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*Scientific Researcher*

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**The research interest** covers the areas of: (i) natural polymers-based hydrogels for medical/pharmaceutical applications; (ii) nanocellulose-based biomaterials for drug delivery and tissue engineering applications; (iii) chemical modification of polysaccharides in order to obtain new compounds with specific properties, for biomedical applications; (iv) hydrogel-based adsorbent materials for wastewater treatment.

**Scientific record:** Articles published in international peer-reviewed journals (ISI ranked and included in international data bases): **23**; Articles published full-text in international conference volumes: **25**; Book chapters: **2**; Patents (national): **2 patent**; Research and development projects based on **2 international projects** and **4 national research projects**, of which: **6 as member** of the project; **Research stages:** “Complutense” University of Madrid, Faculty of Chemical Engineering (2011). **772 citations** (without self-citation) in international ISI ranked journals, Hirsch-index = **14** in Web of Science databases.

#### **RECENT SCIENTIFIC ARTICLES:**

1. Nicu, R.; Lisa, G.; Darie-Niță, R.N.; Avădanei, M.I.; Barga, A.; Rusu, D.; Ciolacu, D.E. Tailoring the structure and physico-chemical features of cellulose-based hydrogels using multi-epoxy crosslinking agents. *Gels*, 10(8), 523, 1-24 (2024) *IF* = 5.
2. Nicu, R.; Ciolacu, D.E.; Petrovici, A.R.; Rusu, D.; Avădanei, M.I.; Mihăilă, A.C.; Butoi, E.; Ciolacu, F. 3D matrices for enhanced encapsulation and controlled release of anti-inflammatory bioactive compounds in wound healing. *International Journal of Molecular Sciences*, 24(4), 4213, 1-20 (2023) *IF* = 4.9.
3. Nicu, R.; Ciolacu, F.; Ciolacu, D.E. Advanced functional materials based on nanocellulose for pharmaceutical/medical applications. *Pharmaceutics*, 13(8), 1125, 1-57 (2021) *IF* = 4.9.
4. Ciolacu, D.E.; Nicu, R.; Ciolacu, F. Cellulose-based hydrogels as sustained drug delivery systems. *Materials*, 13(22), 5270, 1-37 (2020) *IF* = 3.1.
5. Ciolacu, F.; Nicu, R.; Balan, T.; Bobu, E., Chitosan derivatives as bio-based materials for paper heritage conservation. *BioResources*, 12(1), 735-747 (2017) *IF* = 1.61.