insulating polymers (e.g. polyaniline, polydiphenylamine, polypyrrole, poly(2, 2'-biphenylene), poly(3, 4-ethylenedioxythiophene), poly(3-alkyl thiophene), poly(p-phenylene vinylene), polystyrene, poly(vinylchloride), polyurethane, polyolefin, etc.) as well as semiconducting nanoparticles such as ZnO, PbI ₂ , CdS, ZnS, TiO ₂ . Other compounds studied: phosphorene, Cs ₃ Bi ₂ I ₉ , BiI ₃ , various drugs (folic acid, azathioprine, melatonin, acetaminophen, α -lipoic acid, pantoprazole sodium, atorvastatin calcium, losartan potassium, ampicilline, acetylsalicylic acid), and the Ag and Au nanoparticles
Other skills and competences	Reviewer at: Synthetic Metals, Journal of Molecular Structure, Diamond and Related Materials, Carbon. Scientific Reports, Journal of Raman Spectroscopy, Electrochimica Acta, Nanomaterials, Polymers, etc. Guest Editor at : Journal of Nanoscience and Nanotechnology and Molecules; Editor at : Surfaces and Interfaces journal (Elsevier)
Research interests	Spectroelectrochemical properties of nanocomposites based on conducting or insulating polymers and carbon nanoparticles (fullerene, carbon nanotubes, graphene). Applications of composite materials in i) energy conversion and storage and ii) the field of health.
Awards	Prize for Physics , C. Miculescu, of the Romanian Academy for the group of papers Raman studies on conducting polymers thin films, 2000
Visiting position	Institut des Materiaux Jean Rouxel , Nantes, France in 1998, 1999, 2000, 2001, 2002, 2007, 2008-2016
Funding	<ul style="list-style-type: none"> - Reintegration NATO grant (RIG Ref. No. 981483) entitled Nanostructured materials for applications in sensors and optoelectronics technology, 2005-2008, Project director - Complex research project entitled Photoconductivity and photoluminescence processes in composites of the type poly para-phenylene vinylene / carbon nanotubes and poly para-phenylene vinylene/oxide nanoparticles, 2005-2007, Project director - Complex research project entitled Nanostructured composites of the type poly(N-vinyl carbazole)/carbon nanotubes for applications in optoelectronics and rechargeable lithium batteries: synthesis, optical, electrical and electrochemical characterization and demonstrative applications, 2005-2008, Project director - Complex research project entitled Organic/inorganic hybrid nanocomposites based on carbon nanotubes and inorganic semiconducting nanoparticles for applications in the sensors, storage energy and optoelectronics fields, 2006-2008, Project director - IDEI project entitled Optical and electrochemical properties of the carbon nanotubes/polyoxometalates/ conducting polymers nanocomposites, 2007-2010, Project director - Complex research project entitled Hybrid materials based on carbon nanotubes, heteropolyacids and conducting polymers for applications in energy storage field, 2008-2011, Project director - PCE project entitled One-dimensional composites based on carbon nanotubes and conjugated polymers for applications in energy storage and optoelectronic devices field, 2011-2016, Project director - Institutional Partnerships project (SCOPES) entitled "Implementation in East Europe of new methods of synthesis and functionalization of carbon nanotubes for applications in the energy storage and sensors field", 2012-2014, Person in charge - Proiectul Humbert Curien-Brancusi Program Module III bilateral cooperation . 784/ 27.06.2014 cu titlul „Optical properties of SWNTs highly separated in metallic (98%) and semiconducting (99%) functionalized with conjugated polymers”, 2015-2016, Person in charge - POC 58/2016 project entitled “Physico-chemical analysis, nanostructured materials and devices for applications in pharmaceutical and medical field from Romania, 2016-2021, Project director - PCCDI38/2018 project, Composite materials with graphene oxide for the performance improvement at the fire action of building elements and installations in order to protect the life in case of fire, 2018-2020 Person in charge - PCCDI 44/2018 project, Interinstitutional program for the development of advanced eco-nanotechnology solutions for multifunctional treatments of textile and leather materials, 2018-2020, Person in charge

Publications 1998-2022:

- JINR-RO project (Russia-Romania): SERS and CARS studies on composite materials based on single-walled carbon nanotubes functionalized with conjugated macromolecular compounds, 2020-2021, Project director
- POC390/2021 project: Development of integrated methods of diagnosis for the rapid detection of liver diseases, 2021-2023, Person in charge
- COFUND-ERANET MANUNET project, 4D printed flexible and stretchable energy harvesting devices based on innovative electrically tunable elastomers, 2019-2021, Project director
- PED 589/2022 project: Nanocomposites based on recycled cellulose and carbon nanohorns for construction materials with improved fire resistance, 2022-2024, Person in charge
- **195 articles in ISI journals, Hirsch index = 30**
- **List of selected articles in 2005-2023:**
- Surface-Enhanced Raman studies on C₆₀ fullerene self-assemblies; **M.Baibarac**, L.Mihut, N.Preda, I.Baltog, J.Y.Mevellec, S.Lefrant; **Carbon**; 43; 1-9; 2005
- Electrochemical and vibration properties of single-walled carbon nanotubes in hydrochloric acid solutions; S.Lefrant, **M.Baibarac**, I.Baltog, T.Velula, J.Y.Mevellec, O.Chauvet; **Diamond and Related Materials**; 14 (3-7); 873-880; 2005
- Mechano-chemical interaction of single-walled carbon nanotubes with different host matrices evidenced by SERS spectroscopy; **M.Baibarac**, I.Baltog, S.Lefrant, C.Godon, J.Y.Mevellec; **Chemical Physics Letters**; 406; 222-227; 2005
- Surface enhanced Raman scattering studies on chemically transformed carbon nanotubes thin films; S.Lefrant, I.Baltog, **M.Baibarac**; **Journal Raman Spectroscopy**; 36; 676-698; 2005
- Coherent anti-Stokes Raman scattering on single-walled carbon nanotubes and copper phthalocyanine thin films excited through surface plasmons; I.Baltog, **M.Baibarac**, S.Lefrant; **Journal of Optics A: Pure and Applied Optics**; 7; 632-639; 2005
- Coherent anti-Stokes Raman scattering on single-walled carbon nanotube thin films excited through surface plasmons; I. Baltog, **M. Baibarac** and S. Lefrant; **Physical Review B**; 72; 245402; 2005
- Nanocomposite materials based on conducting polymers and carbon nanotubes. From fancy materials to applications; **Mihaela Baibarac** and Pedro Gomez-Romero; **Journal of Nanoscience and Nanotechnology**; 6; 289-302; 2006
- Electrosynthesis of the poly (N-vinyl carbazole)/ carbon nanotubes composite for applications in the supercapacitors field; **M.Baibarac**, P. Gomez-Romero, M. Lira-Cantu, N. Casan-Pastor, N. Mestres, S. Lefrant; **European Polymer Journal**; 42; 2302; 2006
- A distinctive signature in the Raman and photoluminescence spectra of intercalated Pbl₂; N. Preda, L. Mihut, **M. Baibarac**, I. Baltog, S. Lefrant; **J. Phys. Condens. Mater.** 18; 8899-8912, 2006
- Spectroscopic evidence for the bulk polymerization of N-vinyl carbazole in the presence of single-walled carbon nanotubes; **M. Baibarac**, I. Baltog, S. Lefrant, P. Gomez-Romero; **Polymer**; 48 (18); 5279; 2007
- Electrochemical supercapacitors based on novel hybrid materials made of carbon nanotubes and polyoxometalates; Ana Karina Cuentas-Gallegos, Rosa Martinez-Rosales, **Mihaela Baibarac**, Pedro Gomez-Romero and Marina E. Rincon; **Electrochemistry Communications** 9 (8); 2088-2092; 2007
- Raman and FTIR studies on electro-reduction of the single-walled carbon nanotubes films in the presence of lithium salts; I. Baltog, **M. Baibarac**, S. Lefrant, J. Y. Mevellec; **Diamond and Related Materials**, 17 (7-10), 1558, 2008
- Vibrational and photoluminescence properties of the polystyrene functionalized single-walled carbon nanotubes; **M. Baibarac**, I. Baltog, S. Lefrant, J. Y. Mevellec, C. Bucur; **Diamond and Related Materials**, 17 (7-10), 1380, 2008
- Optical cooling of single-walled carbon nanotubes as revealed by their anti-Stokes Raman spectra, I. Baltog, **M. Baibarac**, S. Lefrant, **Journal of Physics Condensed Matter** 20 (27), 275215, 2008
- Non-covalent functionalization of carbon nanotubes: Experimental evidence for isolated and bundled tubes, M. Husanu, **M. Baibarac**, I. Baltog, **Physica E - Low-dimensional Systems and Nanostructures**, 41(1), 66, 2008

- Surface enhanced Raman scattering studies on poly(3,4-ethylenedioxy-thiophene)/SWNTs composites and their applications to rechargeable lithium batteries, I. Baltog, **M. Baibarac**, S. Lefrant, P. Gomez-Romero, **Journal of Nanoscience and Nanotechnology**, , 9 (10), 6204-6209, 2009
- Electropolymerization of N-ethylcarbazole on single-walled carbon nanotubes-cyclic voltammetry, Raman and FTIR studies, **M. Baibarac**, I. Baltog, L. Mihut, J. Y. Mevellec, S. Lefrant, **Journal of Nanoscience and Nanotechnology**, 9(10), 6195-6203, 2009
- Quantum wells effects in bulk PbI₂ crystals revealed by photoluminescence and Raman spectroscopy, I. Baltog, **M. Baibarac**, L.Mihut and Lefrant, **Journal of Physics Condensed Matter**, 21 (2), 025507, 2009
- Raman evidences for the interface interactions in poly(bithiophene)/single-walled carbon nanotubes composites, **M. Baibarac**, I. Baltog, S. Lefrant, **Carbon**, 47 (5), 1389-1398, 2009
- Polyaniline/PbI₂ composite as charge collector, **M. Baibarac**, I. Baltog, S. Lefrant, **Journal of Solid State Chemistry**, 182, 827-835, 2009
- Vibrational properties of composites based on polymer and carbon nanotubes, S. Lefrant, **M. Baibarac**, I. Baltog, **Journal of Materials Chemistry**, 19 (32), 5690-5704, 2009
- Synthesis of Narrow Diameter Distribution Carbon Nanotubes on ZnO Supported Catalysts, D. Lupu, A. R. Biris, F. Watanabe, Z. Li, E. Dervishi, V. Saini, Y. Xu, A. S. Biris, **M. Baibarac**, I. Baltog, **Chemical Physics Letters**, 473 (4-6), 299-304, 2009
- Films and crystalline powder of PbI₂ intercalated with ammonia and pyridine, N. Preda, L. Mihut, **M. Baibarac**, I. Baltog, R. Ramer, J. Pandeale, C. Andronescu, V. Fruth, **Journal of Materials Science: Materials in Electronics**, 20(1), 465, 2009
- Intercalation of Layered Metal Iodides with Pyridine Evidenced by Raman Spectroscopy, N. Preda, L. Mihut, **M. Baibarac** and I. Baltog, **Acta Physica Polonica A**, vol.116, No. 1, 81-83,2009
- Vibrational properties of the polyindole/single-walled carbon nanotubes composite electrochemical synthesized, **M. Baibarac**, I. Baltog, M. Scocioreanu, S. Lefrant, J. Y. Mevellec, **Synthetic Metals**, 159 (23-24), 2550-2555, 2009
- ZnO particles of wurtzite structure as component in ZnO/carbon nanotube composite, **M. Baibarac**, I. Baltog, T. Velula, I. Pasuk, S.Lefrant, N. Gautier, **Journal of Physics: Condenser Matter**, 21 (44), 445801, 2009
- Films and crystalline powder of BiI₃ intercalated with ammonia, N. Preda, L. Mihut, **M. Baibarac**, I. Baltog, J. Pandeale, C. Andronescu, V. Fruth, **Journal of the European Ceramic Society** 30 (2), 475-479, 2010
- Hybrid organic-inorganic materials based on poly(o-phenylenediamine) and polyoxometallate functionalized carbon nanotubes, **M. Baibarac**, I. Baltog, I. Smaranda, M. Scocioreanu, S. Lefrant, **Journal of Molecular Structure** 985 (2-3), 211-218, 2011
- Polydiphenylamine/carbon nanotube composites for applications in rechargeable lithium batteries, **M. Baibarac**, I. Baltog, S. Lefrant, P. Gomez-Romero, **Materials Science and Engineering B-Advanced Functional Solid state Materials**, 176, 110-120, 2011
- Structural and thermoluminescence properties of undoped and Fe-doped-TiO₂ nanopowders processed by sol-gel method, M. Cernea, M. Secu, C.E. Secu, **M. Baibarac**, B. S. Vasile, **Journal of Nanoparticle Research**, 13 (1), 77-85, 2011
- Sensitive detection of endocrine disrupters using ionic liquid-single walled carbon nanotubes modified screen-printed based biosensors, A.M. Gurban, L. Rotariu, **M. Baibarac**, I. Baltog, C. Bala, **Talanta** 85, 2007-2013, 2011
- Electrochemical functionalization of SWNTs with poly(3,4-ethylenedioxy thiophene) evidenced by anti-Stokes/Stokes Raman spectroscopy, I. Baltog, **M. Baibarac**, S. Lefrant, J.Y. Mevellec, **Journal of Raman Spectroscopy**, 42 (3), 303-312, 2011
- Recent progress in synthesis, vibrational characterization and applications trend of conjugated polymers/carbon nanotubes composites, **M. Baibarac**, I. Baltog, S. Lefrant, **Current Organic Chemistry**, 15 (8), 1160-1196, 2011
- Photoluminescence and Raman studies on thin dioxide powder and thin dioxide/single-walled carbon nanotubes composites, I.I. Gontia, **M. Baibarac**, I. Baltog, **Physica Status Solidi (B)**, 248 (6), 1494-1498, 2011

- Abnormal anti-Stokes Raman emission as single beam coherent anti-Stokes Raman scattering like process in LiNbO₃ and CdS powder, **M. Baibarac**, I. Baltog, S. Lefrant, **Journal of Applied Physics**, 110, 053106, 2011
- One-dimensional composites based on single walled carbon nanotubes and poly(o-phenylenediamine), **M. Baibarac**, I. Baltog, M. Scocioreanu, B. Ballesteros, J.Y. Mevellec, S. Lefrant, **Synthetic Metals**, 161, 2344, 2011
- Photoluminescence and Raman evidence for mechanic-chemical interaction of polyaniline-emeraldine base with ZnS in cubic and hexagonal phase, M. Scocioreanu, **M. Baibarac**, I. Baltog, I. Pasuk, T. Velula, **Journal of Solid State Chemistry**, 186, 217, 2012
- Post-synthesis carbon nanowalls transformation under hydrogen, oxygen, nitrogen, tetrafluoroethane and sulfur hexafluoride plasma treatments, S. Vizireanu, M. S. Ionita, G. Dinescu, I. Enculescu, M. Baibarac, I. Baltog, **Plasma Processes and Polymers** 9, 4, 363-370, 2012
- Raman scattering and anti-Stokes luminescence in poly-paraphenylene vinylene/carbon nanotubes composites, M. Baibarac, F. Massuyeau, J Wery, I. Baltog, S. Lefrant, **Journal of Applied Physics** 111, 8, 083109, 2012
- Abnormal anti-Stokes Raman emission and infrared dichroism studies on poly(p-phenylenevinylene)/single-walled carbon nanotube composites, M. **Baibarac**, I. Baltog, J. Wery, S. Lefrant, JY Mevellec, **J. Phys. Chem. C** 116, 25537, 2012
- Spectroelectrochemical properties of the single walled carbon nanotubes functionalized with polydiphenylamine doped with heteropolyanions, I. Smaranda, **M. Baibarac**, I. Baltog, J.Y. Mevellec, S. Lefrant, **Journal of Solid State Chemistry** 197, 352-360, 2013
- Casimir effect demonstrated by Raman spectroscopy on trilayer grapheme intercalated into stiff layered structures of surfactant, M. Baibarac, I. Baltog, L. Mihut, I. Pasuk, S. Lefrant, **Carbon** 51, 134-142, 2013
- Single-walled carbon nanotubes functionalized with polydiphenylamine as active materials for applications in the supercapacitors field, **M. Baibarac**, I. Baltog, S. Frunza, A. Magrez, D. Schur, SY Zaginaichenko, **Diamond and Related Materials** 32, 72, 2013
- New features in the anti-Stokes and Stokes Raman spectra of single-walled carbon nanotubes that are highly separated into their semiconducting and metallic nanotube components, **M. Baibarac**, I. Baltog, L. Mihut, S. Lefrant, **Journal of Raman Spectroscopy** 45, 5, 323-331, 2014
- Abnormal anti-Stokes Raman scattering and surface-enhanced infrared absorption spectroscopy studies of carbon nanotubes electrochemically functionalized with poly(2, 2'-bithiophene-copolyrene), **M. Baibarac**, I. Baltog, M. Smaranda, M. Scocioreanu, J.Y. Mevellec, S. Lefrant, **Applied Surface Science** 309, 11-21, 2014
- Spectroelectrochemical properties of the poly[(2,5-bis(octyloxy)-1,4-phenylene vinylene)/single-walled carbon nanotube composite, **M. Baibarac**, I. Baltog, I. Smaranda, M. Ilie, M. Scocioreanu, J.Y. Mevellec, S. Lefrant, **Synthetic Metals** 195, 276, 2014
- Electrochemical grafting of reduced graphene oxide with polydiphenylamine doped with heteropolyanions and its optical properties, I. Smaranda, A.M. Benito, W.K. Maser, I. Baltog, **M. Baibarac**, **J. Phys. Chem. C** 118, 25704, 2014
- Anti-Stokes Raman spectroscopy as a method to identify the metallic and semiconducting configurations of double-walled carbon nanotubes, **M. Baibarac**, I. Baltog, A. Matea, L. Mihut, S. Lefrant, **J. Raman Spectrosc.** 46, 32-38, 2015
- Photochemical processes developed in composite based on highly separated metallic and semiconducting SWCNTs functionalized with polydiphenylamine, **M. Baibarac**, I. Baltog, I. Smaranda, A. Magrez, **Carbon** 81, 426, 2015
- Optical properties of single-walled carbon nanotubes functionalized with poly(2, 2'-bithiophene-copolyrene) copolymer, I. Smaranda, **M. Baibarac**, M. Ilie, A. Matea, I. Baltog, S. Lefrant, **Current Organic Chemistry** 19, 652-661, 2015
- Raman scattering and photoluminescence studies of ZnO nanowhiskers assembled as flowers in the presence of fullerene, **M. Baibarac**, I. Baltog, A. Matea, S. Lefrant, **Journal of Crystal Growth** 419, 158-164, 2015
- Exciton-phonon interaction in PbI₂ revealed by Raman and photoluminescence studies using excitation light overlapping the fundamental absorption edge, **M. Baibarac**, I. Smaranda, M. Scocioreanu, R.A. Mitran, M. Enculescu, M. Galateanu, I. Baltog, **Materials Research Bulletin** 70, 762-772, 2015
- Influence of single-walled carbon nanotubes enriched in semiconducting and metallic tubes on the vibrational and photoluminescence properties of poly(para-phenylenevinylene), **M Baibarac**, I Baltog, M Ilie, B Humbert, S Lefrant, C Negrila, **Journal of Physical Chemistry C** 120, 5694-5705, 2016

- Polarized Raman spectra of phosphorene in edge and top view measuring configurations, **M. Baibarac**, A. Nila, I. Baltog, **RSC Advances** 6, 58003, 2016
- Exciton-phonon interaction in CdS of different morphological forms manifested as stimulated Raman scattering, **M. Baibarac**, A. Nila, I. Baltog, **Optical Materials Express** 6, 1881, 2016
- Infrared dichroism studies and anisotropic photoluminescence properties of poly(para-phenylene vinylene) functionalized reduced graphene oxide, **M. Baibarac**, M. Ilie, I. Baltog, S. Lefrant, B. Humbert, **RSC Advances** 7, 6931, 2017
- Influence of single-walled carbon nanotubes enriched in semiconducting and metallic tubes on the electropolymerization of tetrabromo ortho-xylene: insights on the synthesis mechanism of poly(ortho-phenylenevinylene), **M. Baibarac**, A. Nila, I. Baltog, S. Lefrant, J.Y. Mevellec, S. Quillard, B. Humbert, **European Polymer Journal** 88, 109, 2017
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- Optical properties of single-walled carbon nanotubes highly separated in semiconducting and metallic tubes functionalized with poly(vinylidene fluoride), A. Matea, **M. Baibarac**, I. Baltog, **Journal of Molecular Structure** 1130, 38-45, 2017
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- Exciton-phonon interaction in the Cs₃Bi₂I₉ crystal structure revealed by Raman spectroscopic studies, A. Nila, **M. Baibarac**, A. Matea, R. Mitran, I. Baltog, **Physica Status Solidi (B) Basic Research**, 254, 4, 1552805, 2017
- The spectrochemical behavior of composites based on poly(para-phenylenevinylene), reduced graphene oxide and pyrene, M. Ilie, **M. Baibarac**, **Optical Materials** 72, 140-146, 2017
- Influence of TiO₂ and Si on the exciton-phonon interaction in PbI₂ and CdS semiconductors evidenced by Raman spectroscopy, A. Nila, I. Baltog, D. Dragoman, **M. Baibarac**, I. Mercioniu, **Journal of Physics: Condensed Matter**, 29, 365702, 2017
- Aging phenomena and wettability control of plasma deposited carbon nanowall layers, S. Vizireanu, M.D. Ionita, R.E. Ionita, S.D. Stoica, C. M. Teodorescu, M.A. Husanu, N. G. Apostol, **M. Baibarac**, D. Panaitescu, G. Dinescu, **Plasma Processes and Polymers** 14, e1700023, 2017
- Development and biocompatibility evaluation of photocatalytic TiO₂/reduced graphene oxide-based nanoparticles designed for self-cleaning purposes, I.C. Nica, M.S. Stan, M. Popa, M.C. Chifiriuc, G.G. Pircalabioru, V. Lazar, I. Dumitrescu, L. Diamandescu, M. Feder, **M. Baibarac**, M. Cernea, V.A. Maraloiu, T. Popescu, A. Dinischiotu, **Nanomaterials** 7 (9), 279, 2017
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- Investigation of the interactions of PVDF shell films with Ni core submicron wires and AAO matrix, M. Sima, **M. Baibarac**, E. Vasile, M. Sima, G.A. Schinteie, V. Kuncser, **Physica B: Condensed Matter** 545, 503-509, 2018
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- Inhibitory effect of three phenacyl derivatives on the oxidation of sphalerite (ZnS) in air-equilibrated acidic solution, P. Chirita, M.I. Duinea, A.M. Sandu, L.M. Birsa, L. G. Sarbu, **M. Baibarac**, F. Sava, M. Popescu, E. Matei, **Corrosion Science** 138, 154-162, 2018
- Polyaniline photoluminescence quenching induced by single-walled carbon nanotubes enriched in metallic and semiconducting tubes, **M. Baibarac**, A. Matea, M. Daescu, I. Mercioniu, S. Quillard, J.Y. Mevellec, S. Lefrant, **Scientific Reports** 8, 9518, 2018
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