Electronic Supplementary Material (ESI) for Materials Advances.
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Supplementary Information

A one-step method for generating antimicrobial nanofibre meshes via coaxial electrospinning

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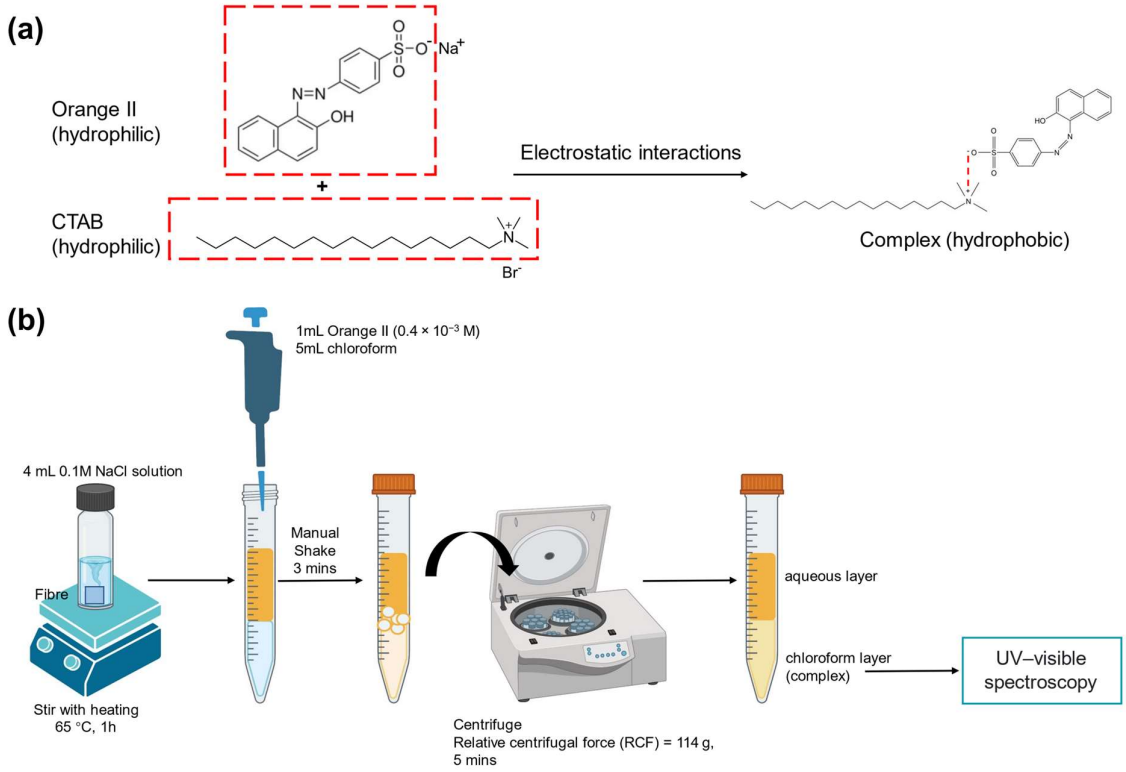

Fig. S1 (a) Illustration of the interaction between orange II and CTAB; (b) Schematic diagram of the ion-paring indirect spectrophotometric method (chloroform extraction). Created with BioRender.com

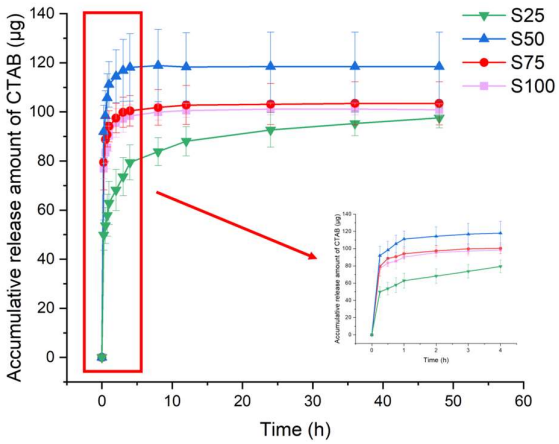

Fig. S2 Cumulative release amount of CTAB (μg) from the electrospun formulations over 48 h, with an inset showing the release profile for the first 4 hours. The maximum theoretical release amount of CTAB from S25, S50, S75, and S100 formulations is 100.2 ± 2.0 μg, 113.4 ± 9.5 μg, 96.5 ± 7.4 μg and 95.6 ± 5.3 μg, respectively. Data are given from three independent experiments as mean ± S.D.

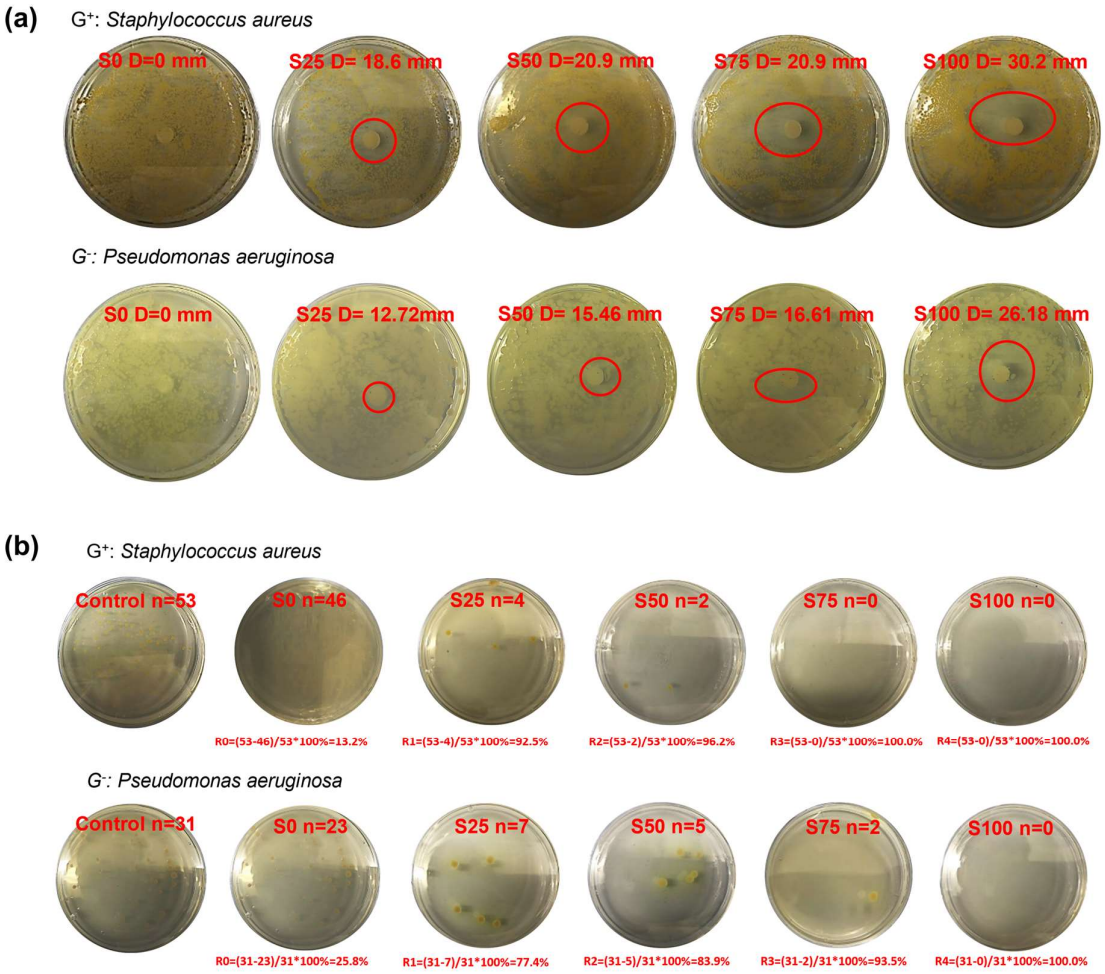

Fig.S3 Exemplar images from (a) agar diffusion experiments (b) colony counting experiments.

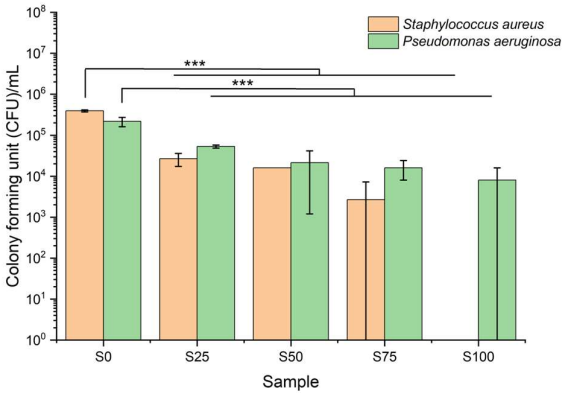

Fig. S4 The results of the S0-S100 formulations in the colony-counting method, expressed as CFU/mL. Positive controls for *Staphylococcus aureus* and *Pseudomonas aeruginosa* were $4.35 \times 10^5 \pm 5.68 \times 10^4$ CFU/mL and $2.53 \times 10^5 \pm 5.62 \times 10^4$ CFU/mL, respectively. Single factor ANOVA with post hoc Tukey's test. Statistical significance: *** (α=0.01, p-value ≤0.001).

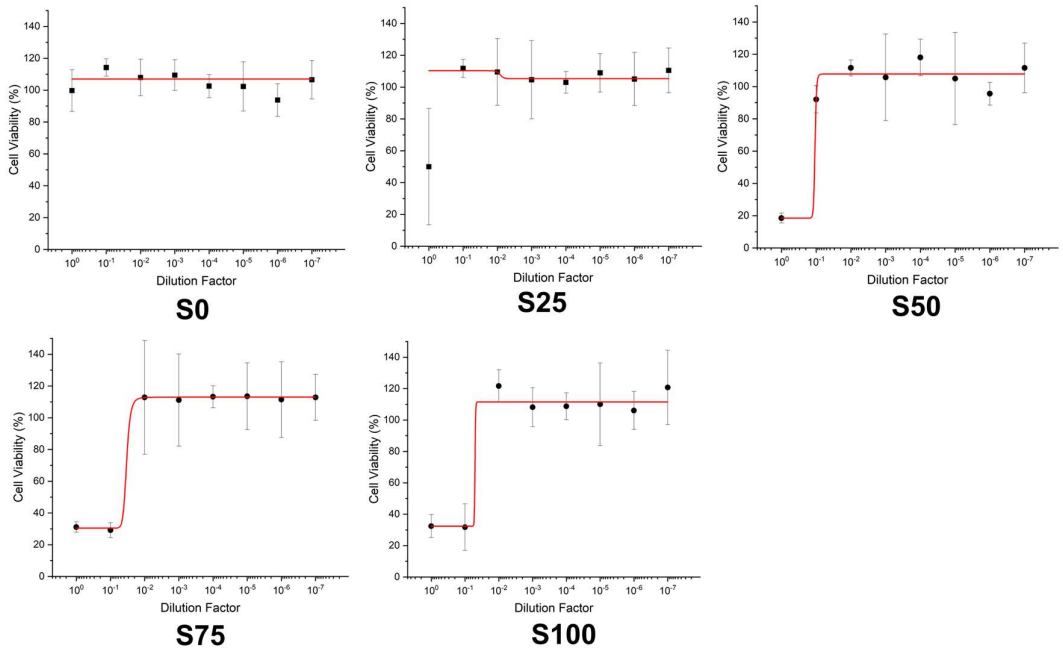

Fig.S5 Cytotoxicity data (dilution factor versus cell viability) for samples S0 to S100 against the Vero E6 cell line, where cell viability (%) is calculated relative to negative control group data (untreated cells). The data are applicable to both RSV and SARS-CoV-2 cases. Positive cytotoxicity results are observed in the row corresponding to dilution factor $=10^{0}$ for S1 and the rows corresponding to dilution factor = 10^{0} and 10^{-1} for S25, S50 and S100. A positive result refers to the presence of dead cells (decreased cell viability) resulting from cytotoxicity, and the dilution factor = initial volume / final volume.