

Supplemental information

Graphene nanoplatelet and graphene oxide

functionalization of face mask materials

inhibits infectivity of trapped SARS-CoV-2

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SUPPORTING INFORMATION

	G	GO
ID/IG (Raman spectroscopy)	0.127	1.1
Thickness (Atomic Force Microscopy)	4-6 layers	1 layer
Lateral Dimension (Atomic Force Microscopy)	3 μm	1 μm
C/O atomic ratio (X ray Photoelectron Spectroscopy)	--	1.9

Table S1 Features of G+ and GO used in the experimental procedures **Related to METHODS**

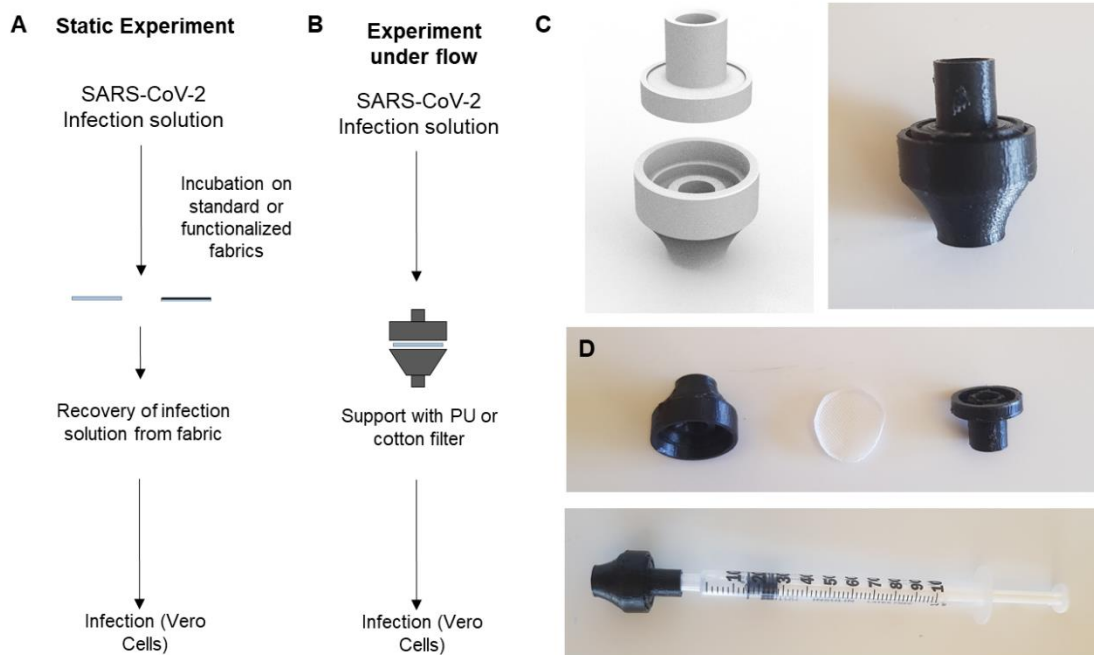


Figure S1 Schematic representation of the experimental design and materials used to assay anti-viral properties of non-functionalized and Graphene (G) or Graphene oxide (GO) functionalized materials. **Related to Figure 3** (A) In the static experiment, viral suspensions were directly incubated with the test materials and the recovered solution was used to infect VERO cells. (B) In the flow filtration experiment, the viral suspension was filtered through material held in the custom support and the post-filtration eluate was used to infect VERO cells. (C-D) A custom 3D-printed device was used to hold the non-functionalized and G- or GO- functionalized materials to filter SARS-CoV-2 viral particle suspensions.

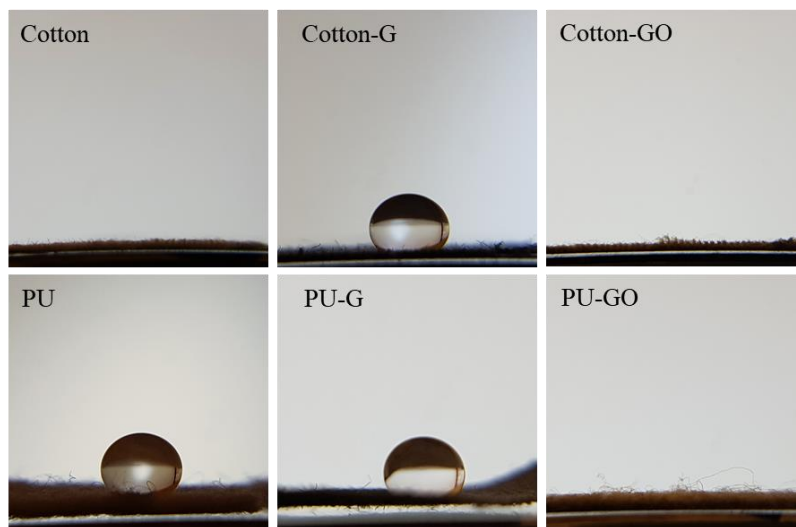


Figure S2 Hydrophobicity of fabric samples. **Related to Figure 5.** Images show the hydrophobicity of each material before after functionalization with G or GO.