

Universitatea Națională de Știință și Tehnologie POLITEHNICA București

Facultatea: Inginerie Chimică și Biotehnologii

Departamentul: Chimie Anorganică, Chimie Fizică și Electrochimie

Nume Prenume: Comănescu, Cezar

Grad didactic: Șef Lucrări

L I S T A

lucrărilor științifice în domeniul postului

A. Teza de doctorat

A1. Comănescu, C., *Noi materiale hibride cu schelet siloxanic – sinteză, caracterizare și aplicații*, Universitatea Politehnică din București, București, **2011, OMECTS 6697/21.12.2011.**

B. Cărți și capitole în cărți publicate în ultimii 10 ani

B1. MATERIALE MULTIFUNCȚIONALE INTELIGENTE PENTRU APLICAȚII DE ÎNALTĂ TEHNOLOGIE, Materiale compozite cu conducție termică ridicată pentru aplicații în motoare electrice (capitol VIII), Burdușel Mihail, Cezar Comănescu, Dobrescu Gabriel, Aldica Gheorghe Virgil, Mihai Alexandru Grigoroșcuță, Andrei Galațanu, Andrei Kuncser, Paul Minciunescu, Andrei Emanuel Dumitru, Adriana Maria Borș, Lucian Demeter, Bogdan Vărățiceanu, *Editura Pro Universitaria*, București, 2021, pg. 180-201, ISBN 978-606-26-1490-4. (Cod CNCISIS carte: 102); link: <https://www.prouniversitaria.ro/carte/materiale-multifunctionale-inteligente-pentru-aplicatii-de-inalta-tehnologie-2/>. Data publicării: 01/20/2022.

B2. TESTE DE CHIMIE PENTRU ADMITERE (Editia 1), Chimie Anorganică, Daniela Berger, Cristian Matei, Ovidiu Oprea, Cezar Comănescu, *Editura Politehnica Press*, București, 2021, pg. 151-259, ISBN 978-606-515-950-1. (Cod CNCISIS carte: 19) link: <https://www.magazinupb.ro/produse/culegere-admitere-chimie-upb.html>. Data publicării: 06/06/2022.

C. Lucrări indexate ISI/BDI publicate în ultimii 10 ani

1. Frustrated Lewis pair-like reactions of nucleophilic palladium carbenes with $B(C_6F_5)_3$, Cui, P.; Comănescu, C. C.; Iluc, V. M. *Chem. Commun.*, **2015**.
2. Palladium carbene complexes as persistent radicals, Comănescu, C. C.; Vyushkova, M.; Iluc, V. M. *Chem. Sci.*, **2015**,
3. C-H Activation Reactions of a Nucleophilic Palladium Carbene, Comănescu, C.; Iluc, V. *Organometallics*, **2015**, 34 (19), 4684-4692, DOI: 10.1021/acs.organomet.5b00414
4. E-H (E = B, Si, Ge) Bond Activation of Pinacolborane, Silanes, and Germanes by Nucleophilic Palladium Carbene Complexes, Comănescu, C. C.; Iluc, V. M. *Chem. Commun.* **2016**, 52, 9048–9051,

5. Mossbauer and magnetic investigation of iron nitride with martensite structure synthesized from oxy-hydroxide type precursor. Palade, P., Plapcianu, C., Mercioniu, I., **Comanescu, C.**, Schinteie, G., *Dig J Nanomater Biostruct* **2016**, 11 (1), 53-63.
6. Structural, Magnetic, and Mossbauer Investigation of Ordered Iron Nitride with Martensitic Structure Obtained from Amorphous Hematite Synthesized via the Microwave Route, Palade, P.; Plapcianu, C.; Mercioniu, I.; **Comanescu, C.**; Schinteie, G.; Leca, A.; Vidu, R. *Ind. Eng. Chem. Res.* **2017**, 56, 11, 2958–2966.
7. Palladium-Catalyzed Formal (5 + 2) Annulation between ortho-Alkenylanilides and Allenes, Cendón, B.; Casanova, N.; **Comanescu, C.**; García-Fandiño, R.; Seoane, A.; Gulías, M.; Mascareñas, J. L. *Org. Lett.* **2017**, 19 (7), 1674–1677
8. Formation of Palladium η^2 -bound Chalcogenoketones across a Pd+–C– Bond, Rothstein, P. E; **Comanescu, C. C.**; Iluc, V. M. *Chem.- Eur. J.* **2017**.
9. E-H (E = N, O) Bond Activation by a Nucleophilic Palladium Carbene, **Comanescu, C. C.**; Iluc, V. M. *Polyhedron* **2018**; 143, 176-183.
10. The Influence of the Leaving Group on C-H Activation Pathways in Palladium Pincer Complexes, Hoffbauer, M.; **Comanescu, C.**; Dymm, B.; Iluc, V. *Organometallics* **2018**, 37, 13, 2086–2094.
11. Reactivity of a Pd(II) Carbene towards 2,6-dimesitylphenyldiazomethane and 2,6-dimesitylphenylazide, **Comanescu, C. C.**; Hoffbauer, M. R.; Iluc, V. M. *Polyhedron* **2019**, 158, 352-356
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13. Optimization of magnetic fluid hyperthermia with respect to nanoparticle shape-related parameters: case of magnetite ellipsoidal nanoparticles, Iacob, N.; Kuncser, A.; **Comanescu, C.**; Palade, P.; Kuncser, V. *J Nanopart Res* **2020**, 22:138
14. Mesoporous Cobalt Ferrite Nanosystems Obtained by Surfactant-Assisted Hydrothermal Method: Tuning Morpho-structural and Magnetic Properties via pH-Variation, Palade, P.; **Comanescu, C.***, Kuncser, A.; Berger, D.; Matei, C.; Iacob, N.; Kuncser, V. *Nanomaterials* **2020**, 10(3), 476.
15. Mössbauer spectroscopy investigation of Fe oxide nanoparticles synthesized by a novel hydrothermal process over a wide pH range (3–13), **Comanescu, C.***; Palade, P.; Kuncser, V. *Hyperfine Interact.* **2021**, 242, 42.
16. Dielectric and electric properties of novel core-shell nanocomposite: SrFe₁₂O₁₉ - BNT-BT. Greculeasa, S.G.; **Comanescu, C.***; Cioangher, M. *Rom. Rep. Phys.* **2022**, 74, 504.
17. Exchange coupled nanocomposites: magnetoplumbite Sr ferrite and magnetite. Greculeasa, S.G.; **Comanescu, C.***; Iacob, N.; Kuncser, A. *Rom. J. Phys.* **2022**, 67, 606.
18. New superdielectric materials: (1-x) SrFe₁₂O₁₉ – x BNT-BT nanocomposites. Greculeasa, S.; **Comanescu, C.***; Iacob, N.; Kuncser, A.; Smaranda, I.; Amarande, L.; Cioangher, M.; Burduşel, M.; Teodorescu, V. *Phys. B: Condens. Matter* **2022**, 642, 414139.

19. Complex Metal Borohydrides: from Laboratory Oddities to Prime Candidates in Energy Storage Applications, **Comanescu, C.*** *Materials* **2022**, 15(6), 2286;
20. Recent Development in Nanoconfined Hydrides for Energy Storage, **Comanescu, C.***, *Int. J. Mol. Sci.* **2022**, 23(13), 7111
21. Magnetic Nanoparticles: Current Advances in Nanomedicine, Drug Delivery and MRI. **Comanescu, C.***, *Chemistry* **2022**, 4, 872-930.
22. Paving the Way to the Fuel of the Future - Nanostructured Complex Hydrides. **Comanescu, C.***, *Int. J. Mol. Sci.* **2023**, 24, 143.
23. Synthesis of Nickel and Cobalt ferrite – doped graphene as efficient catalysts for improving the hydrogen storage kinetics of lithium borohydride. Palade, P.; **Comanescu, C.***, Radu, C. *Materials* **2023**, 16(1), 427.
24. Synthesis and Anti-Melanoma Activity of L-Cysteine-Coated Iron Oxide Nanoparticles Loaded with Doxorubicin. Toderascu, L.I.; Sima, L.E.; Orobeti, S.; Florian, P.E.; Icriverzi, M.; Maraloiu, V.-A.; **Comanescu, C.**; Iacob, N.; Kuncser, V.; Antohe, I.; et al. *Nanomaterials* **2023**, 13, 621.
25. Graphene Supports for Metal Hydride and Energy Storage Applications. **Comanescu, C.*** *Crystals* **2023**, 13, 878.
26. Calcium Borohydride Ca(BH₄)₂: Fundamentals, Prediction and Probing for High-Capacity Energy Storage Applications, **Comanescu, C.***. *Organic Synthesis and Catalysis. Energies* **2023**, 16, 4536.
27. Microemulsions of Nonionic Surfactant with Water and Various Homologous Esters: Preparation, Phase Transitions, Physical Property Measurements, and Application for Extraction of Tricyclic Antidepressant Drugs from Aqueous Media. Racovita, R.C.; Ciuca, M.D.; Catana, D.; **Comanescu, C.***; Ciocirlan, O. *Nanomaterials* **2023**, 13, 2311.
28. Recent Advances in Surface Functionalization of Magnetic Nanoparticles. **Comanescu, C.*** *Coatings* **2023**, 13, 1772.
29. Evaluation of magnetic inhomogeneities in non-stoichiometric Mg_{0.5}Ca_{0.5}Fe₂O₄ nanoferrite, S. Tiwari, **C. Comanescu**, N. Iacob, V. Kuncser, V. K. Salvi, S. Kumar, *Ceramics International* **2024**, 50(4), 6025-6041.
30. An Overview of Degradation Strategies for Amitriptyline. **Comanescu, C.***; Racovita, R.C. *Int. J. Mol. Sci.* **2024**, 25, 3822.
31. Ensuring Safety and Reliability: An Overview of Lithium-Ion Battery Service Assessment, **Comanescu, C.***. *Batteries* **2025**, 11, 6.
32. Comprehensive Methodology for Evaluating the Drug Loading of Iron Oxide Nanoparticles Using Combined Magnetometry and Mössbauer Spectroscopy. Iacob, N.; Palade, P.; **Comanescu, C.**; Crisan, O.; Toderascu, L.I.; Socol, G.; Schinteie, G.; Kuncser, V. *Molecules* **2025**, 30, 676.

Note: *- corresponding author

D. Lucrări publicate în reviste și volume de conferințe cu referenți în ultimii 10 ani

1. **Comanescu, C.**, Palade, P., Kuncser, V., “Mesoporous Cobalt Ferrite Nanoparticulate Systems: Synthesis, Magnetic And Catalytic Properties”, *18th IBWAP (International Balkan Workshop on Physics and Materials Science) 2018*, 10 – 13 July 2018, Ovidius University, Constanta, Romania (oral presentation).

2. **Comanescu, C.**, Iacob, N., Palade, P., Kuncser, V., “Correlation of Hyperthermia and Magnetic Measurements in Nanosized Cobalt Ferrite Systems“, *RICCCE XXI (Romanian International Conference on Chemistry and Chemical Engineering)*, September 4-7, 2019, Constanta, Mamaia, Romania (oral presentation).
3. **Comanescu, C.**; Palade, P.; Iacob, N.; Schinteie, G.; Kuncser, V. “Exploring the journey of ferrites from biomedical to energy storage applications“, 22ndRomanian International Conference on Chemistry and Chemical Engineering (RICCCE 2022), 7-9 September 2022, Sinaia, Romania. (oral presentation)
4. **Comanescu, C.**; Palade, P.; Iacob, N.; Kuncser, V. “Transition metal ferrites – efficient tools for energy storage, environment remediation and biomedical applications“. 5thInternational Conference on Emerging Technologies in Materials Engineering (EmergeMAT), 27-28 October 2022, Bucharest, Romania. (oral presentation)
5. **Comanescu, C.**; Palade, P.; Kuncser, V. “Versatility of iron oxides and ferrites: from biomedical applications to hydrogen storage hosts and catalysts“. 20thInternational Balkan Workshop on Applied Physics and Materials Science (IBWAP 2022), 12-15 July 2022. (oral presentation).

E. Brevete obținute în întreaga activitate

1. Hydrogen-storing materials based on mixtures of amides-hydrides-borohydrides, Palade, P; **Comanescu, C.**; Guran, C; Chihaiia, V; Coldea, ID, Nr. Înregistrare: RO128919-A2, Nr. si data deciziei de acordare: Nr./01-01-2014
2. Material magnetic pe bază de nanoparticule de nitrură de fier ordonată cu structură martensitică și procedeu de obținere a lui, Palade, P.; **Comanescu, C.**; Kuncser, A.; Plapcianu, C. OSIM cererea de brevet de invenție nr. A 00686 din 20.09.2017, prin hotărârea nr. 4.21136 din 30.09.2021 (notificare B11 OSIM r. 1048301 din 14.09.2021)