Abstract

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Archives in Chemistry

2022
Vol 3. S3

Mesoporous silica as drug delivery platform in disbiosis

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Abstract

Drug delivery systems are increasingly studied or even used for a wide range of biomedical applications [1-3]. Internal or external factors can be used to tune the delivery of the biologically active agents and thus to assure the optimal conditions. Micro and Mesoporous materials are widely used as drug delivery system because they can assure the desired controlled release of a wide range of biologically active agents. Usually, mesoporous silica exhibit large surface area and good surface reactivity to be easily functionalized and thus to assure the desired delivery profile considering especially surface modification, pores' characteristics, and triggering factors. Starting from the advantages of the mesoporous silica supports, innovative drug delivery systems can be developed in order to obtain targeted drug delivery systems. In this work, several examples of drug delivery systems based on mesoporous silica and different polyphenols will be discussed.

Received: February 2, 2022; **Accepted:** February 11, 2022; **Published:** March 31, 2022

Biography

Anton FICAI is a young professor with habilitation involved in both academic and scientific life of the University POLITEHNICA of Bucharest and Academy of Romanian Scientists. His major academic interests are related to the coordination of the teaching activities related to the classes: Chemistry, Chemistry and Characterization of Materials, Composite Materials for Medicine, NaoBioMaterials for Tissue Engineering and Drug Delivery Systems. The research interests are much broader and cover the following topics: tissue engineering; drug delivery systems; multifunctional materials; composite materials; antimicrobial / antitumoral materials; nanoparticles synthesis and characterization; coatings and surface modification; etc. Till now, over 300 scientific papers, from which 270 ISI papers and 18 books or chapters (including 2 edited books) were published along with 28 patent applications (8 of them being already released) and attracting over 3000 citations and a Hirsh index of 30.

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This Abstract is taken from: 35th International Conference on Nanomaterials and Nanotechnology | March 25-26, 2022 | Berlin, Germany