



PERSONAL INFORMATION

Name	CODESCU MIRELA MARIA
Address	137,CALEA 13 SEPTEMBRIE, BUCHAREST - 5, ROMANIA, POSTCODE RO-050712
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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

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| • 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 | <ul style="list-style-type: none">- 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

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| • Name and type of organization providing education and training | April 1994 – January 2004 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", Politehnica University from Bucharest;
September 1981 – June 1986, Graduated in Materials Science and Engineering, Politehnica University from Bucharest, specialization: extractive metallurgy / iron and steels production.
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 |
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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: <i>Management in R&D activities:</i> <i>Project / Workpackage manager.</i> „Obtaining and expertise of new biocompatible materials for medical applications” (ctr. PCCDI No. 60/2018; <i>Partner responsible</i>), „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. CEEEX MATNANTECH No. 19/2005); “Fe-Cu Composites for Anisotropic Permanent Magnets” (ctr. MATNANTECH No. 134/2003);▲ “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 ₂ Fe ₁₄ B/α-Fe, Fe ₃ B 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 ₂ O 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). 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).

TECHNICAL SKILLS & COMPETENCES
DRIVING LICENCE(S)
ADDITIONAL INFORMATION

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".

Basic computer works

Type B

Awards:

- Prize of National Authority for Scientific Research for the "Most Valuable Patent" - "*Electrical Self-protective Conductor at Frost / Ice Depositions*", authors: Palii L. S., Kappel, W., Codescu, M. M., Patroi, E. A., Iorga, A., Ionescu, I., Racovitan, I., Patent No. 125940/2017;

- "ESTC 2006 Best Poster Award" on 1st Electronic Systemintegration Technology Conference ESTC 2006, 5-7.09.2006, 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: 16, in the field of the processing and applications of the NdFeB permanent magnets and functional materials. 6 of these patents are awarded at different international exhibitions and fairs with Gold (2000, 2001, 2008, 2010, 2011, 2014, 2016, 2018), Silver (2010, 2014, 2015, 2016, 2017) and Bronze medals (2002).

ANNEXES

List of patents/patent applications, papers and books

21th February, 2019

Patents / Patent Applications

1. Patroi, A. E., E. Manta, Stancu, N., Lixandru, A., Kappel, W., Codescu, M. M., Patroi, D., Metallic nanowires preparation method, Patent Applications No. A / 00178 / 14.03.2018
2. M. M. Codescu, E. Chitanu, W. Kappel, E. Manta, D. Patroi, J. Pintea, E. Patroi, C. Morari, Electrically insulated FeCo nanopowders, Patent Applications No. A / 01039 / 23.12.2016 (published 132096 / 03.08.2017)
3. Iordoc M., Codescu M. M., Teisanu A., Prioteasa P., Material for orthopedic implant, Patent Application No. A/00308/18.04.02013
4. Patroi, D., Patroi, E. A., Codescu, M. M., Bojin, D., Magnetic Materials based on Alnico thin films, Patent No. 128449/2016 B1
5. Patroi, D., Patroi, E. A., Bojin, D., Codescu, M. M. *et al.*, Preparation methods for Alnico thin films, Patent No. 128389/2015 B1
6. Paliu, L. S., Kappel, W., Codescu *et al.*, Electric aerial conductor electric with self-protection at frost / ice deposition, granted patent, Patent No. 125940/2017
7. Patroi, E. A., Erdei, R., Codescu, M. M. *et al.*, Metalic microwires for electromagnetic shielding fabric, Patent No.10 126211/2015 B1
8. 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
9. Kappel, W., Romalo, D., Codescu, *et al.* Fe-Cu composites for anisotropic magnets and method for their preparation, Patent No. 122570 / 2009
10. Kappel, W., Codescu, M.M. *et al.*, Isotropic nanocomposite permanent magnets and preparation method, Patent No. 1254345/ 2013
11. 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
12. 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
13. 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
14. Kappel, W., Alexandru, St., Ivan, I., Stancu, N., Codescu, M. M., Preparation method for NdFeB fine powders, Patent No. RO 115851 B1 / 2000
15. 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
16. 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. M. M. Codescu, E. Chitanu, 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>
2. B. Cekić, V. Ivanovski, M. M. Codescu, A. Umičević, K. Čirić, E. Manta, Mössbauer spectroscopic analysis of (Nd,Pr,Dy)₂(Fe,Co,Ga)₁₄B/ α -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>
3. 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>
4. V. Ioniță, M. M. Codescu, E. Chițanu, 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
5. 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
6. 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](https://doi.org/10.1109/ATEE.2017.7905091)
7. E. Chitanu, A. Bara, D. Patroi, V. Marinescu, M. M. Codescu, C. Banciu, Polyacrylonitrile-Based Electrospun Fibers, IEEE Explore Digital Library, 2017, 227 – 230 doi: [10.1109/ATEE.2017.7905098](https://doi.org/10.1109/ATEE.2017.7905098)
8. 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](https://doi.org/10.1117/12.2243352)
9. 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
10. 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](https://doi.org/10.1016/j.cap.2013.09.002)
11. 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>
12. Iorga, M. Codescu, L. Paliu, 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
13. 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
14. 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
15. Cekić, V. Ivanovski, M. M. Codescu, A. Umičević, T. Barudzija, E. A. Pătroi, Mössbauer Spectroscopic Analysis of Nd₂Fe₁₄B/ α -Fe Hard Magnetic Nanocomposites, Solid State Phenomena, 170 (2011), 154 - 159, doi:[10.4028/www.scientific.net/SSP.170.154](https://doi.org/10.4028/www.scientific.net/SSP.170.154)
16. A. Iorga, M. M. Codescu, R. Șaban, E. A. Pătroi, Low Curie Temperature in Fe-Cr-Ni-Mn Alloys, U.P.B. Scientific Bulletin - B, 73, 4, 2011, 195-202
17. 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>
18. 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, 10, (2010) 1361 – 1365
19. 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
20. E. Burzo, M. M. Codescu, W. Kappel, E. Helerea, Magnetic Materials for Technical Applications, Journal of Optoelectronics and Advanced Materials 11, (2009) 229 - 237

21. 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
22. 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>
23. 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
24. 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, <https://doi.org/10.1002/sia.2750>
25. 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](https://doi.org/10.1016/j.vacuum.2007.01.029)
26. 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 Nd₂Fe₁₄B/ α -Fe Nanocomposites, *Journal of Optoelectronics and Advanced Materials*, 9, 6, (2007) 1125 - 1128
27. 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
28. 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
29. 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](https://doi.org/10.1109/ESTC.2006.280022) – *Best Poster Award*
30. 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>
31. 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
32. W. Kappel, M. M. Codescu, D. Popa, Losses in Sintered NdFeB Magnets, *Romanian Reports in Physics*, 56, 3, 391 – 398, 2004
33. W. Kappel, M. M. Codescu, D. Popa, The influence of the Postsintering Treatment on the Magnetic Properties for (Nd,Dy)(Fe,Al)B Permanent Magnets, *Romanian Reports in Physics*, 56, 3, 399 – 403, 2004
34. W. Kappel, M. M. Codescu, Nd₂Fe₁₄B/ α -Fe Hard Magnetic Nanocomposite. Performances and Limits, *Romanian Journal on Physics*, 49, 9–10, 733–741, 2004
35. 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
36. W. Kappel, M. M. Codescu, M. G. Mihaiescu, D. Popa, R. Seghianu, M. C. Hondrea, Permanent Magnetic Materials with High Temperature Stability, for Electric Machine Applications, *Revue Roumaine des Sciences Techniques – Série Électrotechnique et Énergétique Électrotechnique et Énergétique*, 49, 4, 2004, 1-9
37. S. Alexandru, W. Kappel, A. Văleanu, A. Jianu, M. Bunescu, I. Ivan, M. M. Codescu, M. Mihaiescu, High energy NdFeB permanent magnets with nanocrystalline structure, *IEEE Xplore*, 56 – 58, 2002, DOI: [10.1109/SMICND.2001.967415](https://doi.org/10.1109/SMICND.2001.967415)
38. M. M. Codescu, I. Ivan, W. Kappel, Magnetic properties of hydrogenated Nd-Fe-B powders, *Romanian Reports in Physics*, 47. 8-9-10, 773 – 778, 1995

Books

1. W. Kappel, M. M. Codescu, N. Stancu, J. Pintea, *Magnetic Nanocomposites based on NdFeB*, 120-128, Ed. Universitatea de Vest Timisoara, 2005
2. H. Gavrilă, W. Kappel, M. M. Codescu, *Materiale magnetice*, Ed. Printech, Bucuresti, 2005
3. M. M. Codescu, W. Kappel, N. Stancu, *Magneti permanenti pe baza de NdFeB*, Ed. Printech, Bucuresti, 2006
4. W. Kappel, M. M. Codescu, S. Jipa, *Magneti permanenti*, Ed. Printech, Bucuresti, 2006
5. W. Kappel, M. M. Codescu, *Tratat de Stiinta si Ingineria materialelor metalice*, vol. 3 *Metale. Aliaje. Materiale speciale. Materiale compozite*, cap. 21 *Materiale magnetice*, 1155 – 1263, Ed. AGIR, Bucuresti, 2009
6. R. D. Popa, M. M. Codescu, I. Ciriuc, *Magneti permanenti utilizati in aeronautica*, Ed. Academiei Fortelor Aeriene “Henri Coanda”, Brasov, 2011