

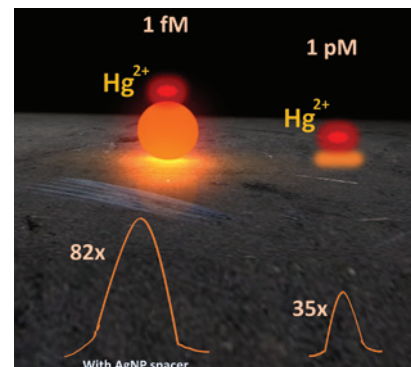
In this issue

Pradeep Kumar Badiya, Tejkiran Pindi Jayakumar, Venkatesh Srinivasan and Sai Sathish Ramamurthy
Spacer layer engineering for ultra-sensitive Hg(II) detection on surface plasmon-coupled emission platform

DOI 10.1515/ntrev-2017-0124
Nanotechnol Rev 2017; 6(4): 331–338

Communication: Demonstration of ultrasensitive detection of Hg(II) on surface plasmon-coupled emission platform assisted by spacer layer engineering.

Keywords: fluorescence enhancements; mercury sensing; silver nanoparticles; spacer engineering; surface plasmon-coupled emission.



Admire Dube and Naushaad Ebrahim
The nanomedicine landscape of South Africa

DOI 10.1515/ntrev-2016-0108
Nanotechnol Rev 2017; 6(4): 339–344

Nanotechnology Institutions

contribution: This article presents a description of the landscape of nanomedicine research in South Africa. A top-level description of the infrastructure, policy, funding, human capital development, and nanomedicine research outputs that have emanated from South Africa is presented.

Keywords: nanomedicine; nanoparticle drug delivery; nanotechnology in South Africa; nanotechnology policy.



Jonathan Shannahan

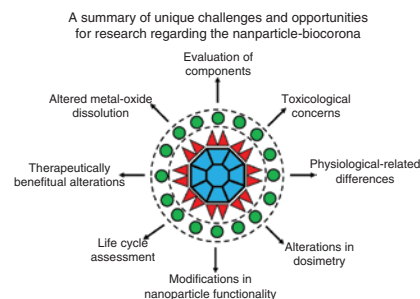
The biocorona: a challenge for the biomedical application of nanoparticles

DOI 10.1515/ntrev-2016-0098

Nanotechnol Rev 2017; 6(4): 345–353

Review: When nanoparticles are placed into a biological environment their surface becomes coated with a variety of biomolecules forming a biocorona. The red triangles represent the first layer of biomolecules that interact with the nanoparticle's surface known as the hard biocorona. The green circles indicate the dynamic secondary layer of macromolecules interacting with the hard biocorona which is termed the soft biocorona. Surrounding the nanoparticle-biocorona are the unique challenges and areas for future research. Overall, an understanding of the interactions between biomolecules and nanoparticles, biocorona-mediated cellular interactions, and the resulting biological responses are necessary for the use of nano-enabled diagnostic tools and therapeutics.

Keywords: *in vitro* toxicology; nanotherapeutics; nanotoxicology; protein corona.

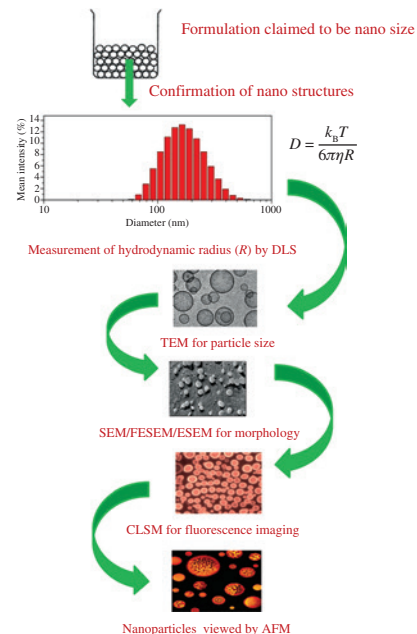


Syed Mahmood, Uttam Kumar Mandal, Bappaditya Chatterjee and Muhammad Taher
Advanced characterizations of nanoparticles for drug delivery: investigating their properties through the techniques used in their evaluations

DOI 10.1515/ntrev-2016-0050
 Nanotechnol Rev 2017; 6(4): 355–372

Review: This review article highlights the advanced characterization techniques for nanoparticles from the drug delivery point of view together with their shortcomings and future advancement required.

Keywords: atomic force microscopy; confocal laser scanning microscopy; DLS; scanning electron microscopy; transmission electron microscopy.



Pooja Bhatia and Archana Chugh
A multilevel governance framework for regulation of nanomedicine in India

DOI 10.1515/ntrev-2016-0083
 Nanotechnol Rev 2017; 6(4): 373–382

Review: Regulation of nanomedicine in India through a hierarchical framework.

Keywords: ethical issues; legal aspects and societal implications; monitoring; policy.

