

Accepted Manuscript

Gelatin cages: the formation and characterization of carriers for housing catalyst cargoes

Xiaomin Zhang, Giuseppina Simone

PII: S1385-8947(18)31747-9
DOI: <https://doi.org/10.1016/j.cej.2018.09.038>
Reference: CEJ 19877

To appear in: *Chemical Engineering Journal*

Received Date: 6 June 2018
Revised Date: 1 August 2018
Accepted Date: 6 September 2018

Please cite this article as: X. Zhang, G. Simone, Gelatin cages: the formation and characterization of carriers for housing catalyst cargoes, *Chemical Engineering Journal* (2018), doi: <https://doi.org/10.1016/j.cej.2018.09.038>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Gelatin cages: the formation and characterization of carriers for housing catalyst cargoes

Xiaomin Zhang, Giuseppina Simone*

Department of Mechanical Engineering, Northwestern Polytechnical University, 127 West Youyi Road, Xi'an Shaanxi, 710072, People's Republic China

*Corresponding Author: Email: giuseppina.simone@nwpu.edu.cn;

Tel: +86 15029040025.

Abstract

Taking inspiration from nature, research has focused on developing microstructures, nanostructures, and cages constructed from proteins and peptides as appealing devices to compartmentalize and transfer agents and chemical reactions or synthesis. Long-chain peptide and protein cages are scarcely retrieved, and their fabrication is far from clear; nonetheless, they have the advantage of being rigid-chains of high molecular weight, affording diverse supramolecular structures. Here, we report the ability of long gelatin peptides to form monodisperse spheroidal cages. We examine a range of synthetic modality conditions that give rise to gelatin particles with dissimilar properties. Using an emulsion containing a self-organizing system generated by reaction–diffusion, we produce protein cages in a one-vessel process. Based on systematic physiochemical analyses, the upload and release of cargo stored

Download English Version:

<https://daneshyari.com/en/article/10145317>

Download Persian Version:

<https://daneshyari.com/article/10145317>

[Daneshyari.com](https://daneshyari.com)