Journal of Nanomaterial and Molecular Nanotechnology

Editorial Note

A SCITECHNOL JOURNAL

Nanobiosensor

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Editorial Note

The planet has been shocked by a new pandemic known as COVID 2019 (coronavirus disease 2019). This pandemic situation has arisen as a result of the massive death toll caused by SARS-CoV-2 infection, which causes pneumonia-associated respiratory syndrome all over the world. It is regrettably observed to be spreading rapidly across the world on a daily basis due to the need for rapid diagnosis, adequate care, and proven treatment. Scientists have been working to decipher the genome code since November 2019. However, scientists (both physical and biological) around the world are currently working to develop specific antiviral drugs and physical therapies to combat COVID. In recent years, scholars from all over the world have paid attention to much emphasis on the synthesis of various types of MNPs and make a concerted effort to improve electrical and magnetic properties, and in addition to their structural similarity and tunability for numerous applications in biotechnology, environmental, biomedical, material science, and engineering considerations Because of their small size, strong monodispersity, superparamagnetic activity, high coercivity, low Curie temperature, and high magnetic susceptibility, biofunctionalized. MNPs have recently been successfully used in the detection of bio pathogens such as bacteria and viruses all over the world. Furthermore MNPs are now commonly used to identify dangerous respiratory viral pathogens. GMR biosensors, in combination with MNPs, are a powerful tool for high sensitivity, real time electrical readout, and rapid biomolecule detection. They were first introduced by Baselt in 1998 and have since been developed by a number of research groups. The basic Detecting SARS CoV 2 pathogens quickly and accurately to prevent the spread of the COVID-19 pandemic has become an unavoidable requirement for us during the COVID19 pandemic of giant magneto resistance based immunoassay detection is to change the electrical resistance from high to low. The governing factor for changing the electrical resistance is the spin collision at the interface. As a result, as the spin collision increases, the electrical resistance decreases, increasing the magnetization at the MNP protein interface, and thus by proper calibration to the uninfected body, this magnetic signal can be the measuring parameters in the said detection device in its operation The GMR biosensor based platform is more sensitive, takes less time, and is less expensive than other testing systems. A magnetic tag is used in GMR biosensors Compared to other sensing modalities this has some main advantages. To begin with, biological samples (blood, urine, serum, etc.) have no visible magnetic material, resulting in a sensing platform with a very low background level and thus lower detection limit of analytes. Second, the sensors can be arrayed and multiplexed so that a panel of proteins or nucleic acids can be analysed in a single assay. Finally, the sensors can be mass produced at a low cost in order to be deployed in a one-time use disposable format. Magnetic nanobiosensors are a compelling and cost effective alternative to optical techniques for these purposes. In addition, the GMR biosensor is significant because it can be integrated into a compact, mobile computer for on-site use. The magnetic nanobiosensor, especially the GMR biosensor, in combination with MNPs, could be a very sensitive and promising nanobiosensing system for detecting SARS CoV2 S protein and ssRNA from biological samples (blood, urine, serum, etc.) This is being developed as an alternate method for separating COVID 19 patients and thereby protecting the epidemic of COVID 19 so that the world can return to normal.

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Received: April 02, 2021 **Accepted:** April 13, 2021 **Published:** April 29, 2021

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