In this issue

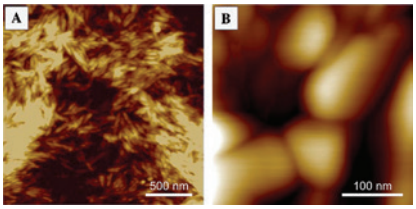
Parisa Pooyan, Luke P. Brewster, Rina Tannenbaum and Hamid Garmestani

Biomimetic synthesis of two different types of renewable cellulosic nanomaterials for scaffolding in tissue engineering

DOI 10.1515/gps-2016-0196
Green Process Synth 2018; 7: 181–190

Original article: Inspired by the fascinating nanostructured assembly existing in the cell walls of different plant species, we designed two fully bio-based green nanomaterials reinforced with renewable polysaccharide nanoparticles in the form of cellulose nanowhiskers to extend the biomimetic design for scaffolding in tissue engineering applications.

Keywords: biomimetic design; cellulosic nanomaterials; mechanical percolation; nanotechnology; tissue engineering.



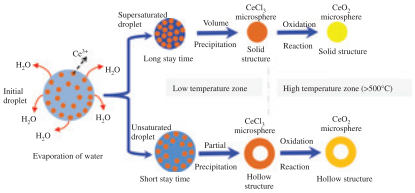
Shou-Feng Xue, Wen-Yuan Wu, Xue Bian, Zhen-Feng Wang and Yong-Fu Wu

Facile preparation of CeO_2 microspheres with high surface area by ultrasonic spray pyrolysis

https://doi.org/10.1515/gps-2017-0041
Green Process Synth 2018; 7: 241–247

Original article: CeO_2 microspheres were successfully prepared by ultrasonic spray pyrolysis of $CeCl_3$ solution at 700°C. The prepared CeO_2 microspheres with a narrow distribution range of 0.09~3.86 μm and two basic structures of CeO_2 microsphere were reported.

Keywords: $CeCl_3$; CeO_2; high surface area; microsphere; spray pyrolysis.



Jiří Rusín, Kateřina Kašáková and Kateřina Chamrádová

High-solids semi-continuous anaerobic digestion of corn silage in bag-type digester

DOI 10.1515/gps-2017-0017
Green Process Synth 2018; 7: 268–276

Original article: The model test verified that by using a given bag-type horizontal fermenter configuration, it was possible to process the most common agricultural fibrous substrate, corn silage, with reasonable biogas output.

Keywords: biogas; bioreactor; corn silage; high-solids anaerobic digestion; horizontal bag-type digester.