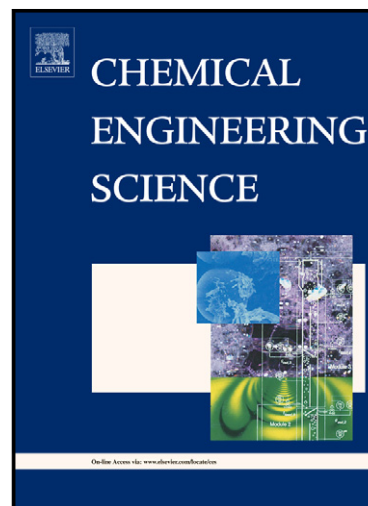


# Author's Accepted Manuscript

Non-Spherical Particles for Targeted Drug Delivery

Jinrong Chen, Nicholas Clay, Hyunjoon Kong



[www.elsevier.com/locate/ces](http://www.elsevier.com/locate/ces)

PII: S0009-2509(14)00590-9  
DOI: <http://dx.doi.org/10.1016/j.ces.2014.10.022>  
Reference: CES11937

To appear in: *Chemical Engineering Science*

Received date: 18 August 2014  
Revised date: 9 October 2014  
Accepted date: 12 October 2014

Cite this article as: Jinrong Chen, Nicholas Clay, Hyunjoon Kong, Non-Spherical Particles for Targeted Drug Delivery, *Chemical Engineering Science*, <http://dx.doi.org/10.1016/j.ces.2014.10.022>

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 galley proof before it is published in its final citable 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.

# Non-Spherical Particles for Targeted Drug Delivery

*Jinrong Chen<sup>a</sup>, Nicholas Clay<sup>a</sup>, and Hyunjoon Kong<sup>a,b,c,\*</sup>*

<sup>a</sup>Department of Chemical and Biomolecular Engineering, University of Illinois at Urbana-Champaign, 600 South Mathews Avenue, Urbana IL, 61801, USA

<sup>b</sup>Institute for Genomic Biology, University of Illinois at Urbana-Champaign, 1206 West Gregory Drive, Urbana IL, 61801, USA

<sup>c</sup>Department of Chemical Engineering, Soongsil University, Seoul, South Korea

\*To whom correspondence should be addressed: [hjkong06@illinois.edu](mailto:hjkong06@illinois.edu)

ABSTRACT Nano- and microparticles loaded with various bioimaging contrast agents or therapeutic molecules have been increasingly used for the diagnosis and treatment of diseases and tissue defects. These particles, often a filled or hollow sphere, can extend the lifetime of encapsulated biomedical modalities in circulation and in target tissue. However, there is a great need to improve the drug loading and targeting efficiency of these particles. Recently, several simulation and *in vitro* experimental studies reported that particle shape plays a pivotal role in the targeted delivery of molecules. To better

Download English Version:

<https://daneshyari.com/en/article/6590406>

Download Persian Version:

<https://daneshyari.com/article/6590406>

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