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Research topic

- **Synthesis and characterization of some reactive ionic oligomers and cationic polyelectrolytes;**
- **Studies of the physico-chemical properties of the synthetic and natural polyelectrolytes in solutions;**
- **Application of polyelectrolytes solutions as flocculants for removal of some contaminants from surface and wastewater (industrial and model)**

Scientific activity

- **81** scientific papers;
- **2** books
- **7** book chapters
- **7** patents
- member in 12 research projects;
- over **80** attending at national and international scientific events
- Hirsh index = **20**

Relevant publications

1. Novel biodegradable flocculating agents based on cationic amphiphilic polysaccharides; L. Ghimici, M. Nichifor; *Biores. Technol.* 101, 8549-8554 (2010)
2. Novel biodegradable flocculating agents based on pullulan; L. Ghimici, M. Constantin, Ghe. Fundueanu; *J. Hazard. Mater.* 181 351-358 (2010)
3. Intrinsic viscosities of polyelectrolytes in the absence and in the presence of extrasalt: Consequences of the stepwise conversion of dextran into a polycation; L. Ghimici, M. Nichifor, A. Eich, B. A. Wolf; *Carbohydr. Polym.* 87, 405- 410 (2012)
4. Separation of TiO₂ particles from water and water/methanol mixtures by cationic dextran derivatives; L.Ghimici, M. Nichifor; *Carbohydr. Polym.* 98, 1637-1643 (2013)
5. Ionic dextran derivatives for removal of Fastac 10 EC from its aqueous emulsions L Ghimici, M. Nichifor; *Carbohydr. Polym.* 134, 46-51 (2015)
6. Removal of some commercial pesticides containing a-Cypermethrin, Deltamethrin and Mancozeb as active ingredients by chitosan solution; L. Ghimici, C.E. Brunchi, A. Diaconu; *Cellulose* 23, 3837-3846 (2016)
7. Cationic polyelectrolyte induced separation of some inorganic contaminants and their mixture (zirconium silicate, kaolin, K- feldspar, zinc oxide) as well as of the paraffin oil from water; L. Ghimici; *J. Environ. Manag.* 169, 1-7 (2016)
8. Dextran derivatives application as flocculants; L. Ghimici, M. Nichifor; *Carbohydr. Polym.* 190 162-174 (2018)
9. Removal of some commercial pesticides from aqueous dispersions using as flocculant a thymine-containing chitosan derivative; L. Ghimici, I.A. Dinu; *Sep. Purif. Technol.* 209, 698-706 (2019)
10. A review of the use of pullulan derivatives in wastewater purification; L. Ghimici, M. Constantin; *React. Funct. Polym.* 149, 104510 (2020)