

Supplementary Information

Destruction Mechanisms of Ozone over SARS-CoV-2

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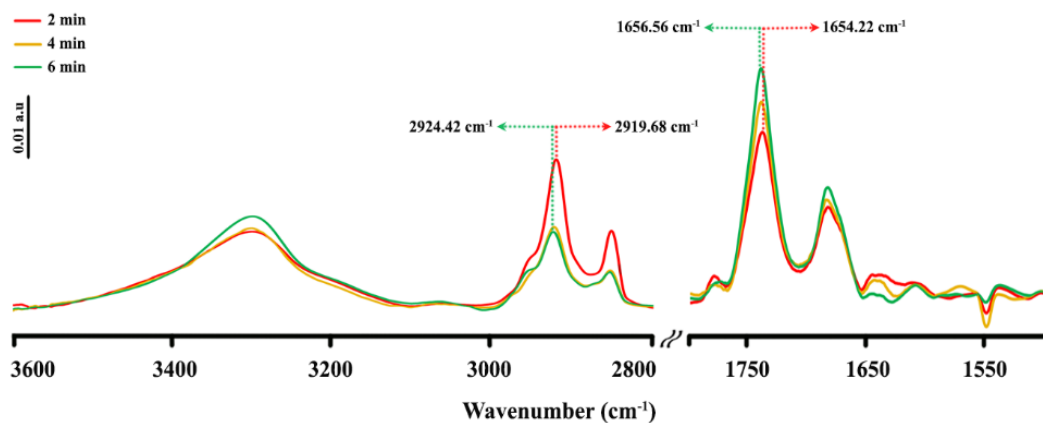


Figure S1. The ATR-FTIR spectra shows the effect of ozone on the virus at different times (2, 4, and 6 minutes). The ATR-FTIR spectra of the virus after 2 minutes (red), 4 minutes (yellow), and 6 minutes (green) of exposure times.

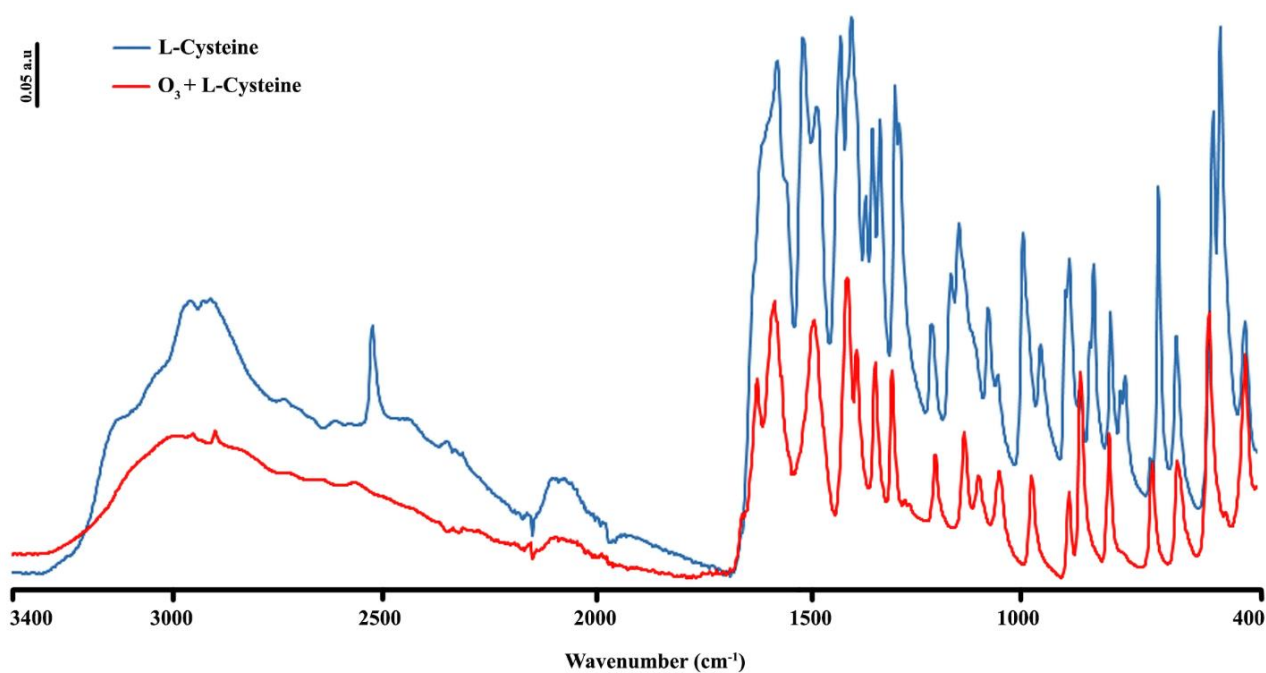


Figure S2. ATR-FTIR spectra to show the conversion of cysteine to cystine.

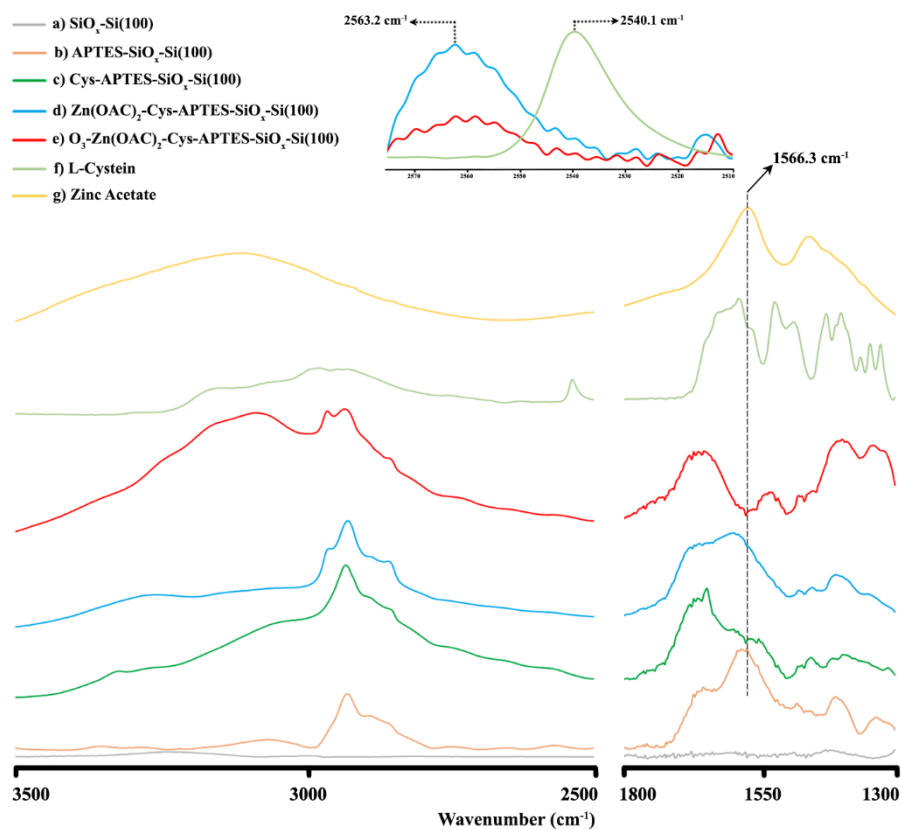


Figure S3. ATR-FTIR spectra to investigate the effect of ozone on Zn bound to cysteine: **a.** IR-Spectra at each modification step, ATR-FTIR spectra of $\text{Zn(OAc)}_2\text{-Cys-APTES-SiO}_x\text{-Si(100)}$ functionalized surfaces exposed to ozone.

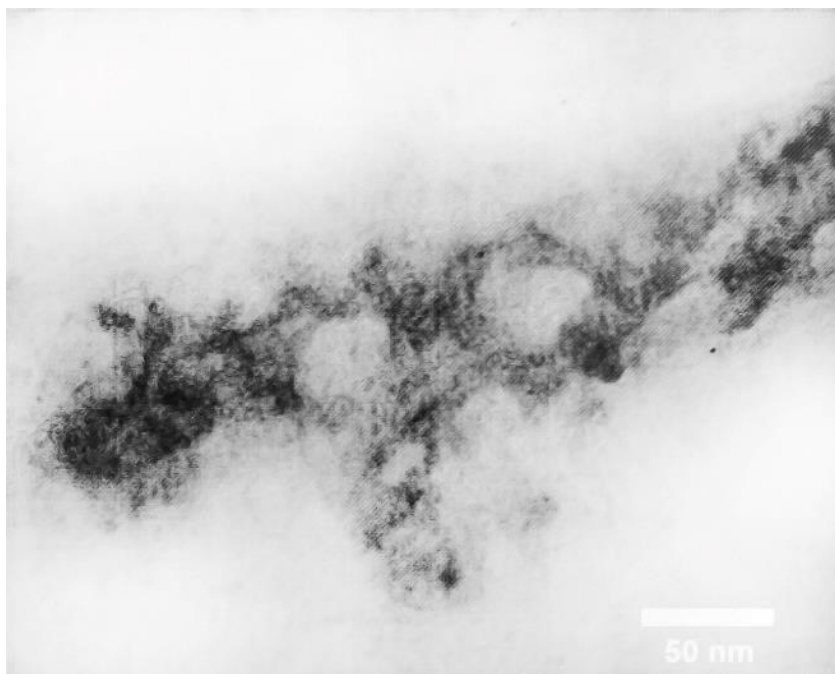


Figure S4. Electron microscopic image of two interconnected viral particles that suggest virus aggregation at 2 minutes of exposure time (77500x).

Table S1. pH decreases in viral suspension with increasing ozone exposure time

Exposure Time(minutes)	pH
2	6.5
3	5.6
4	5.1
5	4.5
6	4.2