

Listă de lucrări 2019 - Dumitrița Corpodean

1. Activitate didactică

1a. Cărți publicate

1. R. Fechete, D. E. Demco, D. Moldovan, R. I. Chelcea, E. Culea, *Rezonanta Magnetica Nucleara: Metode clasice si Moderne*, Editura Risoprint, Cluj-Napoca, ISBN 978-973-53-0441-6, (2010).
2. D. Moldovan, *Metode moderne RMN pentru caracterizarea materialelor avansate*, Editura Risoprint, Cluj-Napoca, ISBN: 978-973-53-0902-2, (2012).
3. R. Fechete, D. Moldovan, R. Chelcea, *Applications of modern NMR techniques to nanocomposite materials and biomaterials*, Editura U.T.PRESS, Cluj-Napoca ISBN: 978-973-662-906-8, (2013).
4. R. Fechete, R. Chelcea, D. Moldovan, S. Nicoara, I. Coroiu, C. Badea, E. Culea, I. Cosma, N. Serban, *Fizica: Indrumator de laborator*, Editura U.T. PRESS, Cluj-Napoca, ISBN 978-973-662-952-5, (2014).

1b. Lucrări de laborator redactate și realizate practic

1. Determinarea coeficientului de vâscozitate a lichidelor.
2. Determinarea concentrației unor soluții prin măsurători RMN a timpului de relaxare T_2 .
3. Determinarea spectrelor IR a unor lichide folosind metoda FT IR-ATR.
4. Determinarea distribuțiilor timpilor de relaxare RMN în câmpuri joase pentru emulsii.

2. Activitate științifică

2a. Articole publicate

Articole publicate in reviste ISI

1. C. Melian, D.E. Demco, M. Istrate, A. Balaceanu, D. Moldovan, R. Fechete, C. Popescu, M. Möller, *Morphology and side-chain dynamics in hydrated hard alpha-keratin fibers by 1H solid-state NMR*, Chem. Phys. Letters, 480, 300 (2009).

2. S. Rada, E. Culea, M. Rada, V. Maties, M. Bosca, L. Pop, R. Fechete, R. Chelcea, D. Moldovan, *Immobilization of gadolinium in borate-tellurate glasses*, J. Physics: Conf. Series 182, 01207 (2009).
3. D. Moldovan, R. Fechete, D. E. Demco, E. Culea, B. Blümich, V. Herrmann, M. Heinz, *Heterogeneity of nanofilled EPDM elastomers investigated by Invers Laplace Transform 1H NMR Relaxometry and Rheometry*, Macromolecular Chemistry and Physics, 211,1579-1594, (2010).
4. D. Moldovan, R. Fechete, D. E. Demco, E. Culea, B. Blümich, V. Herrmann, M. Heinz, *The heterogeneity of segmental dynamics of filled EPDM by 1H transverse relaxation NMR*, Journal of Magnetic Resonance, 208, 156-162, (2011).
5. D. Moldovan, Mihaela Pop, Radu Fechete, Anne Baudouine, Mihai Todica, *Investigate the Effects of Degradation of High Density Polyethylene by ^{13}C NMR Spectroscopy and 1H Relaxometry*, (Studia UBB Chemia, LVI, 3, 103 – 110, (2011).
6. E. Jumate, D. Moldovan, R. Fechete, D. Manea, *NMR Relaxometry Study Of Plaster Mortar With Polymer Additives*, AIP Conf. Proc. 1565, 112-116 (2013).
7. R. I. Chelcea, Remus S. Sipoș, R. Fechete, D. Moldovan, I. Sus, Z. Pávai and Dan E. Decmo, *One-Dimensional Laplace Spectroscopy Used For The Assessment Of Pore-Size Distribution On The Ovariectomized Rats Femur*, Studia UBB Chemica, LX, 1, pag 57-70, (2015).
8. R. S. Sipoș, R. Fechete, D. Moldovan, I. Șuș, Z. Pávai, *Assessment of femoral bone osteoporosis in rats treated with simvastatin or fenofibrate*, Open Life Sciences (BIOL-2015-0039), 10:379-387, (2015).
9. R. Sipoș, R. Fechete, R. I. Chelcea, D. Moldovan, Z. Pap, Z. Pávai, D. E. Demco, *Ovariectomized rats' femur treated with fibrates and statins. Assessment of pore-size distribution by 1H -NMR relaxometry*, Rom J Morphol Embryol 56(2 Suppl):3–6, (2015).
10. Jumate, E., Moldovan, D., Manea, D.L. Demco, D.E., Fechete, R., *The Effects of Cellulose Ethers and Limestone Fillers in Portland Cement-Based Mortars by 1H NMR relaxometry*, Applied Magnetic Resonance Volume 47, Issue 12, Pages 1353-1373 (2016).

11. Chelcea, R.I., Moldovan, D., Demco, D.E., Culea, E., Fechete, R., *In vitro degradation and phase composition of cosmetic emulsions*, Studia Universitatis Babeş-Bolyai ChemiaOpen Access Volume 62, Issue 1, Pages 73-88, (2017).
12. Emma Dávid, R., Fechete, R., Sfrângeu, S., Moldovan, D., Chelcea, R.I., Morar, I.A., Stamatian, F., Kovacs, T., Popoi, P, *In Vivo ¹H Nuclear Magnetic Resonance Spectroscopy and Relaxometry Maps of the Human Female Pelvis*, Analytical Letters Volume 52, Issue 1, Pages 54-77, (2019).

Articole publicate în reviste BDI sau B+

1. D. Moldovan, A. Mihailcioiu, A. Iuga, *Studiul experimental al factorilor ce influenteaza separarea triboelectrostatic in pat fluidizat a amestecurilor de materiale plastice*, Cerc stiintific de cercetare, Cluj-Napoca, 19 Mai (2006).
2. D. Moldovan, R. Fechete, D. E. Demco, E. Culea and B. Blümich, *Monte - Carlo simulations of the two-dimensional NMR T₂-T₂ exchange of fluids in porous media*, Diffusion Fundamentals, 10 20.1 - 20.3 (2009).
3. R. Fechete, D. Moldovan, D. E. Demco and B. Blümich, *Laplace inversions applied to multi-component T₂-T₂ exchange experiments*, Diffusion Fundamentals, 10 14.1 - 14.3 (2009).
4. E. Jumate, D. C. Moldovan, R. Fechete, D. L. Manea, *The porosity and exchange processes in Portland cement pastes by 1D and 2D NMR relaxometry*, First International Conference for PhD students in Civil Engineering, 4-7 Noiembrie, Cluj-Napoca, CE-PhD, 421-427 (2012).
5. Jumate, E., Manea, D.L., Moldovan, D., Fechete, R., *The Effects of Hydrophobic Redispersible Powder Polymer in Portland Cement Based Mortars*, Procedia Engineering Volume 181, Pages 316-323 (2017).
6. Jumate, E., Aciu, C., Manea, D.L., Moldovan, D., Chelcea, R., Fechete, R., *Plastering mortar with antibacterial and antifungal properties studied by ¹H NMR relaxometry*, AIP Conference Proceedings Volume 1917, Article number 040007, (2017).

7. Suărășan, R.E., Budu, S.R., Suărășan, I., Moldovan, D., Fechete, R., *Complex influence of intense electric fields upon ozone and free radicals from aqueous solutions*, IFMBE Proceedings Volume 71, Pages 347-350, (2019).

Participări la conferințe internaționale

1. L. Calin, D. Moldovan, A. Iuga, L. Dascalescu, A. Mihalcioiu, Controlling particle trajectory in free fall electrostatic separators, Proceeding of the 6th International Workshop Materials for Electrotechnics, Berkeley V., S.U.A., 25-27 Iunie (2006).
2. D. Moldovan, R. Fechete, D. E. Demco, E. Culea and B. Blümich, Monte - Carlo simulations of the two-dimensional NMR T_2 - T_2 exchange of fluids in porous media, Cambridge, Massachusetts USA, MRPM9 the 9th - Conference on Magnetic Resonance in Porous Media, 13 - 17 Iulie (2008).
3. R. Fechete, D. Moldovan, D. E. Demco and B. Blümich, Laplace inversions applied to multi-component T_2 - T_2 exchange experiments, Cambridge, Massachusetts USA, MRPM9 the 9th - Conference on Magnetic Resonance in Porous Media, 13 - 17 Iulie (2008).
4. E. Culea, M. Rada, V. Maties, M. Bosca, L. Pop, R. Fechete, R. Chelcea, D. Moldovan, Immobilisation of gadolinium in borate-tellurate glasses, Process in isotopes an molecules, Process in isotopes an molecules, September 24-26, Cluj-Napoca, (2009).
5. D. Moldovan, R. Fechete, D. E. Demco, E. Culea and B. Blümich, Heterogeneity of nano-filled EPDM elastomers investigated by inverse Laplace transform ^1H NMR relaxometry, July 4-9, Florence, (2010).
6. R. Fechete, D. Moldovan, D. E. Demco, E. Culea and B. Blümich, Heterogeneity of segmental dynamics of filled EPDM rubber by ^1H Hahn echo measurements, Iulie 4-9, Florence, (2010).
7. D. Moldovan, R. Fechete, D. E. Demco, Characterization of the ^1H Double Quantum Fourier and Laplace Spectra of Aged Natural Rubber Samples, Conferinta Internationala EUROMAR 2012, Dublin, Irlanda, 1-5 Iulie (2012).
8. R. Fechete, D. Moldovan, D. E. Demco, Morphology of Filled EPDM Rubber by Laplace Distribution of ^1H NMR Spin-Diffusion Decays, Conferinta Internationala EUROMAR 2012, Dublin, Irlanda, 1-5 Iulie (2012).

9. E. Jumate, D. Moldovan, R. Fechete, D. Manea, Relaxometry Study Of Plaster Mortar With Polymer Additives, Processes in Isotopes and Molecules PIM 2013, 25-27 Septembrie, Cluj-Napoca, Romania (2013).
10. R. I. Chelcea, R. S. Sipos, R. Fechete, D. Moldovan, I. Sus, Z. Pávai and D. E. Demco, One-Dimensional Laplace Spectroscopy Used For The Assessment Of Pore-Size Distribution On The Ovariectomized Rats Femur, Advanced Spectroscopies on Biomedical and Nanostructured Systems BioNanoSpec, Cluj-Napoca, Romania, 7-10 Septembrie, (2014).
11. D. Moldovan, R. I. Chelcea, D. E. Demco, R. Fechete, Characterization of Superabsorbent Hydrogels by Low-Field 1D and 2D ^1H NMR Laplace Spectroscopy, Conferinta Internationala EUROMAR 2016, Aarhus, Danemarca, 3-7 Iulie (2016).
12. R. Fechete, D. Moldovan, R. I. Chelcea, D. E. Demco, Experimental and numeric characterization of various PEM membranes for fuel cells, Conferinta Internationala EUROMAR 2016, Aarhus, Danemarca, 3-7 Iulie (2016).
13. R. I. Chelcea, D. Moldovan, D. E. Demco, R. Fechete, The NR segmental dynamics response at thermal treatment monitored by ^1H DQ NMR and Laplace spectra, Conferinta Internationala EUROMAR 2016, Aarhus, Danemarca, 3-7 Iulie (2016).
14. D. Moldovan, R. I. Chelcea, D. E. Demco and R. Fechete, Characterization of Poly (isobutylene-co-maleic acid) sodium salt cross-linked hydrogel by Low-Field 1D and 2D ^1H NMR Laplace Spectroscopy, 11th biennial International Conference on Processes in Isotopes and Molecules PIM-INCDTIM, Cluj-Napoca, Romania, 27-29 September (2017).
15. R. I. Chelcea, R. Fechete, D. Moldovan and D. E. Demco, Advanced methods for the characterization of commercial cosmetics effects on the skin, 11th biennial International Conference on Processes in Isotopes and Molecules PIM-INCDTIM, Cluj-Napoca, Romania 27-29 September (2017).
16. E. Jumate, C. Aciu, D. L. Manea, D. Moldovan, R. Chelcea and R. Fechete, Plastering Mortar with Antibacterial and Antifungal Properties Studied By ^1H NMR relaxometry, 11th biennial International Conference on Processes in Isotopes and Molecules PIM-INCDTIM, Cluj-Napoca, Romania, 27-29 September (2017).

2b. Alte lucrări -

2c. Membru în proiecte de cercetare:

- **PN II IDEI nr. 1102/2007 – tema:** Corelația proprietăților macroscopice, mezoscopice și microscopice pentru diferite clase de polimeri nanocompoziți și membrane polimerice utilizate în celulele electrice de combustie.
- **FP7 – nr. 222824 – tema:** European Network for integrating novel technologies for food processing.
- **PN II IDEI nr. 183/2009 – tema:** Noi Sisteme Vitroase Nanostructurate Cu Posibile Aplicații In Imobilizarea Deseurilor Nucleare.
- **PN II IDEI nr. 307/2011 – tema:** Relațiile structură-dinamică-proprietății și efectele îmbătrânirii elastomerilor nanocompoziți și membranelor de schimb protonice.

Data

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