

Aggregation of Organic Compounds and its effect on their photophysical properties

Aggregation of Organic Compounds and its effect on their photophysical properties

ABSTRACT: Diagnostics are important for a broad range of fields including infectious disease, health, food safety, and many other applications. These can provide a yes/no answer on the food we are about to eat is contaminated, or whether we are infected with a virus vs. a bacteria. Paper tests in the same format as pregnancy test possess many ideal characteristics, in that they are low cost, can be mass produced, and operated point of care by non-experts.¹ We discuss how different diagnostics work and their respective advantages and disadvantages. In

particular, nanotechnology has enabled many innovations in point of care tests. The unique size and material dependent properties of nanoparticles can enhance sensitivity, enable multiplexing, and impart new capabilities to diagnostics. We will discuss some of these innovations that we have been developing in the lab for infectious disease and also the relevance of diagnostics for the ongoing COVID-19 outbreak.^{2,3}

Biography

Nidhi Gour is currently Assistant Professor at Indrashil University an education initiative of Cadila Pharmaceuticals, India. She was formerly associated to IAR, Gandhinagar as Faculty. Dr. Nidhi did her doctoral studies from Indian Institute of Technology Kanpur (IITK). Her PhD thesis was awarded with Eli Lilly Asia Outstanding Thesis Award. After two short post doctoral stints at Tata Institute of Fundamental Research (TIFR), Mumbai and Albert Einstein College of Medicine, New York, USA, she joined University of Geneva, Switzerland as post doctoral fellow for two years and finally CSGI, University of Florence for one year. Her research is based on synthesis and characterization of compounds/nanoparticles with potential applications in biology with particular focus on molecular self-assembly. Her research has been published in reputed international journals and she has regularly received many national and international research grants and fellowships

Recent Publications

1. Gour, N., Kshtriya, V., Gupta, S., Koshti, B., Singh, R., Patel, D., & Joshi, K. B. (2019). Synthesis and Aggregation Studies of a Pyridothiazole-Based AIEE Probe and Its Application in Sensing Amyloid Fibrillation. *ACS Applied Bio Materials*, 2(10), 4442-4455.
2. Gour, N., Kanth P, C., Koshti, B., Kshtriya, V., Shah, D., Patel, S., ... & Pandey, M. K. (2019). amyloid-like structures formed by single amino acid self-assemblies of cysteine and methionine. *ACS chemical neuroscience*, 10(3), 1230-1239

Nidhi Gour, *Aggregation of Organic Compounds and its effect on their photophysical properties*



This open-access article is distributed under the terms of the Creative Commons Attribution Non-Commercial License (CC BY-NC) (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits reuse, distribution and reproduction of the article, provided that the original work is properly cited and the reuse is restricted to noncommercial purposes. For commercial reuse, contact reprints@pulsus.com