

## Scientific and teaching publications

### A) Articles published in journal which are indexed in Web of Science and Scopus databases

1. I.Hrianca, I.Mălăescu, F.Claici, **C.N.Marin**, "The influence of particles concentration in ferrofluids on the broadening of the magnetic resonance line", J. Magn. Magn. Mater 201 no.1-3 (1999) 126-128.
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3. **C.N.Marin**, I.Mălăescu, A.Ercuța, "The dependence of the effective anisotropy constant on particle concentration within ferrofluids, measured by magnetic resonance", J.Phys.D: Appl.Phys. 34, no.10 (2001) 1466-1469.
4. I.Mălăescu, **C.N.Marin**, "Dependence on the temperature of the activation energy in the dielectric relaxation processes for ferrofluids in low-frequency field", J. Magn. Magn. Mater 252 (2002) 68-70.
5. I.Mălăescu, **C.N.Marin**, "Dielectric behavior of some ferrofluids in low-frequency fields", Journal of Colloid and Interface Science 251 (2002) 73-77
6. **C.N.Marin**, „The particle concentration effect on magnetic resonance linewidth for magnetic liquids with chain aggregates”, J. Magn. Magn. Mater. 250 (2002) 197-202.
7. **C.N.Marin**, I.Mălăescu, V.Socoliuc, „Study of the interparticle interaction effect on magnetic resonance line in ferrofluids”, Journal of Optoelectronics and Advanced Materials, 5 (2003) 227 - 231.
8. P.C.Fannin, **C.N.Marin**, V.Socoliuc, G.M.Istrățucă , A.T.Giannitsis, "The effect of colloidal stabilization upon ferrimagnetic resonance in magnetic fluids in the presence of a polarizing magnetic field", J.Phys.D: Appl.Phys., 36 (2003) 1227 – 1235.
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10. P.C.Fannin, **C.N.Marin**, V.Socoliuc, G.M.Istrățucă, "Investigation of particle agglomeration in unpolarised magnetic fluids by means of magnetic resonance measurements", J.Magn.Magn.Mater., 284C (2004) 104-112.
11. P.C.Fannin, **C.N.Marin**, I.Mălăescu, A.T.Giannitsis, "Microwave absorption of composite magnetic fluids", J.Magn.Magn.Mater. 289 (2005) 78-80.
12. P.C.Fannin, I.Mălăescu, **C.N.Marin**, "The effective anisotropy constant of particles within magnetic fluids as measured by magnetic resonance", J.Magn.Magn.Mater. 289 (2005) 162-164.
13. I.Mălăescu, **C.N.Marin**, „Study of magnetic fluids by means of magnetic spectroscopy”, Physica B: Condensed Matter, 365 (2005) 134 – 140.
14. P.C.Fannin, **C.N.Marin**, „Determination of the Landau-Lifshitz damping parameter by means of complex susceptibility measurements”, J. Magn. Magn. Mater., 299 (2006) 425 - 429.
15. **C. N. Marin**, "Thermal and particle size distribution effects on the ferromagnetic resonance in magnetic fluids" J.Magn.Magn.Mater., 300 (2006) 397 - 406.
16. P. C. Fannin, C. Mac Oireachtaigh, I. Malaescu, **C. N. Marin** "Investigation of magnetic fluids exhibiting field induced absorption peaks in the susceptibility spectra", Journal of Optoelectronics and Advanced Materials, Vol. 8, No. 1, (2006), 46 – 49.
17. P. C. Fannin, **C. N. Marin**, I. Malaescu, N. Stefu "Microwave dielectric properties of magnetite colloidal particles in magnetic fluids", J. Phys.: Condensed Matter, 19 (2007) 036104-036111.
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23. P.C.Fannin, I. Malaescu, **C. N. Marin**, N. Stefu, *Microwave propagation parameters in magnetic fluids*, The European Physical Journal E, **29** (3) 299-303 (2009)
24. P.C. Fannin, I. Malaescu, N. Stefu, **C. N. Marin**, „*Polarizing field and particle concentration dependence of the magnetic loss power in ferrofluids*”, AIP Conference Proceedings 1131 (2009) pp 81-85
25. P.C.Fannin, **C.N Marin**, C. Couper, , “*Investigation of magnetic fluids exhibiting field-induced increasing loss peaks*”, Journal of Magnetism and Magnetic Materials **322** (9-12) 1677-1681 (2010)
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29. C. Couper, **C.N. Marin**, P.C. Fannin, “*Biasing field effect on the microwave dielectric properties of magnetic fluids*”, Physics Procedia, Volume 9 (2010) Pages 58-62
30. P. C. Fannin, **C. N. Marin**, C. Couper, I. Malaescu, N. Stefu, “*A Comparative Study of the Field Dependence of the Properties of Colloidal Suspensions of Nanoparticles and of Magnetic Microspheres*”, PIERS Proceedings, Xi'an, China (2010) March 22-26
31. P. C. Fannin, **C. N. Marin**, I. Malaescu, N. Stefu, P. Vlăzan, S. Novaconi, S. Popescu, “*Effect of the concentration of precursors on the microwave absorbent properties of Zn/Fe oxide nanopowders*”, Journal of Nanoparticle Research, **13** 311–319 (2011)
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33. P.C. Fannin, **C. N. Marin**, C.Couper, “*The resonance decay function method in the determination of the pre-factor of the Néel relaxation time of single-domain nanoparticles*”, Journal of Magnetism and Magnetic Materials **323** (9-12) 1242-1245 (2011)
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38. **C. N. Marin**, I. Malaescu, A. Savici, *Investigation of the low frequency polarization mechanisms in magnetic fluids*, ACTA PHYSICA POLONICA A, Vol. **124**, No. 4, (2013) 724 – 727
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42. A. Lungu, I. Malaescu, **C. N. Marin**, P. Vlăzan, P. Sfirloaga, *The electrical properties of manganese ferrite powders prepared by two different methods*, Physica B: Condensed Matter, **462** (2015) 80-85.

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45. Aurora Gajta, Daniela Turkoanje, Iosif Malaescu, **Catalin-Nicolae Marin**, Marie-Jeanne Koos, Biljana Jelcic, Vuk Milutinovic, *Dry eye syndrome among computer users*, AIP Conference Proceedings 1694 (2015) 040011-1 (5pp); doi: 10.1063/1.4937263
46. **C.N. Marin**, P.C. Fannin, I. Malaescu, *Time solved susceptibility spectra of magnetic fluids*, Journal of Magnetism and Magnetic Materials 388 (2015) 45-48
47. D. Malaescu, I. Grozescu, P. Sfirloaga, P. Vlazan, **C. N. Marin**, *The Electrical Properties of Some Composite Materials Based on Sodium and Tantalum Oxides*, Acta Physica Polonica A 129 (1) (2016) 133-137.
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59. G. Matu, **C. N. Marin**, I. Malaescu, *Frequency and temperature analysis of the clausius-mossotti factor of a kerosene-based ferrofluid in low frequency field*, Journal of Ovonic Research, **16**, Issue 2 (2020) 89-96.
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61. D. Lazic, I. Malaescu, O. M. Bunoiu, I. Marin, F. G. Popescu, V. Socoliuc, **C. N. Marin**, *Investigation of therapeutic-like irradiation effect on magnetic hyperthermia characteristics of a water-based ferrofluid with magnetite particles*, J. Magn. Magn. Mater., **502** (2020) Article number 166605

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72. B. Ile, I. Malaescu, **C. N. Marin**, I. Marin, M. Spunei, S. Negru, *Dosimetric investigations of some composites consisting of metallic particles distributed in silicone rubber matrix*, Journal of Ovonic Research, **17**, Issue 2 (2021) 217 - 223
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75. Adina-Elena Segneanu, **Catalin Nicolae Marin**, Ioan Ovidiu-Florin Ghirlea, Catalin Vladut Ionut Feier, Cornelia Muntean and Ioan Grozescu, *Artemisia annua Growing Wild in Romania—A Metabolite Profile Approach to Target a Drug Delivery System Based on Magnetite Nanoparticle*, Plants 2021, **10**, 2245. DOI: 10.3390/plants10112245
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81. I. Marin, F. G. Popescu, A. E. Pauncu, A. Apostol, V. M. Ivan, C. N. Marin, O. Fira-Mladinescu, S. Ursoniu, *A Heart Rate Step Function Response Method for the Evaluation of Pulse Wave Velocity as a Predictor of Major Adverse Cardio-Vascular Events*, *Medicina* **58** (2022) 1633 DOI 10.3390/medicina58111633
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**B) Articles published in journals which are no indexed in Web of Science or Scopus databases**

1. I. Bica, **C.N.Marin**, "An experimental study of anodic spot diameter", *Analele Universității de Vest din Timișoara*, seria Științe Fizice, vol. XXXI (1994) 39-43.
2. **C.N.Marin**, I.Mălăescu, "Experimental study of dielectric loss in magnetite-kerosene ferrofluids", *Analele Universității de Vest din Timișoara*, seria Științe Fizice, vol. XXXIV (1996) 62-67.
3. I.Hrianca, I.Mălăescu, **C.N.Marin**, N.Ștefu, "Magnetic relaxation processes in radiofrequency field for dispersed monodomain particles", *Analele Universității de Vest din Timișoara*, seria Științe Fizice, vol. XXXVI (1997) 17 – 28.
4. I.Mălăescu, L.Gabor, **C.N.Marin**, "Ferrimagnetic resonance of the ferrofluids filtered in magnetic field", *Analele Universității de Vest din Timișoara*, seria Științe Fizice, vol. XXXVIII (2002) 96 – 102.
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14. P. C. Fannin, I. Malaescu, N. Ștefu, **C. N. Marin**, *On the frequency and magnetic polarizing field dependence of the complex dielectric permittivity of magnetic fluids in the microwave range*, *Analele Universitatii de Vest din Timisoara*, *Seria Fizica*, vol. 49 (2006) 93-96
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19. Dan Malaescu, Ioan Grozescu, Paula Sfirloaga, Paulina Vlazan, **Catalin N Marin**, *Electric Properties of NaTaO<sub>3</sub> Obtained by Hydrithermal Method*, Annals of the West University of Timisoara. Physics Series, 58 (2015) 48
20. I. Malaescu, **C. N. Marin**, M. Bunoiu, P. C. Fannin, N. Stefu, L. Iordaconiu, *The effect of particle concentration on the heating rate of ferrofluids for magnetic hyperthermia*, Analele Universității de Vest din Timisoara, Seria Fizică., LVIII, 2015, 81 - 88, DOI: 10.1515/awutp -2015-0210
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23. I Malaescu, **CN Marin**, M Spunei, *Comparative Study on the Surface Dose of Some Bolus Materials*, International Journal of Medical Physics, Clinical Engineering and Radiation Oncology, 4 (2015) 348-352

### **C) Contributions in conferences**

1. I.Hrianca, I.Mălăescu, F.Claici, **C.N.Marin**, “Complex permeability of polymer composite ferrites”, A 5-a Conferință de Materiale Magnetice și Supraconductoare, Cluj-Napoca, 12-13 septembrie 1996.
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