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## ***LISTA DE LUCRĂRI***

### **(i) Lista de lucrări cele mai relevante pentru realizările profesionale proprii în domeniu**

- **Book/Chapters (peer review) publicate în edituri internaționale de prestigiu recunoscute Web of Science (WOS);**

Book: *Magnetic Nanoparticles in Human Health and Medicine*

WILEY, UK, 2022, 512 pages;

Editors: **Costică Caizer** and Mahendra Rai

Book Series: *Nanobiotechnology in Medicine & Health Care*

- publicată după dobândirea atestatului de abilitare;

Chapter: *Magnetic/ Superparamagnetic Hyperthermia as an Effective Noninvasive Alternative Method for Therapy of Malignant Tumors*

Chapter 15 in: *Nanotheranostics: Applications and Limitations*

SPRINGER, 2019, pp. 297-335;

Author: **C. Caizer**

- publicat după dobândirea atestatului de abilitare;



Chapter: *Nanoparticles Size Effect on Some Magnetic Properties*

Chapter in: *Handbook of Nanoparticles*

SPRINGER, 2016, pp. 475-519;

Author: **C. Caizer**

- publicat după dobândirea atestatului de abilitare;

- citat (fără autocitări) de peste 40 ori în lucrări WOS;

- **Cărți/cursuri publicate în edituri recunoscute CNCSIS (cu referenți științifici și ISBN);**

Curs: *Nano-biomagnetism*

Ed. Universității de Vest, Timișoara, 2010, 286 pag.; ISBN: 978-973-125-337-4

Autor: **C. Caizer**

Carte: *Impulsuri electrice. Aplicații în circuite electrice, dispozitive electronice și magnetism tehnic*

MIRTON, Timișoara, 2007, 268 pag.; ISBN: 978-973-52-0064-0

Autor: **C. Caizer**

Curs: *Nano-fluide magnetice*

Ed. Eurobit, Timișoara, 2004, 200 pag.; ISBN: 973-620-186-4;

Autor: **C. Caizer**

- **Articole de cercetare în extenso publicate în reviste WOS cu factor de impact (IF);**

**Costica Caizer**, Isabela Simona Caizer-Gaitan, Claudia Geanina Watz, Cristina Adriana Dehelean, Tiberiu Bratu and Codruta Soica, *High Efficacy on the Death of Breast Cancer Cells Using SPMHT with Magnetite Cyclodextrins Nanobioconjugates*, PHARMACEUTICS, 15(4) (2023) 1145 (pp. 1-20). **Impact Factor: 6,525**, **zona ROSIE** (Q1 in Web of Science (WOS)); Five Years Impact Factor: 7,227;

- publicată după dobândirea atestatului de abilitare;



**Costica Caizer**, Isabela Simona Caizer, Roxana Racoviceanu, Claudia Geanina Watz, Marius Mioc, Cristina Adriana Dehelean, Tiberiu Bratu, Codruta Soica, *The Fe<sub>3</sub>O<sub>4</sub>-PAA-(HP- $\gamma$ -CDs) Biocompatible Ferrimagnetic Nanoparticles for Increasing Efficacy in Superparamagnetic Hyperthermia*, NANOMATERIALS, 12(15) (2022) 2577 (pp.1-28). **Impact Factor: 5,719**, **ROSI (Q1)**; Five Years Impact Factor: 5,81;

- publicată după dobândirea atestatului de abilitare;

**Costica Caizer**, Isabela Simona Caizer, *Study on Maximum Specific Loss Power in Fe<sub>3</sub>O<sub>4</sub> Nanoparticles Decorated with Biocompatible Gamma-Cyclodextrins for Cancer Therapy with Superparamagnetic Hyperthermia*, INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES, 22(18) (2021) 10071 (pp. 1-22). **Impact Factor: 6,208**, **ROSI (Q1)**; Five Years Impact Factor: 6,628;

- publicată după dobândirea atestatului de abilitare;

**Costica Caizer**, *Optimization study on specific loss power in superparamagnetic hyperthermia with magnetite nanoparticles for high efficiency in alternative cancer therapy*, NANOMATERIALS, 11(1) (2020) 40 (pp. 1-20); **Impact Factor: 5,719**, **ROSI (Q1)**; Five Years Impact Factor: 5,81;

- publicată după dobândirea atestatului de abilitare;

M. Ștefănescu, **C. Caizer\***, M. Stoia, O. Ștefănescu, *Ultrafine, perfectly spherical Ni-Zn ferrite nanoparticles, with ultranarrow distribution, isolated in a silica matrix, prepared by a novel synthesis method in the liquid phase*, ACTA MATERIALIA, 54 (2006) 1249 – 1256);

**C. Caizer**, *Deviation from Bloch law in the case of surfacted nanoparticles*, APPLIED PHYSICS A, 80 (2005) 1745 - 1751;

**C. Caizer**, *T<sup>2</sup> law for magnetite-based ferrofluids*, JOURNAL OF PHYSICS: CONDENSED MATTER, 15 (2003) 765 – 776;

I. Hrianca, **C. Caizer**, Z. Schlett, *Dynamic magnetic behavior of Fe<sub>3</sub>O<sub>4</sub> colloidal nanoparticles*, JOURNAL OF APPLIED PHYSICS, 92 (2002) 2125 – 2132;



C. Caizer, M. Ștefănescu, *Magnetic Characterization of Nanocrystalline Ni-Zn Ferrite Powder Prepared by the Glyoxylate Precursor Method*, JOURNAL OF PHYSICS D: APPLIED PHYSICS, 35 (2002) 3035 – 3040; citari (WOS): peste 180.

C. Caizer, *Magnetic behaviour of  $Mn_{0.6}Fe_{0.4}Fe_2O_4$  nanoparticles in ferrofluid at low temperatures*, JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, 251 (2002) 304 – 315;

## (ii) *Teza de Abilitare*

**Titlu:** *MAGNETIC PROPERTIES OF FERRIMAGNETIC NANOPARTICLES AND NANOCOMPOSITES WITH APPLICATION IN NANOBIO TECHNOLOGY*

- UNIVERSITATEA “AL. I. CUZA” IASI, sept. 2015;

## *Teza de Doctorat*

**Titlu:** *COMPORTAREA MAGNETICĂ A SISTEMELOR DE NANOPARTICULE FERIMAGNETICE DISPERSE. APLICAȚII LA GENERAREA OSCILAȚIILOR DE RADIOFRECVENȚĂ DE PUTERE*

- cu cea mai înaltă distincție: *SUMMA CUM LAUDE*;
- UNIVERSITATEA DE VEST DIN TIMIȘOARA, 2003;

## (iv) Lista cărților:

- peer review, în edituri internaționale recunoscute Web of Science;

1. Title: *Magnetic Nanoparticles in Human Health and Medicine*

WILEY, UK, 2022, 512 pages;

Editors: Costică Caizer and Mahendra Rai

Book Series: *Nanobiotechnology in Medicine & Health Care*

- publicată după dobândirea atestatului de abilitare;



- cu referenți științifici și ISBN, în edituri recunoscute CNCSIS;

2. Titlu: ***Bioelectromagnetism. Lucrări de laborator***

EUROBIT, Timișoara, 2013, 168 pag.; ISBN: 978-973-132-080-9  
Autor: C. Caizer

3. Titlu: ***Fizică experimentală***

EUROBIT, Timișoara, 2012, 262 pag.; ISBN: 978-973-132-016-8  
Autor: C. Caizer

4. Titlu: ***Nano-biomagnetism***

ED. UNIVERSITĂȚII DE VEST, Timișoara, 2010, 286 pag.; ISBN: 978-973-125-337-4  
Autor: C. Caizer

5. Titlu: ***Impulsuri electrice. Aplicații în circuite electrice, dispozitive electronice și magnetism tehnic***

MIRTON, Timișoara, 2007, 268 pag.; ISBN: 978-973-52-0064-0  
Autor: C. Caizer

6. Titlu: ***Sisteme de nanoparticule ferimagnetice disperse. Comportare magnetică***

ED. UNIVERSITĂȚII DE VEST, Timișoara, 2004, 166 pag.; ISBN: 973-8433-73-8  
Autor: C. Caizer

7. Titlu: ***Nano-fluide magnetice***

EUROBIT, Timișoara, 2004, 200 pag.; ISBN: 973-620-186-4;  
Autor: C. Caizer

8. Titlu: ***Electricitate și magnetism. Lucrări experimentale***

EUROBIT, Timișoara, 2004, 212 pag.; ISBN: 973-8181-38-0;  
Autori: C. Caizer, I. Hrianca



- **volume de cercetare peer review in reviste ISI, în edituri internaționale recunoscute Web of Science (editate electronic);**

9. Title: ***Nanoparticles in Nanobiotechnology and Nanomedicine***

MDPI, Switzerland, 2022-2023

Editor: **Costică Caizer**

Special Issue in: **INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES**

(ISI Web of Science, IF: 6,208, zona ROȘIE)

Section: Molecular Nanoscience

- după dobândirea atestatului de abilitare;

10. Title: ***Applications in Nanotechnology and Nanomedicine of Magnetic Nanomaterials***

MDPI, Switzerland, 2022-2023;

Editor: **Costică Caizer**

Special Issue in: **APPLIED SCIENCES - BASEL**

(ISI Web of Science, IF: 2,838, zona GALBENĂ)

Section: Nanotechnology and Applied Nanosciences

- după dobândirea atestatului de abilitare;

11. Title: ***Nano- and Biomagnetism***

MDPI, Switzerland, 2021;

Editor: **Costică Caizer**

Special Issue in: **APPLIED SCIENCES - BASEL**

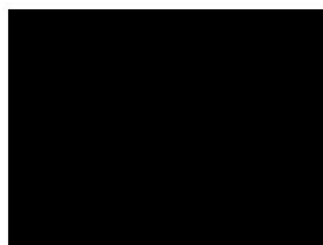
(ISI Web of Science, IF: 2,838, zona GALBENĂ)

Section: Nanotechnology and Applied Nanosciences

- după dobândirea atestatului de abilitare;

(v) **Lista capitolelor de cărți**

- **peer review, în edituri internaționale de prestigiu, recunoscute Web of Science;**



1. Title: ***Magnetic/Superparamagnetic Hyperthermia in Clinical Trials for Noninvasive Alternative Cancer Therapy***  
Chapter 18 in: ***Magnetic Nanoparticles in Human Health and Medicine;***  
WILEY, UK, 2022, pp. 430-463;  
Author: **C. Caizer**

- publicat după dobândirea atestatului de abilitare;

2. Title: ***Magnetic Nanoparticles in Alternative Tumors Therapy: Biocompatibility, Toxicity, and Safety Compared with Classical Methods***  
Chapter 16 in: ***Magnetic Nanoparticles in Human Health and Medicine;***  
WILEY, UK, 2022, pp. 355-379;  
Author: **C. Caizer, Mahendra Rai**

- publicat după dobândirea atestatului de abilitare;

3. Title: ***Classical Magnetoliposomes vs. Current Magnetocyclodextrins with Ferrimagnetic Nanoparticles for High Efficiency and Low Toxicity in Noninvasive Alternative Therapy of Cancer by Magnetic/Superparamagnetic Hyperthermia***  
Chapter 13 in: ***Magnetic Nanoparticles in Human Health and Medicine;***  
WILEY, UK, 2022, pp. 272-306;  
Author: **C. Caizer, Cristina Dehelean, Codruța Șoica**

- publicat după dobândirea atestatului de abilitare;

4. Title: ***An introduction to magnetic nanoparticles: from bulk to nanoscale magnetism and their applicative potential in human health and medicine***  
Chapter 1 in: ***Magnetic Nanoparticles in Human Health and Medicine;***  
WILEY, UK, 2022, pp. 1-34;  
Author: **C. Caizer, Shital Bonde, Mahendra Rai**

- publicat după dobândirea atestatului de abilitare;

5. Title: ***Magnetic Nanoparticle Nanoformulations for Alternative Therapy of Cancer by Magnetic/ Superparamagnetic Hyperthermia***  
Chapter in: ***Nanoformulations in Human Health;***  
SPRINGER, 2020, pp. 503-530;  
Author: **C. Caizer**, Cristina Dehelean, Dorina Coricovac, Isabela Caizer, Codruța Șoica  
- publicat după dobândirea atestatului de abilitare;
6. Title: ***Magnetic/ Superparamagnetic Hyperthermia as an Effective Noninvasive Alternative Method for Therapy of Malignant Tumors***  
Chapter 15 in: ***Nanotheranostics: Applications and Limitations;***  
SPRINGER, 2019, pp. 297-335;  
Author: **C. Caizer**  
- publicat după dobândirea atestatului de abilitare;
7. Title: ***Magnetic Anisotropy of Nanocomposites Made of Magnetic Nanoparticles Dispersed in Solid Matrices***  
Chapter in: ***Advances in Nanostructured Composites;***  
TAYLOR & FRANCIS – CRC Press, vol. I, 2019, pp. 245-276;  
Author: **C. Caizer**  
- publicat după dobândirea atestatului de abilitare;
8. Title: ***Magnetic Hyperthermia-Using Magnetic Metal /Oxide Nanoparticles with Potential in Cancer Therapy***  
Chapter in: ***Metal Nanoparticles in Pharma;***  
SPRINGER, 2017, pp. 193-218;  
Author: **C. Caizer**  
- publicat după dobândirea atestatului de abilitare;
9. Title: ***Biocompatible Magnetic Oxide Nanoparticles with Metal Ions Coated with Organic Shell as Potential Therapeutic Agents in Cancer***  
Chapter in: ***Metal Nanoparticles in Pharma;***  
SPRINGER, 2017, pp. 219-256;



Author: **C. Caizer**, Alice-Sandra Buteica, Ioan Mindrila

- publicat după dobândirea atestatului de abilitare;

10. Title: ***Nanoparticles size effect on some magnetic properties***

Chapter in: ***Handbook of Nanoparticles***;

SPRINGER, 2016, pp. 475-519;

Author: **C. Caizer**

- publicat după dobândirea atestatului de abilitare;

## (vi) Lista articolelor în extenso publicate în reviste WOS

[1] **Costica Caizer**, Isabela Simona Caizer-Gaitan, Claudia Geanina Watz, Cristina Adriana Dehelean, Tiberiu Bratu and Codruta Soica, *High Efficacy on the Death of Breast Cancer Cells Using SPMHT with Magnetite Cyclodextrins Nanobioconjugates*, PHARMACEUTICS, 15(4) (2023) 1145 (pp. 1-20). **Impact Factor: 6,525**, **zona ROSIE (Q1 in Web of Science (WOS))**; Five Years Impact Factor: 7,227;

- publicat după dobândirea atestatului de abilitare;

[2] **Costica Caizer**, Isabela Simona Caizer, Roxana Racoviceanu, Claudia Geanina Watz, Marius Mioc, Cristina Adriana Dehelean, Tiberiu Bratu, Codruta Soica, *The Fe<sub>3</sub>O<sub>4</sub>-PAA-(HP- $\gamma$ -CDs) Biocompatible Ferrimagnetic Nanoparticles for Increasing Efficacy in Superparamagnetic Hyperthermia*, NANOMATERIALS, 12(15) (2022) 2577 (pp.1-28). **Impact Factor: 5,719**, **zona ROSIE (Q1)**; Five Years Impact Factor: 5,81;

- publicat după dobândirea atestatului de abilitare;

[3] Isabela Simona Caizer, **Costica Caizer**, *Superparamagnetic Hyperthermia Study with Cobalt Ferrite Nanoparticles Covered with  $\gamma$ -Cyclodextrins by Computer Simulation for Application in Alternative Cancer Therapy*, INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES, 23(8) (2022) 4350 (pp. 1-25). **Impact Factor: 6,208**, **zona ROSIE (Q1)**; Five Years Impact Factor: 6,628;

- publicat după dobândirea atestatului de abilitare;

[4] **Costica Caizer**, *Computational Study Regarding CoxFe<sub>3</sub>-xO<sub>4</sub> Ferrite Nanoparticles with Tunable Magnetic Properties in Superparamagnetic Hyperthermia for Effective Alternative*

*Cancer Therapy*, NANOMATERIALS, 11(12) (2021) 3294 (pp. 1-20). **Impact Factor: 5,719**, **zona ROSIE (Q1)**; Five Years Impact Factor: 5,81;

- publicat după dobândirea atestatului de abilitare;

[5] **Costica Caizer**, Isabela Simona Caizer, *Study on Maximum Specific Loss Power in Fe<sub>3</sub>O<sub>4</sub> Nanoparticles Decorated with Biocompatible Gamma-Cyclodextrins for Cancer Therapy with Superparamagnetic Hyperthermia*, INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES, 22(18) (2021) 10071 (pp. 1-22). **Impact Factor: 6,208**, **zona ROSIE (Q1)**; Five Years Impact Factor: 6,628;

- publicat după dobândirea atestatului de abilitare;

[6] **Costica Caizer**, *Specific Loss Power and Heating Temperature in CoFe<sub>2</sub>O<sub>4</sub> Nanoparticles as Possible Candidate for Alternative Cancer Therapy by Superparamagnetic Hyperthermia*, APPLIED SCIENCES, 11(12) (2021) 5505 (pp. 1-22); **Impact Factor: 2.838**, **zona GALBENA (Q2)**; Five Years Impact Factor: 2,921;

- publicat după dobândirea atestatului de abilitare;

[7] **Costica Caizer**, *Optimization study on specific loss power in superparamagnetic hyperthermia with magnetite nanoparticles for high efficiency in alternative cancer therapy*, NANOMATERIALS, 11(1) (2020) 40 (pp. 1-20); **Impact Factor: 5,719**, **zona ROSIE (Q1)**; Five Years Impact Factor: 5,81;

- publicat după dobândirea atestatului de abilitare;

[8] **C. Caizer**, *Computational study on superparamagnetic hyperthermia with biocompatible SPIONs to destroy the cancer cells*, **Journal of Physics (IOP) (J. Phys.: Conf. Ser. 521 (2014) 012015)**.

[9] M. Stoia, **C. Caizer**, M. Ștefănescu, P. Barvinschi, L. Barbu-Tudoran, *Structure, morphology and magnetic properties of Ni,Zn ferrite/ silica nanocomposites with different compositions*, **Journal of Sol-Gel Science and Technology (J. Sol-Gel Sci. Techn., 58 (2011) 126)**;

[10] M. Ștefănescu, M. Stoia, **C. Caizer**, T. Dippong, P. Barvinschi, *Preparation of CoxFe<sub>3-x</sub>O<sub>4</sub> nanoparticles by thermal decomposition of some organo-metallic precursors*, **Journal of Thermal Analysis and Calorimetry (J. Therm. Anal. Calorim., 97 (2009) 245)**;



- [11] M. Ștefănescu, M. Stoia, **C. Caizer**, O. Ștefănescu, *Preparation of  $x(\text{Ni}_{0.65}\text{Zn}_{0.35}\text{Fe}_2\text{O}_4)/(1-x)\text{SiO}_2$  nanocomposite powders by a modified sol-gel method*, **Materials Chemistry and Physics** (Mater. Chem. Phys., 113 (2009) 342 – 348);
- [12] **C. Caizer**, *Magnetic properties of the novel nanocomposite  $(\text{Zn}_{0.15}\text{Ni}_{0.85}\text{Fe}_2\text{O}_4)_{0.15}/(\text{SiO}_2)_{0.85}$  at room temperature*, **Journal of Magnetism and Magnetic Materials** (J. Magn. Magn. Mater., 320 (2008) 1056 – 1062);
- [13] M. Stoia, **C. Caizer**, M. Ștefănescu, P. Barvinschi, I. Julean, *Obtaining of  $\text{Ni}_{0.65}\text{Zn}_{0.35}\text{Fe}_2\text{O}_4/\text{SiO}_2$  nanocomposites by thermal decomposition of complex compounds embedded in silica matrix*, **Journal of Thermal Analysis and Calorimetry** (J. Therm. Anal. Calorim., 88 (2007) 193 – 200);
- [14] **C. Caizer**, V. Tura, *Magnetic relaxation/stability of Co ferrite nanoparticles embedded in amorphous silica particles*, **Journal of Magnetism and Magnetic Materials** (J. Magn. Magn. Mater., 301 (2006) 513 – 520);
- [15] M. Ștefănescu, **C. Caizer**, M. Stoia, O. Ștefănescu, *Ultrafine, perfectly spherical Ni-Zn ferrite nanoparticles, with ultranarrow distribution, isolated in a silica matrix, prepared by a novel synthesis method in the liquid phase*, **Acta Materialia** (Acta Mater., 54 (2006) 1249 – 1256);
- [16] **C. Caizer**, *The effect of external magnetic field on the thermal relaxation of magnetization*, **Journal of Physics: Condensed Matter** (J. Phys.: Condens. Matter 17 (2005) 2019 – 2034);
- [17] M. Ștefănescu, **C. Caizer**, M. Stoia, O. Ștefănescu, *Ni,Zn/SiO<sub>2</sub> ferrite nanocomposites prepared by an improved sol-gel method and their characterisation*, **Journal of Optoelectronics and Advanced Materials** (J. Optoelectron. Adv. M., 7 (2005) 607 – 614);
- [18] **C. Caizer**, *Deviation from Bloch law in the case of surfacted nanoparticles*, **Applied Physics A** (Appl. Phys. A, 80 (2005) 1745 - 1751);
- [19] **C. Caizer**, *T<sup>2</sup> law for magnetite-based ferrofluids*, **Journal of Physics: Condensed Matter** (J. Phys.: Condens. Matter 15 (2003) 765 – 776);
- [20] **C. Caizer**, M. Popovici, C. Savii, *Spherical  $(\text{Zn}_\delta\text{Ni}_{1-\delta}\text{Fe}_2\text{O}_4)_\gamma$  nanoparticles in an amorphous  $(\text{SiO}_2)_{1-\gamma}$  matrix, prepared with the sol-gel method*, **Acta Materialia** (Acta. Mater., 51 (2003) 3607 – 3616);

- [21] C. Caizer, *Saturation magnetization of  $\gamma$ -Fe<sub>2</sub>O<sub>3</sub> nanoparticles dispersed in a silica matrix*, **Physica B** (Physica B, 327 (2003) 27 – 33);
- [22] C. Caizer, *Structural and magnetic properties of nanocrystalline Zn<sub>0.65</sub>Ni<sub>0.35</sub>Fe<sub>2</sub>O<sub>4</sub> powder obtained from heteropolynuclear complex combination*, **Materials Science & Engineering B – Solid State Materials for Advanced Technology** (Mat. Sci. Eng. B, 100 (2003) 63);
- [23] C. Caizer, I. Hrianca, *Dynamic magnetization of  $\gamma$ -Fe<sub>2</sub>O<sub>3</sub> nanoparticles isolated in an SiO<sub>2</sub> amorphous matrix*, **European Physical Journal B** (Eur. Phys. J. B, 31 (2003) 391 – 400);
- [24] C. Caizer, I. Hrianca, *Temperature dependence of saturation magnetization of  $\gamma$ -Fe<sub>2</sub>O<sub>3</sub>/SiO<sub>2</sub> magnetic nanocomposite*, **Annalen der Physik** (Ann. Phys. 12 (2003) 115 – 122);
- [25] C. Caizer, M. Ștefănescu, *Nanocrystallite size effect on  $\sigma_s$  and  $H_c$  in nanoparticle assemblies*, **Physica B** (Physica B, 327 (2003) 129 – 134);
- [26] C. Caizer, C. Savii, M. Popovici, *Magnetic behaviour of iron oxide nanoparticles dispersed in a silica matrix*, **Materials Science & Engineering B – Solid State Materials for Advanced Technology** (Mat. Sci. Eng. B: Solid, 97 (2003) 129 – 134);
- [27] M. Popovici, C. Savii, D. Niznansky, J. Subrt, J. Bohacek, C. Caizer, C. Enache, C. Ionescu, *Nanocrystalline Ni-Zn ferrites prepared by sol-gel method*, **Journal of Optoelectronics and Advanced Materials** (J. Optoelectron. Adv. M., 5 (2003) 251 – 256);
- [28] I. Hrianca, C. Caizer, Z. Schlett, *Dynamic magnetic behavior of Fe<sub>3</sub>O<sub>4</sub> colloidal nanoparticles*, **Journal of Applied Physics** (J. Appl. Phys., 92 (2002) 2125 – 2132);
- [29] I. Hrianca, C. Caizer, Z. Schlett, *Dynamic magnetic behavior of Fe<sub>3</sub>O<sub>4</sub> colloidal nanoparticles*, **Nanoscale Science & Technology** (Vir. J. Nan. Sci. & Techn., 6 (7) (2002) (Electronic Journal), <http://www.vjnano.org/>);  
Selected Paper (source J. Appl. Phys. 92 (2002) 2125) by the expert editors from American Institute of Physics (AIP) and American Physical Society (APS).
- [30] C. Caizer, *Thermal dependence of the saturation magnetisation of Mn<sub>0.6</sub>Fe<sub>0.4</sub>Fe<sub>2</sub>O<sub>4</sub> nanoparticles in a ferrofluid*, **Solid State Communication** (Solid State Commun., 124 (2002) 52);



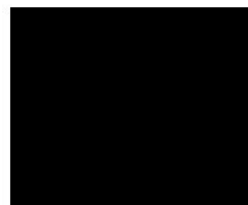
- [31] C. Savii, M. Popovici, C. Enache, J. Subrt, D. Niznansky, S. Bakardzieva, **C. Caizer**, I. Hrianca, *Fe<sub>2</sub>O<sub>3</sub> – SiO<sub>2</sub> composites obtained by sol-gel synthesis*, **Solid State Ionics** (Solid State Ionics, 151 (2002) 219 – 227);
- [32] R. Kohnlechner, Z. Schlett, M. Lungu, **C. Caizer**, *A new wet eddy-current separator*, **Resources Conservation & Recycling** (Resour. Conserv. Recy., 37 (2002) 55 – 60);
- [33] **C. Caizer**, M. Ștefănescu, *Magnetic Characterization of Nanocrystalline Ni-Zn Ferrite Powder Prepared by the Glyoxylate Precursor Method*, **Journal of Physics D: Applied Physics** (J. Phys. D: Appl. Phys., 35 (2002) 3035 – 3040);
- [34] **C. Caizer**, *Magnetic behaviour of Mn<sub>0.6</sub>Fe<sub>0.4</sub>Fe<sub>2</sub>O<sub>4</sub> nanoparticles in ferrofluid at low temperatures*, **Journal of Magnetism and Magnetic Materials** (J. Magn. Magn. Mater., 251 (2002) 304 – 315);
- [35] **C. Caizer**, M. Ștefănescu, C. Muntean, I. Hrianca, *Studies and magnetic properties of Ni-Zn ferrite synthesis from the glyoxylates complex combination*, **Journal of Optoelectronics and Advanced Materials** (J. Optoelectron. Adv. M., 3 (2001) 919 – 924);
- [36] I. Hrianca, **C. Caizer**, *Researches regarding load adaptation of a radiofrequency generator working in pulses*, **Romanian Journal of Physics** (Rom. Journ. Phys., 46 (2001) 139 – 149);
- [37] I. Hrianca, **C. Caizer**, C. Savii, M. Popovici, *Magnetic and structural properties of  $\gamma$ -Fe<sub>2</sub>O<sub>3</sub> nanoparticles dispersed in a silica matrix*, **Journal of Optoelectronics and Advanced Materials** (J. Optoelectron. Adv. M., 2 (2000) 634 – 638);

### (vii) Lista publicațiilor *în extenso* apărute în lucrări ale principalelor conferințe internaționale de specialitate

1. **C. Caizer**, I.S. Caizer, C. Soica, R. Racoviceanu, M. Mihoc, *The (Co-Fe)<sub>f</sub> ferrite biocompatible magnetic nanoparticles for increasing efficacy and reducing toxicity in superparamagnetic hyperthermia for alternative cancer therapy*, **13<sup>th</sup> International Conference on Physics of Advanced Materials (ICPAM-13)**, September 24–30, 2021, Sant Feliu de Guixols, Spain. Contribution: Abstract Book, pp. 47–49.
  - publicată în *Nanomaterials*, 12(15) (2022) 2577 (pp.1-28);
  - publicat după dobândirea atestatului de abilitare;

2. **C. Caizer**, *SPMHT with biocompatible SPIONs for destroy the cancer cells*, **The 8<sup>th</sup> International Conference on Fine Particle Magnetism (ICFPM-2013)**, June 24-27, 2013, Perpignan, FRANCE. Contribution: p. 129.
  - publicată în Journal of Physics: Conference Series (IOP) 521 (2014) 012015 (pp. 1-4);
3. M. Ștefănescu, M. Stoia, **C. Caizer**, T. Dippong, P. Barvinschi, *Preparation of  $Co_xFe_{3-x}O_4$  nanoparticles by thermal decomposition of some organo-metallic precursors*, **14-th International Conference on Thermal Analysis and Calorimetry**, 14 – 18 September, 2008, São Pedro, BRAZIL. Contribution: H07, p. 71.
  - publicată în Journal of Thermal Analysis and Calorimetry 97 (2009) 245-250;
3. **C. Caizer**, M. Ștefănescu, M. Stoia, P. Barvinschi, I. Hrianca, *Advanced nanocomposites of Ni,Zn ferrite – amorphous silica, obtained by means of a new sol-gel method: magnetic behaviour*, **International Conference on Fine Particles Magnetism (ICFPM-07)**, October 9-12, 2007, Rome, ITALY. Contribution: PA36, p. 128.
  - publicată ulterior în Materials Chemistry and Physics 113 (2009) 342-348;
4. M. Stoia, M. Ștefănescu, **C. Caizer**, O. Ștefănescu, *Synthesis of magnetic nanocomposites  $x\%(Ni_{0.75}Zn_{0.25}Fe_2O_4)/(100-x)\%SiO_2$  by a sol-gel method*, **The IX International Symposium “Young People and Multidisciplinary Research” (ISYPMR 2007 ACM-V)**, 15-16 November, Timisoara, 2007.
  - publicată ulterior în Ann. West Univ. Timisoara, Chem. 16(4) (2007) 87-94.
5. M. Stoia, **C. Caizer**, M. Ștefănescu, P. Barvinschi, *Obtaining of  $(Ni_{0.65}Zn_{0.35}Fe_2O_4)_x-(SiO_2)_{100-x}$* , **9<sup>th</sup> European Symposium on Thermal Analysis and Calorimetry (ESTAC 9)**, Crakow, POLAND, 28 – 31 August, 2006.
  - publicată în Journal of Thermal Analysis and Calorimetry 88 (2007) 193-200;
6. M. Ștefănescu, **C. Caizer**, M. Stoia, O. Ștefănescu, *Studies on the synthesis of Ni,Zn ferrite/SiO<sub>2</sub> nanocomposites trough a modified sol-gel method*, **Romanian International Conference on Chemistry and Chemical Engineering (RICCCE XIV)**, 22-24 Sept., 2005, Bucharest. Contribution: O-S02, p. 48.
  - publicată ulterior în Journal of Optoelectronics and Advanced Materials 7 (2005) 607-614;

7. **C. Caizer**, V. Tura, *Magnetic relaxation in Co ferrite nanoparticles covered with amorphous silica and dispersed in water*, **7<sup>th</sup> International Conference on Physics of Advanced Materials (ICPAM-7)**, June 10 - 12, 2004, Iași, Romania. Contribution: Section 3: Magnetic Properties, P-III.9, p. 28.
  - publicata ulterior in *Journal of Magnetism and Magnetic Materials* 301 (2006) 513 – 520;
8. M. Ștefănescu, **C. Caizer**, M. Stoia, O. Ștefănescu, *Ni,Zn/SiO<sub>2</sub> ferrite nanocomposites prepared by an improved sol-gel method and their characterisation*, **7<sup>th</sup> International Conference on Physics of Advanced Materials (ICPAM 7)**, June 10 - 12, 2004, Iași, Romania. Contribution: Section 1: Processing and Characterization, O-I.3, p. 13.
  - publicata in *Journal of Optoelectronics and Advanced Materials* 7 (2005) 607 – 614;
9. **C. Caizer C.**, M. Ștefănescu, M. Stoia, P. Barvinschi, O. Ștefănescu, *Ultrafine magnetic particles embedded in a silica matrix obtained by a new chemical route of synthesis*, **Physics Conference (TIM-04) - with International Participation**, Timișoara, November 26<sup>th</sup> – 27<sup>th</sup>, 2004. Contribution: MMP-03, p. 76.
  - publicata in **Ann. West Univ. Timisoara, Physics** 45 (2004) 135-138.
10. M. Popovici, D. Niznansky, C. Savii, J. Subrt, J. Bohacek, **C. Caizer**, C. Enache, C. Ionescu, *Structural and magnetic studies concerning formation of nanoparticles in silica matrix*, **Third International Conference on Inorganic Materials**, 7-10 Sept. 2002, Konstanz, GERMANY. Contribution: Section B (Nanostructured Matter), P67.
  - publicata ulterior in *Journal of Optoelectronics and Advanced Materials* 5 (2003) 251-256;
11. **C. Caizer**, *M<sub>s</sub> vs T of zero-field-frozen surfacted nanoparticles*, **International Conference on Advanced Materials and Structures (AMS 2002)**, 19-20 Sept. 2002, Timișoara, România. Contribution: Section 2 (Nanoparticles and nanostructures), p. 33.
  - publicata ulterior in *Journal of Physics: Condensed Matter* 15 (2003) 765-776;
12. **C. Caizer**, M. Ștefănescu, *Nanocrystallite size effect on  $\sigma_s$  and  $H_c$  in particle assemblies*, **International Conference on Advanced Materials and Structures (AMS 2002)**, 19-20 Sept. 2002, Timișoara, România. Contribution: Section 2 (Nanoparticles and nanostructures), p. 35.
  - publicata ulterior in *Physica B* 327 (2003) 129-134;



13. M. Popovici, C. Savii, D. Niznansky, J. Subrt, J. Bohacek, **C. Caizer**, C. Enache, C. Ionescu, *Nanocrystalline Ni-Zn ferrites prepared by sol-gel method*, **International Conference on Advanced Materials and Structures (AMS 2002)**, 19-20 Sept. 2002, Timișoara, România. Contribution: Section 2 (Nanoparticles and nanostructures), p. 27.
  - publicata in Journal of Optoelectronics and Advanced Materials 5 (2003) 251-256;
14. C. Savii, M. Popovici, C. Enache, J. Subrt, D. Niznansky, S. Bakardzieva, **C. Caizer**, I. Hrianca, *Fe<sub>2</sub>O<sub>3</sub> – SiO<sub>2</sub> composites obtained by sol-gel synthesis*, **International Symposium on Soft Solution Processing (SSP – 2000)**, December 11 – 13, 2000, Tokyo, JAPAN, Contribution: P-72.
  - publicata ulterior in Solid State Ionics 151 (2002) 219 – 227;
15. **C. Caizer**, I. Hrianca, M. Ștefănescu, C. Muntean, *Obtaining of Nanoparticles of Mixed Ni-Zn Ferrite from Complex Combinations*, **The 4<sup>th</sup> International Symposium Interdisciplinary Zonal Research**, November, 16 – 17, 2000, Timișoara, România. Contribution: F1.
  - publicata in Proceedings CD-ROM (ISBN: 99425-8-X);
16. **C. Caizer**, I. Hrianca, C. Savii, M. Popovici, *Fe<sub>2</sub>O<sub>3</sub> – SiO<sub>2</sub> Magnetic Nanocomposites Synthesized by Sol-Gel Method*, **The 4<sup>th</sup> International Symposium Interdisciplinary Zonal Research**, November 16 – 17, 2000, Timișoara, România. Contribution: F2.
  - publicata in Proceedings CD-ROM (ISBN: 99425-8-X), pp. 1225-1228;
17. **C. Caizer**, *The computerized determining of the adaptation parameters of a RF wave-trains power generator*, **The 4<sup>th</sup> International Symposium Interdisciplinary Zonal Research**, November 16 – 17, 2000, Timișoara, România. Contribution: F3.
  - publicata in Proceedings CD-ROM (ISBN: 99425-8-X);
18. M. Popovici, C. Savii, A. Gluhoi, R. Turicin, C. Enache, M. Turcu, **C. Caizer**, I. Hrianca, *Fe<sub>2</sub>O<sub>3</sub> – SiO<sub>2</sub> composites obtained via sol-gel route*, **The 4<sup>th</sup> International Symposium Interdisciplinary Zonal Research**, November 16 – 17, 2000, Timișoara, România. Contribution: C 1.17.
  - publicata in Proceedings CD-ROM (ISBN: 99425-8-X), pp. 632-639;
19. **C. Caizer**, M. Ștefănescu, C. Muntean, I. Hrianca, *Studies and Magnetic Properties of Ni-Zn Ferrite Synthesis from Glyoxylate Complex Combination*, **Third International Edition of Romanian Conference on Advanced Materials (ROCAM 2000)**, October 23 – 25, 2000, Bucharest, Romania. Contribution, p. 85.



- publicata ulterior in Journal of Optoelectronics and Advanced Materials 3 (2001) 919 – 924; ISI: 0,563;
20. I. Hrianca, C. Caizer, C. Savii, M. Popovici, *Magnetic and Structural Properties of  $\gamma$ -Fe<sub>2</sub>O<sub>3</sub> Nanoparticles Dispersed in a Silica Matrix*, **Third International Edition of Romanian Conference on Advanced Materials (ROCAM 2000)**, October 23 – 25, 2000, Bucharest, Romania. Contribution p. 132.
- publicata in Journal of Optoelectronics and Advanced Materials 2 (2000) 634 – 638; ISI: 0,563;
21. C. Caizer, I. Hrianca, C. Savii, M. Popovici, D. Nicoara, C. Enache, *Effect of Ultrasonic on Magnetic Properties of (Mn-Cu)Fe<sub>2</sub>O<sub>4</sub> Powder*, **Third International Edition of Romanian Conference on Advanced Materials (ROCAM 2000)**, October 23 – 25, 2000, Bucharest, Romania. Contribution p. 236.
- publicata in Analele Universității București, Physica XLIX (2000) 81 – 86;
22. C. Savii, M. Popovici, C. Enache, I. Hrianca, A. Zamfir, R. Turicin, C. Caizer, *Fe<sub>2</sub>O<sub>3</sub> – SiO<sub>2</sub> Composite Obtained by Sol-Gel Process Using Ultrasonic Field Treatment*, **2<sup>nd</sup> International Conference on Chemical Sciences for Sustainable Development**, June 6 – 9, 2000, Halkidiki, GREECE. Contribution: Volume I, p. 276.
- publicata ulterior in Solid State Ionics 151 (2002) 219 – 227;

**(viii) Alte lucrări și contribuții științifice**

▪ ***Articole de cercetare publicate în Analele Univ. și Proceedings (extras)***

- [38] I.S. Caizer, C. Caizer, *Cobalt Doped Fe<sub>3</sub>O<sub>4</sub> Nanoparticles for Magnetic Hyperthermia Application*, **AIP Conference Proc.** (TIM 20-21 Physics Conference), 2022 (BDI, Web of Science), accepted.
- [39] M. Stoia, M. Ștefănescu, C. Caizer, O. Ștefănescu, *Synthesis of magnetic nanocomposites x%(Ni<sub>0.75</sub>Zn<sub>0.25</sub>Fe<sub>2</sub>O<sub>4</sub>)/(100-x)%SiO<sub>2</sub> by a sol-gel method*, **Annals of West University of Timisoara**, Series of Chemistry (Ann. West Univ. Timișoara, Chem., 16(4) (2007) 87-94).

- [40] C. Caizer, M. Ștefănescu, M. Stoia, P. Barvinschi, O. Ștefănescu, *Ultrafine magnetic particles embedded in a silica matrix obtained by a new chemical route of synthesis*, **Annals of West University of Timisoara, Physics** 45 (2004) 135-138.
- [41] C. Caizer, M. Ștefănescu, P. Barvinschi, *Unusual magnetic behaviour of nickel-zinc ferrite nanoparticles in a silica matrix, obtained through the hybrid sol-gel method*, **Annals of University of Petroșani, Physics** (Ann. Univ. Petrosani, Phys.6 (2004) 111 – 118).
- [42] C. Caizer, M. Popovici, C. Savii, *Magnetic behavior at low temperatures of  $\gamma$ -Fe<sub>2</sub>O<sub>3</sub> nanoparticles dispersed in silica matrix*, **Annals of West University of Timisoara, Physics** (Anal. Univ. Timișoara, St. Fizice, 43 (2002) 124 - 132).
- [43] C. Caizer, *PC Fourier analysis in order to establish the parameters of load adaptation to a RF impulse generator*, **Annals of West University of Timisoara, Physics** (Anal. Univ. Timișoara, St. Fizice, 43 (2002) 12 - 19).
- [44] C. Caizer, *Magnetic behavior of  $(Ni_{1-x}Zn_xFe_2O_4)_y/(SiO_2)_{1-y}$* , **Proceedings 2002: Sesiunea Anuală de Comunicări Științifice a Facultății de Fizică**, 29-30 Noiembrie, Timișoara, 2002, pp. 43 - 48.
- [45] C. Caizer, M. Popovici, C. Savii, *Method for obtaining spherical nanoparticles of nickel-zinc ferrite in an silica matrix and their magnetic characterization*, **Proceedings 2002: Sesiunea Anuală de Comunicări Științifice a Facultății de Fizică**, 29-30 Noiembrie, Timișoara, 2002, pp. 36 – 42.
- [46] I. Hrianca, M. Cristea, M. Boldan, A. Zamfir, C. Caizer, *Some aspects of the magnetic behaviour of LiZn ferrite*, **Buletinul Științific al Universității “Politehnica” Timișoara** (Bull. St. Univ. “Politehnica” Timișoara, Tom 47 (61), 2 (2002) 91).
- [47] C. Caizer, I. Hrianca, M. Ștefănescu, D. Bălțăteanu, *Magnetic properties of Ni<sub>0.36</sub>Zn<sub>0.64</sub>Fe<sub>2</sub>O<sub>4</sub> ferrite nanoparticles*, **Annals of West University of Timisoara, Physics** (Anal. Univ. Timișoara, St. Fizice, XLII (2001) 19 – 25).
- [48] M. Ștefănescu, C. Caizer, C. Muntean, M. Stoia, M. Bîrzescu, *Studies on the formation of the spinel phase Ni<sub>(1-x)Zn<sub>x</sub>Fe<sub>2</sub>O<sub>4</sub> and its magnetic properties</sub>*, **Chemical Bulletin of “Politehnica” University of Timișoara** (Chem. Bull. "Politehnica" Univ. Timișoara, 45 (59) (2000) 30 – 36).

- [49] **C. Caizer**, I. Hrianca, C. Savii, M. Popovici, M. Nicoară, C. Enache, *Effect of ultrasonic on magnetic properties of (Mn-Cu)Fe<sub>2</sub>O<sub>4</sub> powder*, **Annals of University of Bucharest, Physics** (Anal. Univ. București, Physica, XLIX (2000) 81 – 86).
- [50] **C. Caizer**, I. Hrianca, M. Ștefănescu, *Influența concentrației ionilor de Zn<sup>2+</sup> asupra proprietăților magnetice ale particulelor ultrafine de (Ni-Zn)Fe<sub>2</sub>O<sub>4</sub>*, **Annals of University of Oradea, Physica – B** (Anal. Univ. Oradea, Fizica B, X (2000) 81 – 92).
- [51] I. Hrianca, **C. Caizer**, C. Savii, M. Popovici, *Proprietăți magnetice ale nanoparticulelor de (Zn<sub>x</sub>Ni<sub>1-x</sub>Fe<sub>2</sub>O<sub>4</sub>)<sub>y</sub> dispersate în matrice amorfă de (SiO<sub>2</sub>)<sub>1-y</sub>*, **Annals of University of Oradea, Physica – B** (Anal. Univ. Oradea, Fizica B, X (2000) 153 – 161).
- [52] M. Ștefănescu, **C. Caizer**, C. Muntean, I. Hrianca, *Studiul prin analiză termică diferențială și difractometrie X al feritei de Ni-Zn obținută din complecși de tip glioxilat*, **Annals of University of Oradea, Physica – B** (Anal. Univ. Oradea, Fizica B, X (2000) 71 – 80).
- [53] M. Popovici, C. Savii, **C. Caizer**, C. Enache, I. Hrianca, *Synthesis and magnetic properties of ultrafine Zn<sub>x</sub>Ni<sub>1-x</sub>Fe<sub>2</sub>O<sub>4</sub> powder dispersed in silica matrix*, **Annals of West University of Timisoara, Series of Chemistry** (Ann. West Univ. Timișoara, Chemistry, 9 (2) (2000) 209 – 218).
- [54] **C. Caizer**, I. Hrianca, C. Savii, M. Popovici, *Fe<sub>2</sub>O<sub>3</sub> – SiO<sub>2</sub> magnetic nanocomposites synthesized by sol-gel method*, **Proceedings: The 4<sup>th</sup> International Symposium Interdisciplinary Zonal Research**, 16-17 Nov., Timișoara, 2000. CD-ROM (ISBN: 99425-8-X), pp. 1225 - 1228.
- [55] M. Popovici, C. Savii, A. Gluhoi, R. Turicin, C. Enache, M. Turcu, **C. Caizer**, I. Hrianca, *Fe<sub>2</sub>O<sub>3</sub> – SiO<sub>2</sub> composites obtained via sol-gel route*. **Proceedings: The 4<sup>th</sup> International Symposium Interdisciplinary Zonal Research**, November 16 – 17, 2000, Timișoara, Romania, Proceeding CD-ROM (ISBN: 99425-8-X), pp. 632-639.
- [56] I. Hrianca, **C. Caizer**, *Instalație pentru studiul feritelor cu ciclul de histerezis dreptunghiular (CHD) în regim de impulsuri cu durată de ordinul nanosecundelor*, **Annals of University of Oradea, Physics** (Anal. Univ. Oradea, Fizică, VII (1997) 83 – 90).
- [57] I. Hrianca, **C. Caizer**, *Wave train radiofrequency power generator using switch bipolar transistors*, **Annals of West University of Timisoara, Physics** (Anal. Univ. Timișoara, St. Fizice, XXXII (1995) 28 – 35).

## *Conferințe științifice*

### ▪ *Lucrări la Conferințe Internaționale (sau cu participare internațională) - extras*

1. **Costica Caizer**, Isabela-Simona Caizer, Roxana Racoviceanu, Claudia-Geanina Watz, Mioc Marius, Cristina-Adriana Dehelean, Tiberiu Bratu, Codruta-Marinela Soica, *The Fe<sub>3</sub>O<sub>4</sub>-PAA-(HP- $\gamma$ -CDs) Biocompatible Ferrimagnetic Nanoparticles for Increasing Efficacy and Reducing Toxicity in Superparamagnetic Hyperthermia: A Promising Approach for Alternative Cancer Therapy*, **3NANO-22 Nano Science/Technology/Biotechnology International Conference**, 20-23 Sept., Roma, 2022.
2. **C. Caizer**, I.S. Caizer, C. Soica, R. Racoviceanu, M. Mihoc, *The (Co-Fe)<sub>f</sub> ferrite biocompatible magnetic nanoparticles for increasing efficacy and reducing toxicity in superparamagnetic hyperthermia for alternative cancer therapy*, **13<sup>th</sup> International Conference on Physics of Advanced Materials (ICPAM-13)**, September 24–30, 2021, Sant Feliu de Guixols, Spain. Abstract Book: pp. 47–49.
3. **C. Caizer**, *3D/2D computational study on magnetic relaxation/stability in linear magnetic field of aligned nanoparticles*, **20<sup>th</sup> International Conference on Magnetism (ICM2015)**, July 5-10, Barcelona, Spain, 2015. Contribution: Topic 4, Magnetism of nanoscale systems (Magnetic nanoparticles), accepted.
4. **C. Caizer**, *3D study on SAR in Co<sub>8</sub>Fe<sub>3- $\delta$</sub> O<sub>4</sub> ferrite nanoparticles*, **4<sup>th</sup> International Conference on Superconductivity and Magnetism (ICSM-2014)**, 27 April – 2 May, Antalya, 2014. Contribution: Magnetism of Nanoparticles, Nanowires and Nanostructures I, p. 940.
5. **C. Caizer**, *SPMHT with biocompatible SPIONs for destroy the cancer cells*, **The 8<sup>th</sup> International Conference on Fine Particle Magnetism (ICFPM-2013)**, June 24-27, 2013, Perpignan, France. Contribution: p. 129.
6. **C. Caizer**, C. Soica, C. Dehelean, A. Radu, I. S. Caizer, *Study on toxicity of the superparamagnetic nanoparticles on the cells in order to use them in cancer therapy*, **The 8<sup>th</sup> International Conference on Fine Particle Magnetism**, June 24-27, 2013, Perpignan, France. Contribution: p. 130.

7. **C. Caizer**, *Superparamagnetic hyperthermia with magnetoliposomes for the cancer therapy*, **12<sup>th</sup> National Conference on Biophysics (CNB 2013) – Biophysics for Health, with International Participation**, June 13-16, Iasi, Romania, 2013. Contribution: Health Physics, P42.
8. **C. Caizer**, *Magnetic anisotropy of  $Co_{\delta}Fe_{3-\delta}O_4$  nanoparticles for applications in magnetic hyperthermia*, **The 19<sup>th</sup> International Conference on Magnetism (ICM 2012)**, July 8–13, 2012, Bexco, Busan. Contribution: PO-Interdisciplinary topics, PO07.
9. **C. Caizer**, N. Hadaruga, D. Hadaruga, G. Tanasie, P. Vlăzan, *The Co ferrite nanoparticles/liposomes: magnetic bionanocomposites for applications in malignant tumors therapy*, **7<sup>th</sup> International Conference on Inorganic Materials**, 12 – 14 September 2010, Biarritz, France. Contribution: Nanomaterials, P2.45.
10. **C. Caizer**, A. Stancu, P. Postolache, I. Dumitru, I. Bodale, P. Vlăzan, *The magnetic properties of the  $Co_{\delta}Fe_{(3-\delta)}O_4$  surfacted nanoparticles, with potential applications in cancer therap*, **7<sup>th</sup> International Conference on Fine Particle Magnetism (ICFPM 2010)**, June 21 – 24, 2010, Uppsala, Sweden. Contribution: PI, p. 91.
11. **C. Caizer**, M. Ștefănescu, M. Stoia, P. Barvinschi, A. Neculae, *The  $Fe^{2+}, Fe^{3+}$  ions and annealing temperature influence on the structure and magnetization of the  $Co_x(Fe^{2+}, Fe^{3+})_{3-x}O_4$  nanoparticles, obtained through the co-precipitation method*, **7<sup>th</sup> International Conference on Fine Particle Magnetism (ICFPM 2010)**, June 21 – 24, 2010, Uppsala, Sweden. Contribution: PI, p. 92.
12. **C. Caizer**, M. Ștefănescu, M. Stoia *The obtaining and the magnetic characterization of the cobalt ferrite nanocrystallites*, **Invited Speaker: IEEE Magnetics Society Chapter (IEEE ROMSC 2009)** -Romanian Section, June 6-9, 2009, Iași, România. Contribution: **Plenary Lecturer**.
13. **C. Caizer**, D.M. Bălțăteanu, *Computational method for precise evaluation of the mean magnetic diameter of the SPM nanoparticles*, **IEEE Magnetics Society Chapter (IEEE ROMSC 2009)**, Romanian Section, June 6 - 9, 2009, Iași, România. Contribution: Section D, Computational Magnetism, P10.
14. **C. Caizer**, P. Vlăzan, P. Barvinschi, *The effect of  $Co^{2+}$  ions concentration on the magnetic behavior of the surfacted/ nonsurfacted  $Co_{\delta}Fe_{(3-\delta)}O_4$  nanoparticles*, **IEEE Magnetics Society**

**Chapter (IEEE ROMSC 2009)**, Romanian Section, June 6 - 9, 2009, Iasi, Romania.  
Contribution: Section A, Magnetic Materials and Advanced Characterization, P11.

15. M. Ștefănescu, M. Stoia, C. Caizer, T. Dippong, P. Barvinschi, *Preparation of  $\text{Co}_x\text{Fe}_{3-x}\text{O}_4$  nanoparticles by thermal decomposition of some organo-metallic precursors*, **14-th International Conference on Thermal Analysis and Calorimetry**, 14 – 18 September, 2008, São Pedro, Brazil. Contribution: H07, p. 71.
16. C. Caizer, M. Ștefănescu, M. Stoia, P. Barvinschi, I. Hrianca, *Advanced nanocomposites of Ni,Zn ferrite – amorphous silica, obtained by means of a new sol-gel method: magnetic behaviour*, **International Conference on Fine Particles Magnetism (ICFPM-07)**, October 9 – 12, 2007, Rome, Italy. Contribution: PA36, p. 128.
17. C. Caizer, D. M. Bălțăteanu, *Method for precisely determining the thickness of the shell of superparamagnetic surfacted nanoparticles*, **International Conference on Fine Particles Magnetism (ICFPM-07)**, October 9 – 12, 2007, Rome, Italy. Contribution: PA35, p. 127.
18. M. Stoia, M. Ștefănescu, C. Caizer, O. Ștefănescu, *Synthesis of magnetic nanocomposites  $x\%(\text{Ni}_{0.75}\text{Zn}_{0.25}\text{Fe}_2\text{O}_4)/(100-x)\%\text{SiO}_2$  by a sol-gel method*, **The IX International Symposium “Young People and Multidisciplinary Research” (ISYPMR 2007 ACM-V)**, 15-16 November, Timisoara, 2007.
19. M. Stoia, C. Caizer, M. Ștefănescu, P. Barvinschi, *Obtaining of  $(\text{Ni}_{0.65}\text{Zn}_{0.35}\text{Fe}_2\text{O}_4)_x-(\text{SiO}_2)_{100-x}$* , **9<sup>th</sup> European Symposium on Thermal Analysis and Calorimetry (ESTAC 9)**, Krakow, Poland, 27 – 31 August, 2006.
20. M. Ștefănescu, C. Caizer, M. Stoia, O. Ștefănescu, *Studies on the synthesis of Ni,Zn ferrite/SiO<sub>2</sub> nanocomposites trough a modified sol-gel method*, **Romanian International Conference on Chemistry and Chemical Engineering (RICCCE XIV)**, 22-24 Sept., 2005, Bucharest. Contribution: O-S02, p. 48.
21. C. Caizer, N. Ștefu, D. Bălțăteanu, M. Ștefănescu, M. Stoia, P. Barvinschi, *Magnetic properties of the  $\text{Ni}_{1-x}\text{Zn}_x\text{Fe}_2\text{O}_4/\text{SiO}_2$  nanocomposites*, **Physics Conference (TIM-05) - with International Participation**, Timișoara, November 26<sup>th</sup> – 26<sup>th</sup>, 2005. Contribution: MMP-04.
22. C. Caizer, D. Bălțăteanu, *Precise method for evaluating the mean magnetic diameter of the superparamagnetic nenoparticles*, **Physics Conference (TIM-05) - with International Participation**, Timișoara, November 25<sup>th</sup> – 26<sup>th</sup>, 2005. Contribution: MMP-03.

23. C. Caizer, V. Tura, *Magnetic relaxation in Co ferrite nanoparticles covered with amorphous silica and dispersed in water*, **7<sup>th</sup> International Conference on Physics of Advanced Materials (ICPAM-7)**, June 10 - 12, 2004, Iași, Romania. Contribution: Section 3: Magnetic Properties, P-III.9, p. 28.
24. M. Ștefănescu, C. Caizer, M. Stoia, O. Ștefănescu, *Ni,Zn/SiO<sub>2</sub> ferrite nanocomposites prepared by an improved sol-gel method and their characterisation*, **7<sup>th</sup> International Conference on Physics of Advanced Materials (ICPAM 7)**, June 10 - 12, 2004, Iași, Romania. Contribution: Section 1: Processing and Characterization, O-I.3, p. 13.
25. C. Caizer C., M. Ștefănescu, M. Stoia, P. Barvinschi, O. Ștefănescu, *Ultrafine magnetic particles embedded in a silica matrix obtained by a new chemical route of synthesis*, **Physics Conference (TIM-04) - with International Participation**, Timișoara, November 26<sup>th</sup> – 27<sup>th</sup>, 2004. Contribution: MMP-03, p. 76.
26. G. Istratucă, C. Caizer, *Spinelic Co substituted magnetite. Synthesis and properties*, **11<sup>th</sup> Physical Chemistry (ROMPHYSCHEM 11) - with International Participation**, 2-5 Sept. 2003, Timișoara, Romania. Contribution: Section 8 (Physical chemistry of materials and chemical engineering), S8-P189.
27. M. Popovici, D. Niznansky, C. Savii, J. Subrt, J. Bohacek, C. Caizer, C. Enache, C. Ionescu, *Structural and magnetic studies concerning formation of nanoparticles in silica matrix*, **Third International Conference on Inorganic Materials**, 7-10 Sept. 2002, Konstanz, Germany. Contribution: Section B (Nanostructured Matter), P67.
28. C. Caizer, *M<sub>s</sub> vs T of zero-field-frozen surfacted nanoparticles*, **International Conference on Advanced Materials and Structures (AMS 2002)**, 19-20 Sept. 2002, Timișoara, România. Contribution: Section 2 (Nanoparticles and nanostructures), p. 33.
29. C. Caizer, M. Ștefănescu, *Nanocrystallite size effect on  $\sigma_s$  and H<sub>c</sub> in particle assemblies*, **International Conference on Advanced Materials and Structures (AMS 2002)**, 19-20 Sept. 2002, Timișoara, România. Contribution: Section 2 (Nanoparticles and nanostructures), p. 35.
30. M. Popovici, C. Savii, D. Niznansky, J. Subrt, J. Bohacek, C. Caizer, C. Enache, C. Ionescu, *Nanocrystalline Ni-Zn ferrites prepared by sol-gel method*, **International Conference on Advanced Materials and Structures (AMS 2002)**, 19-20 Sept. 2002, Timișoara, România. Contribution: Section 2 (Nanoparticles and nanostructures), p. 27.

31. C. Savii, M. Popovici, C. Enache, J. Subrt, D. Niznansky, S. Bakardzieva, **C. Caizer**, I. Hrianca, *Fe<sub>2</sub>O<sub>3</sub> – SiO<sub>2</sub> composites obtained by sol-gel synthesis*, **International Symposium on Soft Solution Processing (SSP – 2000)**, December 11 – 13, 2000, Tokyo, Japan, Contribution: P-72.
32. **C. Caizer**, I. Hrianca, M. Ștefănescu, C. Muntean, *Obtaining of Nanoparticles of Mixed Ni-Zn Ferrite from Complex Combinations*, **The 4<sup>th</sup> International Symposium Interdisciplinary Zonal Research**, November, 16 – 17, 2000, Timișoara, România. Contribution: F1.
33. **C. Caizer**, I. Hrianca, C. Savii, M. Popovici, *Fe<sub>2</sub>O<sub>3</sub> – SiO<sub>2</sub> Magnetic Nanocomposites Synthesized by Sol-Gel Method*, **The 4<sup>th</sup> International Symposium Interdisciplinary Zonal Research**, November 16 – 17, 2000, Timișoara, România. Contribution: F2.
34. **C. Caizer**, *The computerized determining of the adaptation parameters of a RF wave-trains power generator*, **The 4<sup>th</sup> International Symposium Interdisciplinary Zonal Research**, November 16 – 17, 2000, Timișoara, România. Contribution: F3.
35. M. Popovici, C. Savii, A. Gluhoi, R. Turicin, C. Enache, M. Turcu, **C. Caizer**, I. Hrianca, *Fe<sub>2</sub>O<sub>3</sub> – SiO<sub>2</sub> composites obtained via sol-gel route*, **The 4<sup>th</sup> International Symposium Interdisciplinary Zonal Research**, November 16 – 17, 2000, Timișoara, România. Contribution: C 1.17.
36. **C. Caizer**, M. Ștefănescu, C. Muntean, I. Hrianca, *Studies and Magnetic Properties of Ni-Zn Ferrite Synthesis from Glyoxylate Complex Combination*, **Third International Edition of Romanian Conference on Advanced Materials (ROCAM 2000)**, October 23 – 25, 2000, Bucharest, Romania. Contribution, p. 85.
37. I. Hrianca, **C. Caizer**, C. Savii, M. Popovici, *Magnetic and Structural Properties of  $\gamma$  - Fe<sub>2</sub>O<sub>3</sub> Nanoparticles Dispersed in a Silica Matrix*, **Third International Edition of Romanian Conference on Advanced Materials (ROCAM 2000)**, Third International Edition, October 23 – 25, 2000, Bucharest, Romania. Contribution p. 132.
38. **C. Caizer**, I. Hrianca, C. Savii, M. Popovici, D. Nicoara, C. Enache, *Effect of Ultrasonic on Magnetic Properties of (Mn-Cu)Fe<sub>2</sub>O<sub>4</sub> Powder*, **Third International Edition of Romanian Conference on Advanced Materials (ROCAM 2000)**, Third International Edition, October 23 – 25, 2000, Bucharest, Romania. Contribution p. 236.





39. C. Savii, M. Popovici, C. Enache, I. Hrianca, A. Zamfir, R. Turicin, **C. Caizer**, *Fe<sub>2</sub>O<sub>3</sub> – SiO<sub>2</sub> Composite Obtained by Sol-Gel Process Using Ultrasonic Field Treatment*, **2<sup>nd</sup> International Conference on Chemical Sciences for Sustainable Development**, June 6 – 9, 2000, Halkidiki, Greece. Contribution: Volume I, p. 276.

▪ **Lucrări la Conferințe Naționale (extras)**

40. R. Racoviceanu, M. Mioc, C. Soica, **C. Caizer** and I.S. Caizer, *Cobalt doped Fe<sub>3</sub>O<sub>4</sub> nanoparticles – synthesis, characterization and magnetic hyperthermia application*, **TIM 20-21 Physics Conference**, November 11th–13th, 2021, Timisoara, Romania. Abstract Book: API-O12

41. **C. Caizer**, *Study on optimisation of superparamagnetic hyperthermia in biocompatible nanoparticles*, **Invited Speaker: 3<sup>rd</sup> Romanian Conference on Medical Physics**, 22-23 Sept., Sibiu, Romania, 2012. Contribution: I4, **Plenary Lecturer**.

42. **C. Caizer**, C. Dehelean, C. Soica, P. Vlazan, *Specific loss power and toxicity in biocompatible SPIONs for cancer therapy using superparamagnetic hyperthermia*, **Physics Conference (TIM-12)**, 27-30 Nov., Timisoara, Romania, 2012.

43. **C. Caizer**, M. Ștefănescu, M. Stoia, P. Barvinschi, I. Hrianca, *The temperature and ferrite/silica ratio effect on the magnetic behavior of  $\gamma(\text{Zn}_{0.35}\text{Ni}_{0.65}\text{Fe}_2\text{O}_4)-(1-\gamma)\text{SiO}_2$  nanocomposites*, **The 5<sup>th</sup> National Conference “New Research Trends in Materials Science” (ARM-5)**, 5-7 Sept., Sibiu, România, 2007. Contribution: 5-133.

44. **C. Caizer**, I. Hrianca, V. Ciupina, G. Prodan, *The structural and magnetic characterization of 5-6 nm soft nanoparticles, surfacted and dispersed in liquid matrix*, **The 5<sup>th</sup> National Conference “New Research Trends in Materials Science” (ARM-5)**, 5-7 Sept., Sibiu, România, 2007. Contribution: 5-132.

45. **C. Caizer**, *Magnetic behavior of  $(\text{Ni}_{1-x}\text{Zn}_x\text{Fe}_2\text{O}_4)_y(\text{SiO}_2)_{1-y}$* , **Sesiunea Anuala de Comunicari Stiintifice a Facultatii de Fizica**, 29-30 Sept. 2002. Contributie: MMM-27.

46. **C. Caizer**, M. Popovici, C. Savii, *Method for obtaining spherical nanoparticles of nickel-zinc ferrite in an silica matrix and their magnetic characterization*, **Sesiunea Anuala de**

**Comunicari Stiintifice a Facultății de Fizică - cu participare internațională, 29-30 Sept., Timișoara, 2002. Contributie: O.21.**

47. **C. Caizer**, I. Hrianca, M. Popovici, C. Savii, *Magnetic behavior at low temperatures of  $\gamma$ - $Fe_2O_3$  nanoparticles dispersed in silica matrix*, **Sesiunea Anuală de Comunicări Științifice a Facultății de Fizică**, 23-24 Nov., Timișoara, 2001. Contribution: O.18.
48. **C. Caizer**, *PC Fourier analysis in order to establish the parameters of load adaptation to a RF impulse generator*, **Sesiunea Anuală de Comunicări Științifice a Facultății de Fizică**, 23-24 Nov., Timișoara, 2001. Contribution: MMM-19.
49. I. Hrianca, **C. Caizer**, *Asupra stratului nemagnetic de la suprafața nanoparticulelor de ferită*, **Lucrare Invitată: Sesiunea Anuală de Comunicări Științifice a Facultății de Fizică - cu participare internațională, 29-30 Sept. Timișoara, 2002. Contributie: I.11.**
50. I. Hrianca, I. Mălăescu, **C. Caizer**, *Procese de relaxare magnetică în sisteme de particule nanometrice cu ordonare ferimagnetică*, **Lucrare Invitată: Sesiunea Anuală de Comunicări Științifice a Facultății de Fizică**, 23-24 Nov., 2001, Timișoara. Contribuție: I.07.
51. **C. Caizer**, *Zero field cooled magnetization of  $Fe_3O_4$  monodispersed nanoparticles*, **Sesiunea Anuală de Comunicări Științifice a Facultății de Fizică**, 23-24 Nov., Timișoara, 2001. Contribution: MMM-20.
52. **C. Caizer**, I. Hrianca, M. Popovici, C. Savii, *Magnetic Characterisation of Nanoparticles Prepared by Sol-Gel Method Using TEOS and  $FeCl_3$* , **National Physics Conference**, September 21 – 23, 2000, Constanța. Contribution: Condensed Matter Physics, p. 48.
53. **C. Caizer**, I. Hrianca, M. Ștefănescu, C. Muntean, *A New Method for Obtaining Fine and Ultrafine Particles (Ni-Zn) Ferrite*, **National Physics Conference**, September 21 – 23, 2000, Constanța. Contribution: Condensed Matter Physics, p. 49.
54. **C. Caizer**, I. Hrianca, M. Ștefănescu, *Influența concentrației ionilor de  $Zn^{2+}$  asupra proprietăților magnetice ale particulelor ultrafine de  $(Ni-Zn)Fe_2O_4$* , **Sesiunea Anuală de Comunicări Științifice**, 25 – 26 mai, Oradea, 2000. Contribuție: Secțiunea 2, Fizica materiei condensate.
55. I. Hrianca, **C. Caizer**, C. Savii, M. Popovici, *Proprietăți magnetice ale nanoparticulelor de  $(Zn_xNi_{1-x}Fe_2O_4)_y$  dispersate în matrice amorfă de  $(SiO_2)_{1-y}$* , **Sesiunea Anuală de Comunicări Științifice**, 25 - 26 mai, Oradea, 2000. Contribuție: Secțiunea 2, Fizica materiei condensate.

56. M. Ștefănescu, C. Caizer, C. Muntean, I. Hrianca, *Studiul prin analiză termică diferențială și difractometrie X al feritei de Ni-Zn obținută din complecși de tip glioxilat*, **Sesiunea Anuală de Comunicări Științifice**, 25 – 26 mai, Oradea, 2000. Contribuție: Secțiunea 2, Fizica materiei condensate.
57. I. Hrianca, C. Caizer, M. Ștefănescu, C. Muntean, *The Effect of Successive Thermal Treatment on Magnetic and Structural Properties of Mixed Ferrite Powder  $Zn_x^{2+} Fe_{1-x}^{3+} [Ni_{1-x}^{2+} Fe_{1+x}^{2+}] O_4^{2-}$* , **The 3<sup>rd</sup> Conference on Condensed Matter Physics (FMC '99)**, September, 17-19<sup>th</sup>, Timișoara, 1999. Contribution: P1-67.
58. I. Hrianca, I. Mălăescu, C. Caizer, N. Ștefu, S. Novaconi, *Magnetic Properties of Magnetic Particles Processed in Inductive Plasma*, **The 3<sup>rd</sup> Conference on Condensed Matter Physics, (FMC '99)**, September, 17-19<sup>th</sup>, Timișoara, 1999. Contribution: P1-49.
59. I. Hrianca, C. Caizer, *Cercetări privind adaptarea la sarcină a unui generator de RF funcționând în regim de impulsuri*, **Al doilea Simpozion de Fizica Materiei Condensate**, 23 mai, 1997, Timișoara.
60. I. Hrianca, C. Caizer, *Instalație pentru studiul feritelor cu ciclul de histerezis dreptunghiular (CHD) în regim de impulsuri cu durată de ordinul nanosecundelor*, **Sesiunea Anuală de Comunicări Științifice, Univ. din Oradea**, 29 mai - 30 iunie, 1997, Oradea. Contribution: Secțiunea Fizică.
61. I. Hrianca, C. Caizer, *Studiul transferului de putere de la un generator de RF în regim de impulsuri*, **Sesiunea Anuală de Comunicări Științifice, Univ. din Oradea**, 30 mai - 1 iunie, 1996, Oradea. Contribution: Secțiunea Fizică.
62. I. Hrianca, C. Caizer, *Generator în trenuri de undă cu tranzistoare bipolare de comutație*, **Simpozionul "Fizica Materiei Condensate: Materiale Optic-Nelineare"**, 25-26 mai, Timișoara, 1995.

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