Frontiers' Journals Call for Papers on Nanotech Solutions to Tackle COVID-19

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Frontiers' journals call for papers on Research Topic that aims at highlighting the major contribution that nanotechnology solutions can bring to mitigate the acute and chronic effects of COVID-19 pandemic from the detection, protection, medication point of view.

Coronavirus disease 2019 (COVID-19) is an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). At the time of writing on the 7th of April 2020 the WHO indicates that 211 countries, areas, or territories are affected, with around 70'000 deaths worldwide. It is evident that the scientific community must come together to mitigate the many clinical and public health management challenges.

The COVID-19 outbreak poses global pressure on modern societies and particularly healthcare-related infrastructure. Nanotechnology brings new prospects for developing affordable and scalable detection methods, safe personal protection equipment, and new effective medical solutions.

Nanotechnology in Battle Against Coronavirus ...

Nanosensors are already a reality, showing great ability to detect bacteria and viruses at very low concentrations and thus warn clinicians even before symptoms have shown or on patients with very low viral loads.

A nano-filter has been recently developed that is claimed to maintain filtering efficiency, even after hand washing, through the use of nanofibers. This reusable nano-filtered face mask could help to relieve the challenges arising from the supply shortage of face masks.

Researchers have been investigating the potential of using nanoparticles to treat bacterial and viral infections for years now. Gold nanoparticles, for example, are made to attach to viruses such as Ebola or influenza and by heating the particles with certain infrared wavelengths, the nanoparticles can then destroy the structure of the virus. Nanoparticles can be used to deliver drugs as well.

This Research Topic aims at highlighting the major contribution that nanotechnology solutions can bring to mitigate the acute and chronic effects of COVID-19 pandemic from the detection, protection, medication point of view.

We particularly welcome contributions that include, but are not limited to, the following topics and their application for addressing COVID-19 challenges:

- Nanosensors
- Biomedical Nanotechnology
- Nanomaterials

Due to the exceptional nature of the COVID-19 situation, Frontiers is waiving all article publishing charges for COVID-19 related research.

Read the original article on Frontiers.