Corona virus(SARS-CoV-2) detection in real time and development of simple microwave sensor

To deign a microwave based sensor for real time detection of corona virus (SARS-CoV-2), this proposal is divided into two different parts:

First Part:

In the first part, an extensive investigation of saliva, mucus and urine samples of human body containing SARS-CoV-2 under microwave electric field at different temperatures is performed to estimate various useful parameters. Estimated parameters are intermediary vehicle for understanding, explaining, and empirically relating certain physico-chemical properties of corona virus (SARS-Cov-2). This study will give almost real time data related to existence of corona virus compare to existing culture based, molecular study in form of RT-PCR, QRT-PCR or immunology-based detection mechanism such as ELISA etc. With help of my newly developed model, the prediction of corona virus can be performed effectively and accurately under broadband electromagnetic field. To have extensive study on different sets of sample as well as collection of samples, an effective collaboration is required between academic institute, medical institutions and experts from related field. This newly introduced mechanism can be treated as an alternate useful solution of the problem related to inadequate corona virus (SARS-CoV) testing facility in our country.

Second Part:

Depending on above mentioned detailed studies, an important correlation will be developed between various physico-chemical properties of corona virus (SARS-Cov-2). From these two important factors(i.e investigation of sample and development of correlation), a simple and rapid microwave based sensor is going to design with features of increased specificity, increased reliability , real time data and Low cost .