Dr. Biliuta Gabriela

Scientific Research

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Research expertise

Developing of new catalytic systems for the selective derivatization of organic substrates (especially polysaccharides) in mild and "ecofriendly" environment; Free radical processes involving *N*-hydroxyphthalimide (NHPI); Chemical characterization of biopolymers; Chemically modified polysaccharides as biomaterials with pharmaceutical applications.

Impact – Source: ISI Web of Science

Number of articles: 27

Citation: 455 (372 without self-citations)

***h*-index: 12**

Relevant publications

1. Cellulose: A ubiquitous platform for ecofriendly metal nanoparticles preparation, **G. Biliuta**, S. Coseri, Coordination Chemistry Reviews, 383, **2019**, 155-173.
   (IF = 13.476, AIS red area Top 1 out of 45 in Chemistry, Inorganic & Nuclear)
2. Magnetic cellulosic materials based on TEMPO-oxidized viscose fibers, **G. Biliuta**, S. Coseri, Cellulose, 23 (6), **2016**, 3407-3415.
   (IF = 3.917, AIS red area Top 1 out of 21 in Materials Science, Paper & Wood)
3. Self-healing hydrogels of oxidized pullulan and poly(vinyl alcohol), M. Bercea, **G. Biliuta**, M. Avadanei, R.I. Baron, M. Butnaru, S. Coseri, Carbohydrate Polymers, 206, **2019**, 210-219.
   (**IF = 6.044, IF red area Top 2 out of 70 in Chemistry, Applied)**
4. Selective oxidation of cellulose, mediated by *N*-hydroxyphthalimide, under a metal-free environment, S. Coseri, G. Biliuta, B.C. Simionescu, Polymer Chemistry, 9, **2018**, 961-967.
   (**IF = 4.760, AIS red area Top 8 out of 86 in Polymer Science)**
5. Green route for the fabrication of self-healable hydrogels based on tricarboxy cellulose and poly(vinyl alcohol), R.I. Baron, M. Bercea, M. Avadanei, G. Lisa, **G. Biliuta**, S. Coseri, International Journal of Biological Macromolecules 123, **2019**, 744-751.
   (**IF = 4.784, AIS red area Top 14 out of 71 in Chemistry, Applied)**

Patent

1. Procedeu de preparare a *6*-carboxil celulozei prin oxidarea cu oxigen molecular, S. Coseri, **G. Biliuta,** R. Ardeleanu, V. Harabagiu, RO 129374 B1, 2017.