

UNIVERSITATEA DIN CRAIOVA
FACULTATEA DE ȘTIINȚE
DEPARTAMENTUL DE CHIMIE

Postul scos la concurs Conferențiar, Poz. 13

Disciplinele postului: Electrochimia mediului; Biocataliză; Chimia mediului

Domeniul științific: Chimie

LISTA DE LUCRĂRI

Lect.dr. Nicoleta Cioateră

#M1

a) Lista celor maximum 10 lucrări relevante pentru realizările profesionale proprii

1. S. Somacescu, **N. Cioatera**, P. Osiceanu, J.M. Calderon-Moreno, C. Ghica, F. Neatu, M. Florea, Bimodal mesoporous NiO/CeO₂-delta-YSZ with enhanced carbon tolerance in catalytic partial oxidation of methane-Potential IT-SOFCs anode, Appl. Catal. B – Environ. 241 (2019) 393-406.
2. V. Chivu, D. Gilea, **N. Cioatera**, G. Carja, M. Mureseanu, Heterostructures of Ce-Ti/layered double hydroxides and the derived MMOs for photoenergy applications, Appl. Surf. Sci. 513 (2020) Art No 145853.
3. **N. Cioatera**, C.A. Rosculete, E.A. Voinea, E. Rosculete, C.I. Spinu, The influence of Al dopant on the structure, densification behavior and electrical conductivity of heavily doped Sm₂Ti₂O₇, J. Alloys Compd. 764 (2018) 476-481.
4. **N. Cioatera**, E.A. Voinea, I. Kehal, A. Rolle, C.I. Spinu, R.N. Vannier, Effect of calcium doping on La-4(Ti₂O₈)O-2 structure and conductivity, J. Alloys Compd. 670 (2016) 150-155.
5. M. Matei, E.A. Voinea, R. Rica, H. Manolea, L. Mogoanta, A. Salan, A. Rica, V.C. Dinescu, **N. Cioatera**, New zirconia-based materials for dental applications. Structural, morphological and histological evaluation, Ceram. Int. 45 (2019) 14859-14866.
6. **N. Cioatera**, E.A. Voinea, E. Panaintescu, A. Rolle, S. Somacescu, C.I. Spinu, R.N. Vannier, Changes in structure and electrical conductivity of rare-earth titanate pyrochlores under highly reducing atmosphere, Ceram. Int. 42 (2016) 1492-1500.
7. **N. Cioatera**, V. Parvulescu, A. Rolle, R.N. Vannier, Enhanced ionic conductivity of Sm, Gd-doped ceria induced by modification of powder synthesis procedure, Ceram. Int. 38 (2012) 5461-5468.
8. **N. Cioatera**, E.A. Voinea, P. Osiceanu, F. Papa, A. Duta, I. Resceanu, C.I. Spinu, Vanadium-substituted Sm₂Ti₂O₇ pyrochlores. Insight into the structure and electrical conductivity under oxidizing and highly reducing atmosphere, Solid State Ionics, 339 (2019) UNSP 114995.
9. **N. Cioatera**, V. Parvulescu, A. Rolle, R.N. Vannier, Effect of strontium addition on europium-doped ceria properties, Solid State Ionics 180 (2009) 681-687.
10. **N. Cioatera**, E.A. Voinea, A. Dobritescu, A. Simionescu, C.I. Resceanu, C.I. Spinu, Changes in structure and electrical conductivity of some rare-earth-doped ceria induced by strontium addition, Ionics, 25 (2019) 2735-2743.

#B

b) Teza de doctorat

- Doctorand in Chimie – perioada:2005-2009
- Institutul de Chimie Fizică Ilie Murgulescu; Academia Română
- **Coordonator științific:** CSI Dr.Viorica Pârvulescu
- **Titlul tezei de doctorat:** Proprietăți electrochimice și catalitice ale oxizilor solizi nanostructurați cu aplicabilitate în celulele de combustie
- Susținută la: Institutul de Chimie Fizică Ilie Murgulescu, iulie 2009
- **Confirmare: OMEdC nr 6026/ 27.11.2009**

c) Brevete de invenție

d) Cărți și capitole în cărți

1. Materiale si tehnologii avansate pentru energie. Pile de combustie ceramice, N. Cioatera, Editura Universitaria, Craiova, 2013
2. "Cinetică chimică – lucrări practice și probleme", Coordonator - M. Preda, Autori: N. Cioateră, A. Dobrițescu, Editura Universitaria, Craiova, 2007
3. "Chimie tehnică", Ș.I.Blejoiu, N. Cioateră, Editura Universitaria, Craiova, 2002
4. "Cataliză și Tehnologie chimică", Ș.I. Blejoiu, I. Trandafir, N. Cioateră, Ed. Universitaria, Craiova, 2002

e) Articole/studii in extenso, publicate în reviste din fluxul științific internațional principal

1. V. Chivu, D, Gilea, **N. Cioatera**, G. Carja, M. Muresanu, Heterostructures of Ce-Ti/layered double hydroxides and the derived MMOs for photoenergy applications, Appl. Surf. Sci. 513 (2020) Art No 145853.
2. A.Eliescu, A.A. Georgescu, C.M. Nicolescu, M. Bumbac, **N. Cioatera**, M. Muresanu, L.C. Buruleanu, Biosorption of Pb(II) from Aqueous Solution Using Mushroom (Pleurotus ostreatus) Biomass and Spent Mushroom Substrate, Analytical Lett. DOI: 10.1080/00032719.2020.1740722
3. **N. Cioatera**, E.A. Voinea, P. Osiceanu, F. Papa, A. Duta, I. Resceanu, C.I. Spinu, Vanadium-substituted Sm₂Ti₂O₇ pyrochlore. Insight into the structure and electrical conductivity under oxidizing and highly reducing atmosphere, Solid State Ionics, 339 (2019) UNSP 114995.
4. M. Matei, E.A. Voinea, R. Rica, H. Manolea, L. Mogoanta, A. Salan, A. Rica, V.C. Dinescu, **N. Cioatera**, New zirconia-based materials for dental applications. Structural,

- morphological and histological evaluation, *Ceram. Int.* 45 (2019) 14859-14866.
5. R. Grecu, A. Samide, G.E. Iacobescu, N. Cioatera, A. Popescu, Copper corrosion inhibitors based on polyvinyl alcohol and silver nanoparticles, *Chem Ind & Chem Eng Quart.* 25 (2019) 267-275.
 6. N. Cioatera, E.A. Voinea, A. Dobritescu, A. Simionescu, C.I. Resceanu, C.I. Spinu, Changes in structure and electrical conductivity of some rare-earth-doped ceria induced by strontium addition, *Ionics*, 25 (2019) 2735-2743.
 7. M. Leulescu, I. Palarie, A. Moanta, N. Cioatera, M. Popescu, E. Morintale et al, Brown HT Physical, thermal and biophysical properties of the food azo dye, *J Thermal Anal Calorim* 136 (2019) 1249-1268.
 8. A.Samide, G. Bratulescu, C. Merisanu, N. Cioatera, Anticorrosive coating based on poly(vinyl acetate) formed by electropolymerization on the copper surface, *J. Appl. Polymer Sci.* 136 (2019) 47320.
 9. A.A. Georgescu, A. Eliescu, C.M. Nicolescu, M. Bumbac, N. Cioatera, M. Mureseanu, L.C. Buruleanu, Performance of *Pleurotus ostreatus* Mushrooms and Spent Substrate for the Biosorption of Cd(II) From Aqueous Solution, *Anal. Lett.* 52 (2019) 2007-2027.
 10. A.Samide, R. Stoean, C. Stoean, B. Tutunaru, R. Grecu, N. Cioatera, Investigation of Polymer Coatings Formed by Polyvinyl Alcohol and Silver Nanoparticles on Copper Surface in Acid Medium by Means of Deep Convolutional Neural Networks, *Coatings* 9 (2019) 105.
 11. S. Somacescu, N. Cioatera, P. Osiceanu, J.M. Calderon-Moreno, C. Ghica, F. Neatu, M. Florea, Bimodal mesoporous NiO/CeO₂-delta-YSZ with enhanced carbon tolerance in catalytic partial oxidation of methane-Potential IT-SOFCs anode, *Appl. Catal. B – Environ.* 241 (2019) 393-406.
 12. H. Manolea, I.M. Matei, C.M.L. Nistor, A.C. Lazar, A.I. Salan, O. Gingu, N. Cioatera, M.M. Iacov-Craitoiu, B.M. Galbinasu, A microscopic insight of the morphological changes induced by dental zirconia prosthetic structures, *Rom. J. Morphol. Embryol.* 60 (2019) 875-881.
 13. N. Cioatera, C.A. Rosculete, E.A. Voinea, E. Rosculete, C.I. Spinu, The influence of Al dopant on the structure, densification behavior and electrical conductivity of heavily doped Sm₂Ti₂O₇, *J. Alloys Compd.* 764 (2018) 476-481.
 14. M. Leulescu, A. Rotaru, I. Palarie, A. Moanta, N. Cioatera, M. Popescu, E. Morintale et al, Tartrazine: physical, thermal and biophysical properties of the most widely employed synthetic yellow food-colouring azo dye, *J. Thermal Anal. Calorim.* 134 (2018) 209-231.
 15. A.Reiss, N. Cioatera, M.C. Chifiriuc, G. Munteanu et al, New biologically active mixed-ligand Co(II) and Ni(II) complexes of enrofloxacin, *J Thermal Anal. Calorim* 134 (2018) 527-541.
 16. A.Reiss, M.C. Chifiriuc, E. Amzoiu, N. Cioatera, I. Dabulean, P. Roraru, New metal(II) complexes with ceftazidime Schiff base, *J Thermal Anal. Calorim* 131 (2018) 2073-2085.
 17. H. Manolea, M. Opri, N. Cioatera, A. Voinea et al, Characterization of the Specificity in Three Commercial Dental Ceramic Powders, *Rev. Chim.* 68 (2017) 707-710.
 18. N. Cioatera, E.A. Voinea, I. Kehal, A. Rolle, C.I Spinu, R.N. Vannier, Effect of calcium doping on La₄(Ti₂O₈)O₂ structure and conductivity, *Journal of Alloys and Compounds* 670 (2016) 150-155.
 19. A. Samide, B. Tutunaru, N. Cioatera et al, Catalytic activity of thallium on electrochemical degradation of metronidazole from aqueous solutions, *Chemical Engineering Communications* 203 (2016) 1572-1581.

20. N. Cioatera, E.A. Voinea, E. Panaintescu, A. Rolle, S. Somacescu, C.I. Spinu, R.N. Vannier, Changes in structure and electrical conductivity of rare-earth titanate pyrochlores under highly reducing atmosphere, *Ceram. Int.* 42 (2016) 1492-1500.
21. M. Mureseanu, D.E. Popa, M. Buleandra, I. Trandafir, N. Cioatera, D. Sendrescu, I. Tanase, Copper Electrochemical Detection with Hybrid Mesoporous Silica-Gly-Gly-His Modified Electrodes, *Int. J. Electrochem Sci* 9 (2014) 5035.
22. N. Cioateră, V. Pârvulescu, A. Rolle, R.N. Vannier, Enhanced ionic conductivity of Sm, Gd-doped ceria induced by modification of powder synthesis procedure, *Ceramics International* 38 (2012) 5461-5468
23. F. Ciolan, L. Patron, G. Marinescu, N. Cioatera, M. Mureseanu, Synthesis and Characterization of Zn(II) Binuclear Complexes with three Schiff bases derived from some Amino Acids and 2,2'-(propane-1,3-diyldioxy)dibenzaldehyde, *Revista de Chimie* 62 (2011) 1145-1149.
24. M. Mureșeanu, N. Cioateră, I. Trandafir, I. Georgescu, F. Fajula, A. Galarneau, Selective Cu²⁺ adsorption and recovery from contaminated water using mesoporous hybrid silica bio-adsorbents, *Microporous and Mesoporous Materials* 146 (2011) 141–150.
25. N. Cioatera, A. Samide, A. Maxut, R.-N. Vannier, T. Traisnel, Electrodeposition of Ni-ceria nanocomposite coatings and their corrosion behaviour, *Revue Roumaine de Chimie* 56 (2011) 1003-1009.
26. M. Mureseanu, A. Reiss, N. Cioatera, I. Trandafir, V. Hulea, Mesoporous silica functionalized with 1-furoyl thiourea urea for Hg(II) adsorption from aqueous media, *Journal of Hazardous Materials*, vol. 182, issue 1-3, pp. 197-203, 2010.
27. A. Samide, A. Maxut, N. Cioatera, M. Preda, Study on the Corrosion Resistance of Sn/Zr_{0.74}Y_{0.16}Ti_{0.10}O_{2-δ} Composite Coatings Electrodeposited on Carbon Steel in Acidic Medium, *Revista de Chimie*, vol. 61, issue 5, pp. 439-442, 2010.
28. N. Cioatera, V. Parvulescu, B.L. Su, Effect of nonionic surfactants on structure, texture, and morphology of titania-doped YSZ, *Materials Chemistry and Physics*, vol. 120, issue 2-3, pp. 697-701, 2010.
29. A. Kriza, L.V. Ababei, N. Cioatera, I. Rau, N. Stanica, Synthesis and structural studies of complexes of Cu, Co, Ni and Zn with isonicotinic acid hydrazide and isonicotinic acid (1-naphthylmethylene)hydrazide, *Journal of the Serbian Chemical Society*, vol. 75, issue 2, pp. 229-242, 2010.
30. M. Mureseanu, V. Parvulescu, R. Ene, N. Cioatera, T.D. Pasatoiu, M. Andruh, Cu(II) complexes immobilized on functionalized mesoporous silica as catalysts for biomimetic oxidations, *Journal of Materials Science*, vol. 44, issue 24, pp. 6795-6804, 2009.
31. N. Cioatera, V. Parvulescu, A. Rolle, R.-N. Vannier, Effect of strontium addition on europium-doped ceria properties, *Solid State Ionics*, vol. 180, issue 9-10, pp. 681-687, 2009.
32. A. Samide, I. Bibicu, B. Oprea, N. Cioatera, A. Ciuciu, The characterization of surfaces of electro polished 316L stainless steel for orthopedic implant applications, *Journal of Optoelectronics and Advanced Materials*, vol. 10, issue 6, pp. 1431-1436, 2008.
33. P. Chirita, N. Cioatera, A. Dobritescu, D. Stumbea, I. Berdan, Study of FeS in aqueous medium, *Revista de Chimie*, vol. 58, issue 3, pp. 288-292, 2007.
34. A. Samide, M. Preda, N. Cioatera, The study of carbon-steel corrosion in diluted ammoniacal media, *Revista de Chimie*, vol. 54, issue 5, pp. 414-417, 2003.

f) Publicații in extenso, apărute în lucrări ale principalelor conferințe internaționale de specialitate

1. Structural Challenges of Zirconia-Based Biomaterials

Nicoleta Cioateră, Maria Bădin, Mădălina Matei, Alex Salan, Horia Manolea, Laurențiu Mogoantă, Cezar-Ionuț Spînu

International Seminar on Biomaterials and Regenerative Medicine, Craiova, 26-28 sept. 2019

2. Composite anode materials for SOFC applications

N. Cioatera, E.A. Voinea, Cl. Spinu

5th International Conference on Materials Science & Smart Materials "MSSM 2018"
August 7-10, 2018, Glasgow

3. WO₃-based semiconductor materials for gas-sensing applications

N. Cioatera, E.A. Voinea, M. Osiac

5th International Conference on Materials Science & Smart Materials "MSSM 2018"
August 7-10, 2018, Glasgow

4. Effect of Al doping on structure, thermal behavior and electrical conductivity of Sm₂Ti₂O₇ pyrochlore

E.A. Voinea, N. Cioatera, Cl. Spinu

21st International Conference on Solid State Ionics (SSI-21), Padova, Italia, 18-23 iunie 2017

5. Investigation of stability and electrical properties of Ni-doped La₄(Ti₂O₈)O₂ cermet anode

N. Cioatera, E.A. Voinea, S. Somacescu, C.I. Spinu

21st International Conference on Solid State Ionics (SSI-21), Padova, Italia, 18-23 iunie 2017

6. Wet-chemical syntheses of nanocrystalline nickel tungstate

N. Cioatera, S. Somacescu, C.I. Spinu, P. Osiceanu, J.M. Calderon-Moreno

Advanced Nanomaterials ANM 2017, Aveiro, Portugalia, 19-21 iulie 2017

7. Morphological and thermophysical behaviour of hydroxyapatite and titanium powders mixture during the mechanical alloying processing

Bucse Ionela, Cioatera Nicoleta, Voinea Elena-Adriana, Rotaru Petre, Sima Gabriela, Gingu Oana

ADEM 2016, Drobeta Tr. Severin, nov. 2016

8. Effects of the wear process on the in-vitro biocompatibility of some nanostructured hydroxyapatite-based composites

Neamtu Jonny, Gingu Oana, Ghermec Olimpia, Sima Gabriela, Bucse Ionela, Teisanu Cristina, Cioatera Nicoleta, Voinea Elena-Adriana

ADEM 2016, Drobeta Tr. Severin, nov. 2016

9. Assesment of doping possibilities in titanate pyrochlores

N. Cioatera, E.A. Voinea, C.I. Spinu

ADEM 2016, Drobeta Tr. Severin, nov. 2016

10. Solid oxides with fluorite and apatite structures for SOFC electrolyte

N. Cioatera, E.A. Voinea, C.I. Spinu

ROMPHYSICHEM 16, Galați, septembrie 2016

11. Characterization of three commercial dental ceramic powders

N. Cioatera, E.A. Voinea,

BIOMMEDD'2016, Constanta, septembrie 2016

12. The effect of dopant type and concentration on structure, morphology and thermal behavior of polycrystalline zirconia

N. Cioatera, E.A. Voinea, C.I. Spinu

BIOMMEDD'2016, Constanta, septembrie 2016

13. Influence of cerium dopant on pyrochlore structure evolution under highly reducing atmosphere

N. Cioatera, E.A. Voinea, C.I. Radu, C.I. Spinu

CAS 2015 Proceedings, 89-91

14. Synthesis and characterization of $\text{La}_{10}\text{Si}_6\text{O}_{27}$

E.A. Voinea, N. Cioatera, A. Barbu, A. Simionescu, C.I. Spinu

CAS 2015 Proceedings, 75-78.

15. Electrochemical and structural investigations of pyrochlore-type solid oxides. Optimization of composition,

N. Cioatera, E.A. Voinea, C.I. Spinu

Electroceramics 14, Bucuresti, iunie 2014

16. $\text{M}_2\text{Ti}_2\text{O}_7$ (M=Y, Gd, Sm) pyrochlores. Structural and electrochemical investigations

N. Cioatera, L. Stanciu, A. Rolle, E. Capoen, C.I. Spinu, R.N. Vannier

The 19th International Conference on Solid State Ionics, 2-7 iunie 2013, Kyoto, Japonia

17. Structural investigations of $\text{La}_4\text{Ti}_2\text{O}_{10}$ -based oxy-cuspidines

N. Cioatera, E.A. Voinea, A. Rolle, C.I. Spinu, R.N. Vannier

The 19th International Conference on Solid State Ionics, 2-7 iunie 2013, Kyoto, Japonia

18. Phases dérivées de $\text{La}_4\text{Ti}_2\text{O}_{10}$: des matériaux d'anode potentiels

I.Keהל, E.A. Voinea, N. Cioatera, A. Rolle, C.I. Spinu, R.N. Vannier

GDR-PACS, 13-16 mai 2013, Montpellier, Franta

19. Cuspidine-type Solid Oxides for Fuel Cell applications
N. Cioateră
 International Semiconductor Conference (CAS), 15-17 oct. 2012, Sinaia
20. Synthesis and characterization of doped rare earth titanates with pyrochlore structure
N. Cioatera
 1st Central and Eastern European Conference on Thermal Analysis and Calorimetry (CEEC-TAC1), 7-10 sept. 2011, Craiova
21. Influence of synthesis procedure and additives on the sintering behavior and electrical conductivity of Gd, Sm-co-doped ceria
N. Cioatera, V. Parvulescu, A. Rolle, R.-N. Vannier
 1st International Conference „Advances in Engineering and Management - ADEM 2010”, Dr. Tr. Severin, 19-21 mai 2010
22. Effect of dopant on the thermal and electrical behavior of nanostructured ceria materials
N. Cioatera, V. Parvulescu, A. Rolle, R.-N. Vannier
 CAS 2010 Proceedings (2010 International Semiconductor Conference), vol. 2, pp. 317-320, 2010
23. Catalytic oxidation of hydrocarbons on mesoporous anode materials of solid oxide fuel cells
 V. Parvulescu, S. Somacescu, **N. Cioatera**, P. Osiceanu, S. Todorova, G. Kadinov, B. Su
 6th World Congress on Oxidation Catalysis, July 5-10, 2009, Lille, France
24. Nanostructured ceria-based catalysts for methane combustion
N. Cioatera, V. Parvulescu, A. Rolle, R. Vannier, B.L. Su
 6th World Congress on Oxidation Catalysis, July 5-10, 2009, Lille, France
25. Nanostructured $\text{TiO}_2(\text{CeO}_2)\text{-Y}_2\text{O}_3\text{-ZrO}_2$ oxides with catalytic activity in oxidation of hydrocarbons: the influence of synthesis parameters and composition
 V. Pârvulescu, S. Șomăcescu, **N. Cioateră**, S. Todorova, G. Kadinov, B.L. Su
Catalysis for Society, Krakow, Poland, 11-15 May 2008
26. Yttrium-stabilized zirconia films doped with titania and their sensing properties
 V. Pârvulescu, S. Șomăcescu, **N. Cioateră**, P. Osiceanu, B. Mitu, M. Dinescu, G. Dinescu, B.L. Su
4th FEZA Conference, Paris, France, 2-6 sept. 2008
27. New ceria-based mixed oxides for SOFC applications
N. Cioateră, V. Pârvulescu, A. Rolle, R.N. Vannier
18th International Congress of Chemical and Process Engineering, Praga, Cehia, 24-28 august 2008
28. Effect of synthesis method on Gd, Sm- co-doped ceria structure and conductivity
N. Cioateră, V. Pârvulescu, A. Rolle, R.N. Vannier
13th International Conference of Physical Chemistry, București, 3-5 septembrie 2008
29. Effect of synthesis parameters on titania-doped YSZ structure and morphology
N. Cioateră, V. Pârvulescu, B.L. Su

13th International Conference of Physical Chemistry, București, 3-5 septembrie 2008

30. Effect of surfactant on mesoporous titania-doped YSZ composite anode supports for low temperature SOFCs

N. Cioateră, V. Pârvulescu, B.L. Su

6th International Messtructured Materials Symposium- Messtructured Materials: Design and Opportunities, Namur, Belgia, 8-11 septembrie 2008

31. Titania-doped YSZ (TYZ) and NiO-TYZ for SOFC Anode

N. Cioateră, V. Pârvulescu, B.L. Su

Tenth Grove Fuel Cell Symposium, Londra, 25-27 sept. 2007

32. Mesoporous TiO₂-doped yttria stabilized zirconia

V. Pârvulescu, S. Șomăcescu, P. Osiceanu, N. Cioateră, G. Telipan, M. Ignat, B.L. Su

The Fifth Asian-Australian Conference on Composite Materials, Hong-Kong, China, 27-30 nov. 2006

33. Mixed oxides with ordered porous structure and their applications as gas sensors

V. Pârvulescu, S. Șomăcescu, N. Cioateră, G. Telipan, M. Ignat, B.G. Albu, B.L. Su

4th International Conference on Materials and Manufacturing Technologies, Cluj-Napoca, 21-23 Sept. 2006