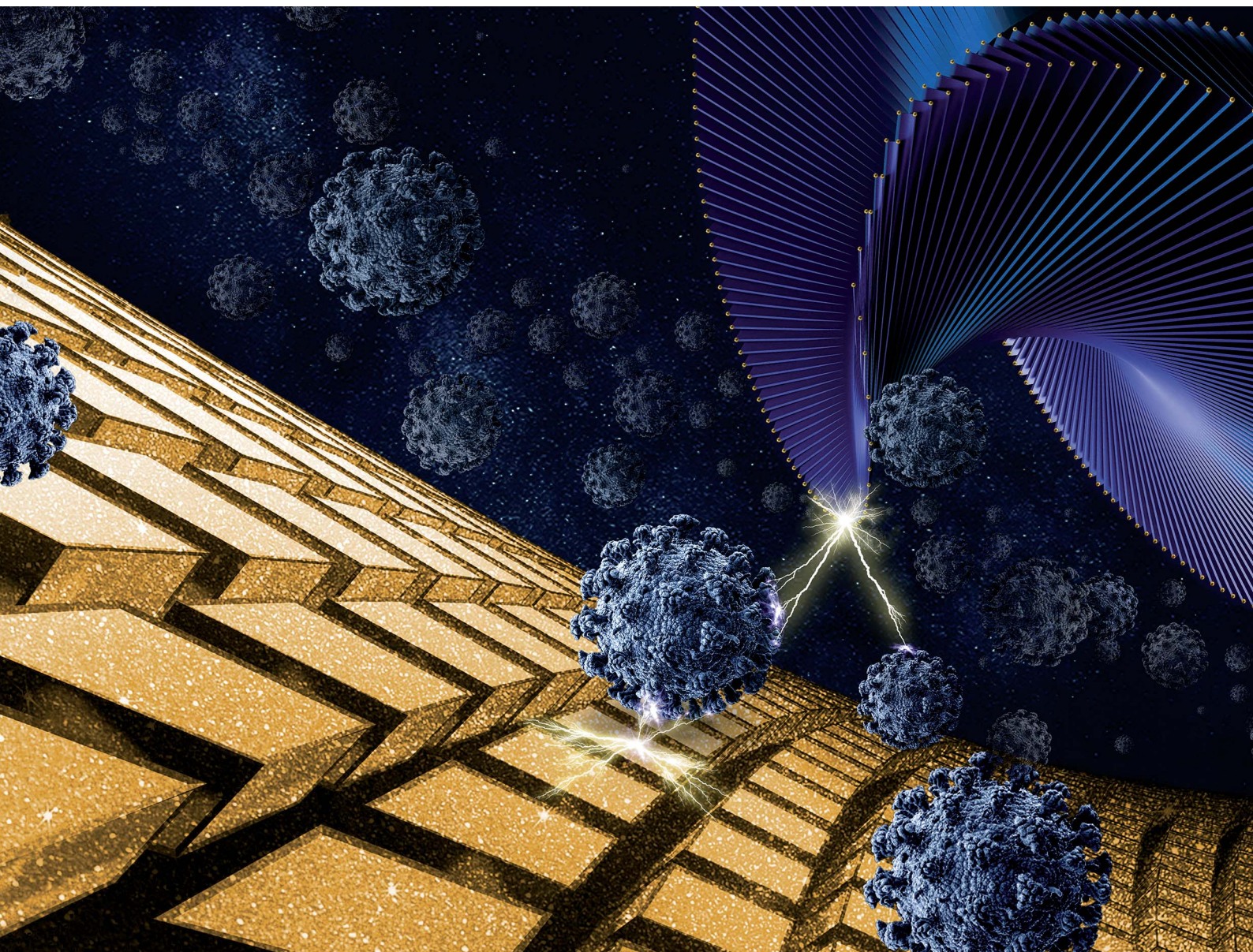


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## EDGE ARTICLE

Essam M. Dief and Nadim Darwish  
SARS-CoV-2 spike proteins react with Au and Si, are electrically conductive and denature at  $3 \times 10^8 \text{ V m}^{-1}$ : a surface bonding and a single-protein circuit study