

Novel Virus-like Mesoporous Silica-ZnO-Ag Nanoparticles and Quercetin Synergize with NIR Laser for Covid-19 Infectious Diseases Treatment.

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Abstract

This work shows that novel virus-like mesopore silica-zinc oxide/Ag nanoparticles (SZnOAg) synthesized and professionally collected on NIR laser irradiation with quercetin to improve their effectively eliminates the virus as a biomedical application. The properties of the nanoparticles can be tuned with respect to their core diameter, tubular length, and outer diameter. Due to their biomimetic appearance, they can rapidly transform living cells into virus-like particles, this SZnOAg nanomaterials has specific elimination effect on bacteriophage and covid-19. Using epitaxial growth, we can construct virus-like structures that can be used for biomedicine applications. These nanomaterials and NIR laser could open the way to a new range of antiviral materials, due to the low-efficiency cellular uptake of current nanoparticles, their applications in the biomedical field

are limited. Herein, it clearly shown that novel mesoporous silica nanoparticles can be easily exhibited superior cellular uptake property

Biography

Dr. Fadi Ibrahim Ahmed El-Rabia School, Kuwait, 1994, (94.1%) Bachelor of Science, Chemistry, 1998, (very good) El-Mansoura University (Egypt) Master's in chemistry, 2007, (GPA 4) (practical works within 9 month). Kuwait University, (Kuwait) Doctorate Degree in Chemistry, 2012, (GPA 3.93) Kuwait University, (Kuwait) Related to novel polymer based hydrogen storage materials, 2013, Kuwait University, (Kuwait).

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