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A Nonclinical Spectroscopic Approach for Diagnosing Covid-19: A Concise Perspective

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Abstract

With the COVID-19 outbreak, many challenges are posed before the scientific world to curb this pandemic. The diagnostic testing, treatment, and vaccine development for this infection caught the scientific community's immediate attention. Currently, despite the global proliferation of COVID-19 vaccination, the specific treatment for this disease is yet unknown. Meanwhile, COVID-19 detection or diagnosis using polymerase chain reaction (PCR)-based methods is expensive and less reliable. Moreover, this technique needs much time to furnish the results. Thus, the elaboration of a highly sensitive and fast method of COVID-19 diagnostics is of great importance. The spectroscopic approach is herein suggested as an efficient detection methodology for COVID-19 diagnosis, particularly Raman spectroscopy, infrared spectroscopy, and mass spectrometry.

Keywords: COVID-19; coronavirus; polymerase chain reaction; spectroscopy.

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