EUROPEAN CURRICULUM VITAE FORMAT

PERSONAL INFORMATION

Name	**CODESCU MIRELA MARIA**
Address	137,CALEA 13 SEPTEMBRIE, BUCHAREST - 5, ROMANIA
Telephone	+40-21-3467235 / 114
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E-mail	mirela.codescu@icpe-ca.ro; mirelamariacodescu@yahoo.com
Nationality	Romanian
Date of birth	15.01.1963
Gender	Female

WORK EXPERIENCE

• Dates (from – to)	October 1989 - present
• Occupation or position held	Researcher (engineer in Materials Science and Engineering, junior researcher (1990-2000), senior researcher (2000 - present)
• Main activities and responsibilities	- preparation and characterisation of permanent magnets obtained from hard magnetic materials based on rare earths: Sm-Co and NdFeB, processed by sintering, bonding or injection of the powders or as Nd-Fe-B magnetic nanocomposites; - preparation of magnetic nanoparticles by chemical and powders metallurgy routes; - study of magnetic alloys based on Fe-Cu, Mn-Bi, Ni-Cr-Fe Co-Ni-Mn-P alloys; - preparation / characterisation of glass-coated microwires and applications, as conductive materials or shielding materials etc; - standardisation activity in the magnetic materials field.
• Name and address of employer	National Institute for R&D in Electrical Engineering ICPE-CA Bucharest (former ICPE), Advanced materials Department
• Type of business or sector	RTD activity in Materials Science and Engineering field
• Dates (from – to)	September 1997 – June 1999
• Occupation or position held	Associated teacher
• Main activities and responsibilities	Teaching activities on Materials Science and Engineering field
• Name and address of employer	POLITEHNICA University from Bucharest, Materials Science and Engineering Faculty
• Type of business or sector	Education
• Dates (from – to)	Oct.1986 – Oct. 1989
• Occupation or position held	Materials Science and Engineering graduate
• Main activities and responsibilities	Preparation of stainless steel in electric arc furnaces, steels remolding under slag for AERO and CNE applications
• Name and address of employer	COS Targoviste, Electrical Steelworks 1 and Unit for Electrical Remolding under Slag
• Type of business or sector	Production of Steels

EDUCATION AND TRAINING

• Name and type of organization providing education and training	April 1994 – January 2004 Politehnica University from Bucharest; PhD in Materials Science and Engineering, PhD Thesis: "Studies and experimental research concerning the processing and characterization of new hard magnetic alloys based on transition metals and rare-earths elements" September 1981 – June 1986, Politehnica University from Bucharest, graduated in Materials Science and Engineering, specialization: extractive metallurgy / iron and steels production; diploma dissertation "VMoCN17 tool steels – manufacturing and industrial applications". September 2015 (40 hours) "Trainer" course; SC Indice Consulting & Management SRL; November 2010 – March 2011 (64 hours), "Entrepreneurial Competencies" course; UEFISCDI; September 2010 – November 2010 (80 hours), Manager in Quality Field – training; Romanian Electrotechnical Committee; July 2010 (25 hours) Expert in accessing of Structural and European Cohesions Funds (modules: Project management, Accessing of Structural Funds, Cost – Benefit Analysis); EXPERT AUDIT GROUP Onesti; May – June & September – October 2006, Management course, module – Management of the Structural Funds, GETJM Formare si Dezvoltare, ARCHE Formazione e Consulenza, Romanian Chamber of

Commerce and Industry, National Agency for Qualifications in Higher Education & Partnership with Economical and Social Environment (ACPART);

May 2006 (80 hours), training in the field of technological transfer and professional formation at University Institute from Rouen (France), in the frame of project: "*Formation des experts dans le domaine de la gestion du transfert de technologie (TechnoTrans)*" LEONARDO DA VINCI Programme; ACPART and University Institute from Rouen;

November 2005 – February 2006 (105 hours), Extrajudiciary technical expert - Materials science and engineering topic, General Association of the Romanian Engineers (AGIR);

September 2004, October 2004 – January 2005 (112 hours), Extrajudiciary technical expert and consultant - Materials science and engineering topic; Association of European Recognised Experts, General Association of the Romanian Engineers, Certify Office (CERTEXPERT);

October 2004 (24 hours), Public management course, Managerial Agency for Scientific Research and Technological Engineering (AMCSIT);

October 2004, JRC Training Workshop "Mapping European Knowledge on Hydrogen Storage", Institute for Energy, Petten, Netherlands;

August - September 1999 (80 hours), French-Romanian Summer School "*High performances permanent magnets*", Cluj-Napoca, Romania; Babes-Bolyai University from Cluj; CNRS – Louis Néel Laboratory and Joseph Fourier University from Grenoble, Romanian Society for magnetic Materials;

September 1997 (80 hours), French-Romanian Summer School *"Magnetism of the Nanoscopic Systems"* - Oradea, Romania; CNRS – Louis Néel Laboratory and Joseph Fourier University from Grenoble, Paris University, Babes-Bolyai University from Cluj, University from Oradea.

PERSONAL SKILLS & COMPETENCES

MOTHER TONGUE	ROMANIAN
OTHER LANGUAGES	
• Reading skills	ROMANIAN, EXCELLENT, FRENCH- EXCELLENT, GERMAN– EXCELLENT, ENGLISH- EXCELLENT
• Writing skills	ROMANIAN, EXCELLENT, FRENCH- EXCELLENT , GERMAN – GOOD, ENGLISH-GOOD
• Verbal skills	ROMANIAN, EXCELLENT, FRENCH- EXCELLENT, ENGLISH-BASIC, GERMAN–GOOD

SOCIAL SKILLS AND COMPETENCES

- team spirit and good communication skills gained during my professional formation and through my activity performed in the frame of the professional associations (Romanian Association for Materials, Romanian Society of Magnetic Materials & Superconductors - paymaster from 2000).

ORGANISATIONAL SKILLS AND COMPETENCES

- leadership, good experience in project management, proved as manager / responsible of over 40 projects, in national / international programmes:

Management in R&D activities:

Project / Workpackage manager:

„Microwave Absorber Hybrid Structures Based on Ferromagnetic Grafted Graphene Derivatives" (ctr. PED No. 278/2020); ▲ „Obtaining and expertise of new biocompatible materials for medical applications" (ctr. PCCDI No. 60/2018; *Partner responsible*), ▲ „Electric insulated soft magnetic nanomaterials for space applications. Upscale-demonstration of technology", „Co-based magnetic nanostructured material with potential space applications" (ctr. STAR No. 125/2017 and No. 176/2017); ▲ "Magnets made by nanocomposites materials used in high speed electric motors manufacturing" (ctr. STAR No. 99/2013); ▲ "Ferromagnetic Components for MEMS" (ctr. PNII No.12-086/2008);▲ "Securing Elements with Ferromagnetic Glass-coated Microwires and Field Sensor with Applications on Electronic Detection for Validation" (ctr. PNII No. 81-059/2007);▲ "Electric Aerial Conductor Self-protective at Frost and Ice Deposition" (PNII No. 21-012/2007);▲ "Anisotropic Nanocomposites for High Energy Permanent Magnets" (ctr. CEEX MATNANTECH No. 19/2005); "Fe-Cu Composites for Anisotropic Permanent Magnets" (ctr. MATNANTECH No. 134/2003)

European and international projects. "Promotion of Competence to Up-grade the RTD Potential in Science and Technology" (ctr. FP7-REGPOT-2 No. 206119/2007);▲ "Temperature Stability and Corrosion Resistance of Rare Earth Transition Metals Magnets" (ctr. INCO Copernicus No. ERBIC15CT 96-0758);▲

Bilateral scientific collaborations with Chinese Iron & Steel Research Institute Beijing: „Using High–frequency Transformer Quenching of Nanocrystalline Materials" (2008-2009), "New Composite Materials for Electromagnetic Shielding" (2011-2012) and "Household Applications with High Energy, Cheaper Permanent Magnets" (2013-2014); *Bilateral scientific collaborations with Joint Institute Nuclear Research Dubna*: "Neutron Diffraction and SANS Study of Magnetic Phases in Nanocrystalline Fe-Cu Pseudo-alloys" (2005-2006) "Magnetic and Crystalline Structures in Two-phases $Nd_2Fe_{14}B$/α-Fe, Fe_3B System" (2009-2012), "Investigation of crystalline and magnetic properties in micro- and nanostructured systems based granular alloys" (2012 – 2013), "Investigation of crystalline and magnetic properties of nanostructured ferrites hardened by exchange interactions" (2014-2015) and „Advanced structural and magnetic investigations on $FeCo/Al_2O_3$ nanocomposites for novel soft magnetic materials for high frequency applications", „Co-based magnetic nanostructured materials with potential space applications – synthesis and complex characterisation" (2018 – 2020); „The study by DLS and RBS methods of structures and elemental compositions of surface layer of ZrO_2 nanoparticles under hydration conditions" (2020-2021); „Study of spatial distribution of particles in liquid media with different water content and energy parameters

of ZrO_2 dispersion systems using DLS and SANS methods" (2021)
Technological transfers: „NdFeB bonded permanent magnets for phone capsules" (beneficiary: SC ELECTROMAGNETICA SA Bucharest, 1995); „Technological transfer for manufacturing of the electrochemically protected, permanent magnets based on NdFeB", (beneficiary: SC ROMNEOMAG SRL Bucharest, 2006); „Securised paper with ferromagnetic microwires" (beneficiary: SC CEPROHART SA Braila, 2010).
Member of research team for: "Business Innovation Support Network Transylvania" - BisNet Transylvania (CIP Project No. EEN 225559/2008: (2009 – 2014).
Evaluator in Materials Science and Engineering field, for national (RELANSIN, MATNANTECH, CALIST, PNII, PNIII) and Horizon 2020, EUREKA, ERANET Plus Russia, M-ERA.NET scientific research programmes. Member of Strategic Experts Group in the frame of M-ERA.NET Programme;
Member of Institute Commissions for Ethics and for Monitoring (2006-present), Coordination and Methodological Guidance for the Development of Internal / Managerial Control System (2013 - 2014) and of the institute Scientific Council (2014 - present).
Member of the Romanian Association for Standardization Technical Committees: 20. "Ferrites magnetic components" and 25. "Magnetic Materials".

TECHNICAL SKILLS & COMPETENCES: Basic computer works

DRIVING LICENCE(S): Type B

ADDITIONAL INFORMATION

- Prize of National Authority for Scientific Research for the "Most Valuable Patent" - "*Electrical Self-protective Conductor at Frost / Ice Depositions*", authors: L. S. Palii, W. Kappel, M. M. Codescu, E. A. Patroi, A. Iorga, I. Ionescu, I. Racovitan, Patent No. 125940/2017;
- "ESTC 2006 Best Poster Award" on 1st Electronic Systemintegration Technology Conference ESTC 2006, 5-7 September 2006, Dresden, Germany, for "*High Energy Density Magnetic Materials for Electronic Packaging*", authors: W. Kappel, M. M. Codescu, N. Stancu, J. Pintea, E.A. Patroi;
- 2nd Prize of National Authority for Scientific Research for the CEEX project No. 19/2005 „*Anisotropic Nanocomposites for High Energy Permanent Magnets*" NANOMAG"

Patents: 18, in the field of the processing and applications of the NdFeB permanent magnets and functional materials. 11 of these patents are awarded at different international exhibitions and fairs with Gold (2000, 2001, 2008, 2010, 2011, 2014, 2016, 2018, 2019 and 2021), Silver (2010, 2014, 2015, 2016, 2017 and 2021) and Bronze medals (2002).

ANNEXES: List of patents, papers and books

30th September 2022

Patents / Patents Applications

1. Voiculescu I., Geanta V., Stefanoiu R., Kelemen H., Vizureanu P., Codescu M. M., Sandu A. V., Binchiciu E. F., Baltatu M. S., Patroi D., High entropy alloy from MoNbTaTiZr system, microalloyed with yttrium for medical applications and obtaining method, published in Oficial Industrial Property Bulletin (BOPI) No. 5/2021
2. Geanta V., Voiculescu I., Stefanoiu R., Binchiciu H. F., Vizureanu P., Kelemen H., Codescu M. M., Sandu A. V., Baltatu M. S., Marinescu V. E., High entropy alloy for surgical medical applications from FeMoTaTiZr metallurgical system and obtaining technology, published in Oficial Industrial Property Bulletin (BOPI) No. 5/2021
3. Patroi, A. E., E. Manta, Stancu, N., Lixandru, A., Kappel, W., Codescu, M. M., Patroi, D., Metallic nanowires preparation method, Patent Application No. A / 00178 / 14.03.2018 (published 133613 / 30.09.2019)
4. Codescu M. M., Chitanu E., Kappel W., Manta E., Patroi D., Pintea J., Patroi E. A., Morari C., Method for preparation of $FeCo/Al_2O_3$-type composite nanopowders, Patent No. 132096/29.10.2021
5. Iordoc M., Codescu M. M., Teisanu A., Prioteasa P., Material for orthopedic implant type $ZrNbTa-ZrO_2$ and preparation method, Patent No. 129839/28.02.2020
6. Patroi, D., Patroi, E. A., Codescu, M. M., Bojin, D., Magnetic Materials based on Alnico thin films, Patent No. 128449/2016 B1
7. Patroi, D., Patroi, E. A., Bojin, D., Codescu, M. M. *et al.*, Preparation methods for Alnico thin films, Patent No. 128389/2015 B1
8. Palii, L. S., Kappel, W., Codescu *et al.,* Electric aerial conductor electric with self-protection at frost / ice deposition, granted patent, Patent No. 125940/2017
9. Patroi, E. A., Erdei, R., Codescu, M. M. *et al.*, Metallic microwires for electromagnetic shielding fabric, Patent No.10 126211/2015 B1
10. Codescu, M. M., Erdei, R., Iorga, A., Kappel, W., Manta, E. *et al.*, Securised paper with detection and electronic validation, Patent No. 126675/2015 B1
11. Kappel, W., Romalo, D., Codescu, *et al,* Fe-Cu composites for anisotropic magnets and method for their preparation, Patent No. 122570 / 2009
12. Kappel, W., Codescu, M.M. *et al.,* Isotropic nanocomposite permanent magnets and preparation method, Patent No. 1254345/ 2013
13. Soare V., Burada M., Kappel W., Ivan I., Codescu M. *et al.*, Method for NdFeB alloys preparation and resulted magnet, Patent No. B.I. RO 121793 B1 / 2007
14. Kappel, W., Alexandru, St., Mihaescu, M. Gh., Ivan, I., Stancu, N., Codescu M. M. *et al.*, Bearing with magnetic bilateral sustentation after the axial direction, Patent No. 119087 B1 / 2004
15. Kappel, W., Alexandru, St., Codescu M. M. *et al.*, N. Preparation method of permanent magnets using hydrogenated powders and resulted magnet, Patent No. RO 116933 B1 / 2001
16. Kappel, W., Alexandru, St., Ivan, I., Stancu, N., Codescu, M. M., Preparation method for NdFeB fine powders, Patent No. RO 115851 B1 / 2000
17. Setnescu, R., Kappel, W., Jipa, S., Codescu, M. M. *et al.*, Preparation method of bonded magnets, using organic binder, Patent No. RO 115997 B1 / 2000
18. Kappel, W., Alexandru, St., Stancu, N., Codescu, M. M., Ivan, I., Method for recovery of the wastes provided from NdFeB magnetic alloy, Patent No. RO 115996 B1 / 2000

Papers (*selection*)

1. I. Crăciunescu, E. Chiţanu, M. M. Codescu, N. Iacob, A. Kuncser, V. Kuncser, V. Socoliuc, D. Susan-Resiga, F. Bălănean, G. Ispas, T. Borbáth, I. Borbáth, R. Turcu, L. Vékás, High performance magnetorheological fluids: very high magnetization $FeCo-Fe_3O_4$ nanoclusters in ferrofluid carrier, Soft Matter, 2022, 18(3), 626-639 https://doi.org/10.1039/D1SM01468D
2. M. M. Codescu, A. Vlădescu, V. Geantă, I. Voiculescu, I. Pană, M. Dinu, A. E. Kiss, V. Braic, D. Pătroi, V. E. Marinescu, M. Iordoc, Zn based hydroxiapatite based coatings deposited on a novel FeMoTaTiZr high entropy alloy used for bone implants, Surfaces and Interfaces, 28, 101591 (2022) https://doi.org/10.1016/j.surfin.2021.101591
3. T. Mălăeru, M. M. Codescu, E. Chiţanu, G. Georgescu, C. A. Banciu, R. C. Dascălu, D. Pătroi, V. Marinescu, I. Borbath, Synthesis and Characterization of Silica Nanoparticles with Hydrophobic Modified Surface, Journal of Optoelectronics and Advanced Materials, 2022, 24(1-2), 74-81
4. D. Chicea, M. M. Codescu, A. Nicolae, O. Doroshkevych, A. Islamov, M. Kulik, Nanoparticles Size Distribution Assessment During Early Synthesis Stages, MATEC Web of Conference MSE 2021, 343, 01005, 2021, https://doi.org/10.1051/matecconf/202134301005
5. E. Chiţanu, T. Mălăeru, M. M. Codescu, C. A. Banciu, V. E. Marinescu, G. Georgescu, I. Borbath, Hydrophobic Protective Coatings Based on Functionalized SiO_2 for Wind Devices Applications, IEEE Xplore Digital Library, 2021, 20634182, doi: 10.1109/ATEE52255.2021.9425214
6. C. Gabor, D. Cristea, I. L Velicu, T. Bedo, A. Gatto, E. Bassoli, B. Varga, M. A. Pop, V. Geantă, R. Ştefănoiu, M. M. Codescu, E. Manta, D. Pătroi, M. Florescu, S. I. Munteanu, I. Ghiuţă, N. Lupu, D. Munteanu, Ti-Zr-Si-Nb Nanocrystalline Alloys and Metallic Glasses. Assessment on the Structural Development, Thermal Stability, Corrosion and Mechanical Properties, Materials, 2019, 12(9), 1551, http://dx.doi.org/10.3390/ma12091551
7. M. M. Codescu, E. Chiţanu, W. Kappel, D. Patroi, E. Manta, J. Pintea, FeCo soft magnetic, electrically insulated nanopowders, Journal of Magnetism and Magnetic Materials, 477, 2019, 264-268, doi: https://doi.org/10.1016/j.jmmm.2019.01.020
8. V. Geantă, I. Voiculescu , R. Ștefănoiu, M. M. Codescu, H. Kelemen, G. Pavel, A. Vlădescu, V. A. Sandu, Obtaining and Characterisation of High Entropy Alloys Used for Medical Applications, IOP Conf. Series: Materials Science and Engineering 572 (2019) 012023, doi:10.1088/1757-899X/572/1/012023
9. M. M. Codescu, E. Chitanu, W. Kappel, D. Patroi, E. Manta, J. Pintea, Co-based magnetic nanostructured material for high frequency applications, IOP Conf. Series: Materials Science and Engineering 572 (2019) 012068, doi:10.1088/1757-899X/572/1/012068
10. Iorga, M. M. Codescu, E. Manta, E. A. Patroi, G. Dumitru, D. Patroi, V. Marinescu, A. Lixandru, Ferromagnetic Microwires with Low Curie Temperature for Sensor Applications, U.P.B. Scientific Bulletin - B, 81, 3, 2019, 179-186
11. B. Cekić, V. Ivanovski, M. M. Codescu, A. Umićević, K. Ćirić, E. Manta, Mössbauer spectroscopic analysis of $(Nd,Pr,Dy)_2(Fe,Co,Ga)_{14}B/\alpha$-Fe permanent magnetic nanocomposites, Powder Metallurgy and Advanced Materials – RoPM&AM 2017 - Materials Research Forum LLC, Materials Research Proceedings 8 (2018) 71-80 doi: http://dx.doi.org/10.21741/9781945291999-8
12. M. M. Codescu, W, Kappel, E, Manta, E. A. Patroi, D. Patroi, R. Erdei, V. Midoni, I. Zăpodeanu, M. Burlacu, A study of the ferromagnetic microwires retention in cellulose matrix in the security papers, Powder Metallurgy and Advanced Materials – RoPM&AM 2017 - Materials Research Forum LLC, Materials Research Proceedings 8 (2018) 1-10 doi: http://dx.doi.org/10.21741/9781945291999-1
13. V. Ioniţă, M. M. Codescu, E, Chiţanu, L. Petrescu, E. Cazacu, Hysteresis modeling accuracy for soft magnetic nanopowders, Revue Roumaine des Sciences Techniques– Série Électrotechnique et Énergétique, 63, 1, 2018, 11–14
14. P. Barbu, M. M. Codescu, M. Iordoc, V. Marinescu, E. Manta, C. Ilie, M. Popa, Electrodeposition of CoNiMnP Thick Films for Micromachined Magnetic Device Applications, Revista de Chimie, 69, 6, 2018, 1355-1362

15. M. M. Codescu, W. Kappel, E. Chitanu, E. Manta, Exchange hardened ferrimagnetic nanocomposites, IEEE Xplore Digital Library, 2017, 444 – 447. doi: 10.1109/ATEE.2017.7905091
16. E. Chitanu, A. Bara, D. Patroi, V. Marinescu, M. M. Codescu, C. Banciu, PAN/ZnO Composite Electrospun Fibers for UV Shielding Applications, IEEE Explore Digital Library, 2017, 227 – 230 doi: 10.1109/ATEE.2017.7905098
17. S. A. Baranov, O. V. Yaltychenko, E. Yu. Kanarovskii, M. M. Codescu, Preparation of the cast glass-coated amorphous magnetic microwires, Proc. SPIE 10010, Advanced Topics in Nanoelectronics, Microelectronics and Nanotechnologies VIII, 1001016 2016, 117 – 123 doi: 10.1117/12.2243352
18. D. Patroi, V. D. Zhaketov, Y.V. Nikitenko, M. M. Codescu, E. A. Patroi, E. Manta, Neutron depolarization investigations of spring exchange interaction nanocomposites, Optoelectronics and Advanced Materials-Rapid Communications, 9, 9 -10, 1328-1331, 2015
19. C. Constantinescu, V. Ion, M. Codescu, P. Rotaru, M. Dinescu, Optical, morphological and thermal behavior of NdFeB magnetic thin films grown by radiofrequency plasma-assisted pulsed laser deposition, Current Applied Physics, 13, 9 (2013) 2019 – 2025, doi: 10.1016/j.cap.2013.09.002
20. C. Constantinescu, E. Pătroi, M. Codescu, M. Dinescu, Effect of nitrogen environment on NdFeB thin films grown by radio frequency plasma beam assisted pulsed laser deposition, Materials Science and Engineering B, 178 (2013) 267 – 271, doi: http://dx.doi.org/10.1016/j.mseb.2012.11.013
21. Iorga, M. Codescu, L. Palii, New thermo-magnetic material wire used for self-protection high voltage line overhead conductors against frost/ice deposits, Optoelectronics and Advanced Materials – Rapid Communications, 7, 1-2 (2013) 86 - 89
22. P. Prioteasa, M. M. Codescu, E. Pătroi, D. Pătroi, V. Marinescu, Electroplating in magnetic field and characterization of NiCoMnP alloy films with permanent magnet, Optoelectronics and Advanced Materials – Rapid Communications, 7, 1-2 (2013) 90 – 95
23. D. Pătroi, M. M. Codescu, E. A. Pătroi, V. Marinescu, Structural and magnetic behaviour of DC sputtered Alnico type thin films, Optoelectronics and Advanced Materials–Rapid Communications, 5, 10, (2011) 1130 – 1133
24. E. Manta, M. M. Codescu, M. Petrescu, Ferromagnetic Glass-Coated Microwires and Their Applications, U.P.B. Scientific Bulletin – B, 74, 4, 2012, 177-184
25. B. Cekič, V. Ivanovski, M. M. Codescu, A. Umicevic, T. Barudzija, E. A. Pătroi, Mössbauer Spectroscopic Analysis of $Nd_2Fe_{14}B$/α-Fe Hard Magnetic Nanocomposites, Solid State Phenomena, 170 (2011), 154 - 159, doi:10.4028/www.scientific.net/SSP.170.154
26. A. Iorga, M. M. Codescu, R. Şaban, E. A. Pătroi, Low Curie Temperature in Fe-Cr-Ni-Mn Alloys, U.P.B. Scientific Bulletin - B, 73, 4, 2011, 195-202
27. W. Kappel, M. M. Codescu, E. Manta, E. A. Pătroi, R. Erdei, C, Morari, New composite materials, obtained from ashes wastes, with potential applications for electromagnetic shielding, Trans. Tech. Periodicals, Zürich, Switzerland, Materials Science Forum, 672 (2011), 245 – 250, doi: https://doi.org/10.4028/www.scientific.net/MSF.672.245
28. M. M. Codescu, E. Manta, E. A. Pătroi, W. Kappel, I. Zăpodeanu, M. Burlacu, P. Nechita, V. Midoni, Securing elements with ferromagnetic microwires, Optoelectronics and Advanced Materials – Rapid Communications, 4, 9, (2010) 1361 – 1365
29. W. Kappel, A. Bara, C. Banciu, M. M. Codescu, C. Morari, E. A. Pătroi, E. Manta, Composites materials with applications in electromagnetic protection, Optoelectronics and Advanced Materials – Rapid Communications, 4, 12, (2010) 2097 - 2102
30. E. Burzo, M. M. Codescu, W. Kappel, E. Helerea, Magnetic Materials for Technical Applications, Journal of Optoelectronics and Advanced Materials 11, (2009) 229 - 237
31. A.Bara, C. Banciu, A. M. Bondar, D. Patroi, M. M. Codescu, Electrical properties of carbon nanotubes based composites, Journal of Optoelectronics and Advanced Materials – Symposia, 1, 5, (2009) 949 – 953
32. V. Branzoi, M. Iordoc, M. Codescu, Electrochemical studies on the stability and corrosion resistance of new zirconium-based alloys for biomedical applications, Surface and Interface Analysis, 40 3-4 167 - 73 (2008), https://doi.org/10.1002/sia.2750
33. M. M. Codescu, W. Kappel, M. Dumitrache, D. Popa, Corrosion tests on alloys and permanent magnets based on NdFeB, used in aerospace industry, Journal of Optoelectronics and Advanced Materials, 10, 4, (2008), 790 – 793
34. I.V. Branzoi, M. Iordoc, M. M. Codescu, Corrosion behaviour of CoCrMo and CoCrTi alloys in simulated body fluids, UPB Sci. Bull., B. 69, 4 (2007) 11 – 18
35. C. Oprea, A. P. Kobzev, M. M. Codescu P.J. Szalanski, M. Curuia, PIXE and RBS analysis of Fe-Cu nanoalloy, Vacuum, 81, 10, (2007) 1164 – 1166, DOI: 10.1016/j.vacuum.2007.01.029
36. W. Kappel, M. M. Codescu, M. Văleanu, N. Stancu, J. Pintea, F. Lifei, A. Jianu, D. Pătroi, E. Pătroi, Influence of the Recrystallization Processes on the Structure and Magnetic Properties of the $Nd_2Fe_{14}B$/α-Fe Nanocomposites, Journal of Optoelectronics and Advanced Materials, 9, 6, (2007) 1125 - 1128
37. W. Kappel, M. M. Codescu, N. Stancu, D. Popa, Evaluation of the Corrosion Behavior of the Permanent Magnets based on Rare Earths, used in Aeronautical Industry, Journal of Optoelectronics and Advanced Materials, 8, 2, (2006) 523 – 526
38. R. Setnescu, T. Setnescu, S. Jipa, W. Kappel, M. Dumitru, M. M. Codescu, N. Stancu, T. Zaharescu, Magnetic Flexible Material containing Microcrystalline NdFeB Powder, Journal of Optoelectronics and Advanced Materials, 8, 2, (2006) 533 – 537
39. W. Kappel, M. M. Codescu, N. Stancu, J. Pintea, E. A. Pătroi, High Energy Density Magnetic Materials for Electronic Packaging, Proc. of 1st Electronics Systemintegration Technology Conference ESTC 2006, Dresden, IEEE *Xplore* Digital Library, 1419 - 1424 (2006), doi: 10.1109/ESTC.2006.280022 – *Best Poster Award*
40. V. Kuncser, M. Văleanu, F. Lifei, A. Jianu, D. Predoi, W. Kappel, M. M. Codescu, E. A. Pătroi, I. Pasuk, M. Bulinski, G. Filoti, Micro-structure and Magnetic Properties of Fe-Cu Nanocomposites for Anisotropic Permanent Magnets, Journal of Alloys and Compounds 395 (1-2) (2005) 1 – 6, https://doi.org/10.1016/j.jallcom.2004.11.059
41. W. Kappel, M. M. Codescu, I. Pasuk, E. Pătroi, V. Kuncser, M. Văleanu, D. Predoi, G. Filoti, Fe_xCu_{1-x} Alloys for Permanent Magnets, Journal of Optoelectronics and Advanced Materials, 6, 3, (2004) 973 – 978
42. W. Kappel, M. M. Codescu, D. Popa, Losses in Sintered NdFeB Magnets, Romanian Reports in Physics, 56, 3, 391 – 398, 2004
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