

# Inhibition of SARS-CoV-2 Alpha Variant and Murine Noroviruses on Copper-Silver Nanocomposite Surfaces

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**Table S1.** EDX quantitative chemical composition of sample A in a concentration descending manner.

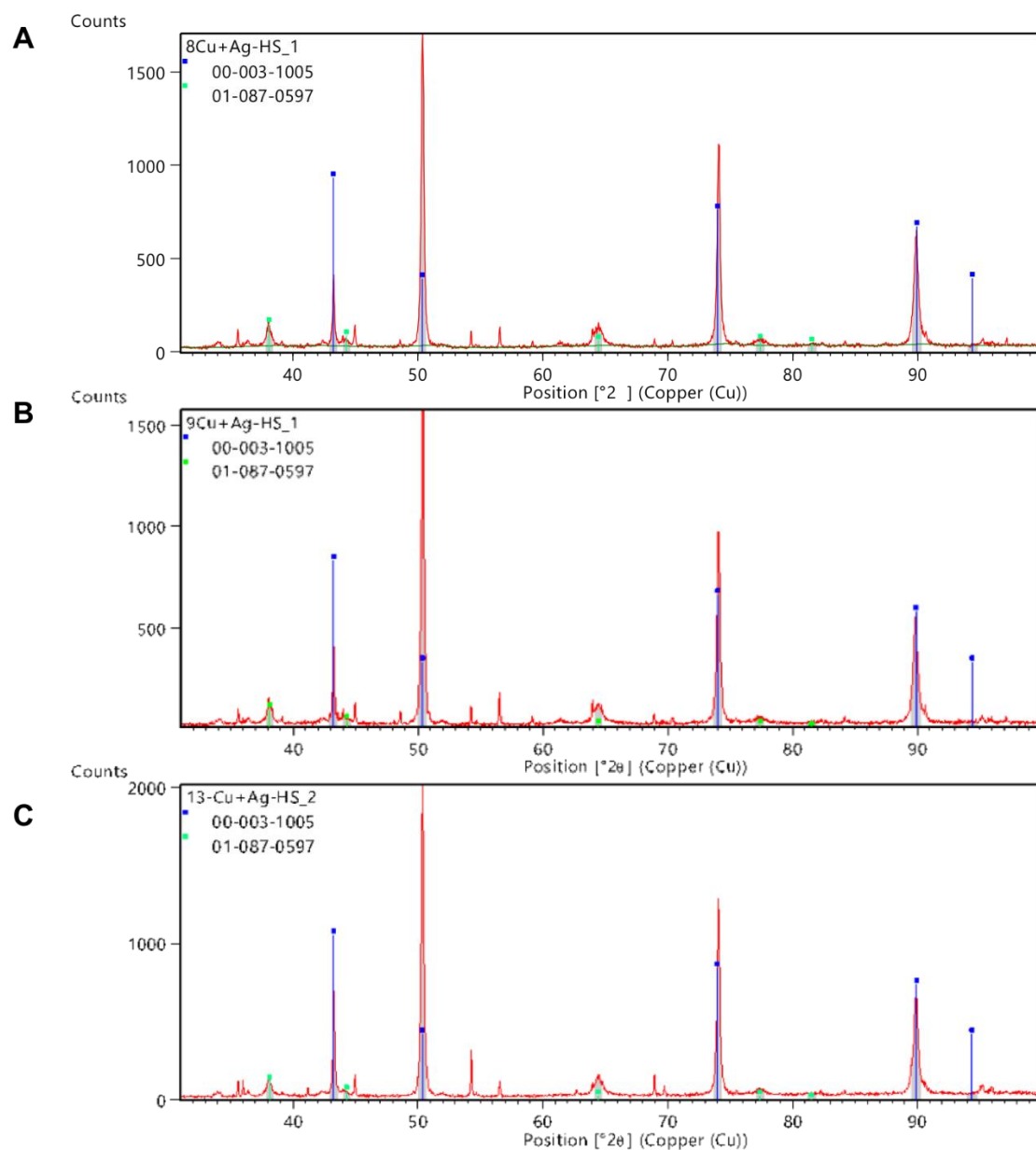
Element	Weight (wt)%	Atomic %	Error %
Cu K	56	38.6	1.6
Ag L	27.8	11.3	1.1
C K	9.3	34	15.1
O K	4.5	12.4	15.1
Al K	1.2	2	1.8
Sn L	1.2	0.4	4.6
Si K	1	1.6	1.9

**Table S2.** EDX quantitative chemical composition of sample B in a concentration descending manner.

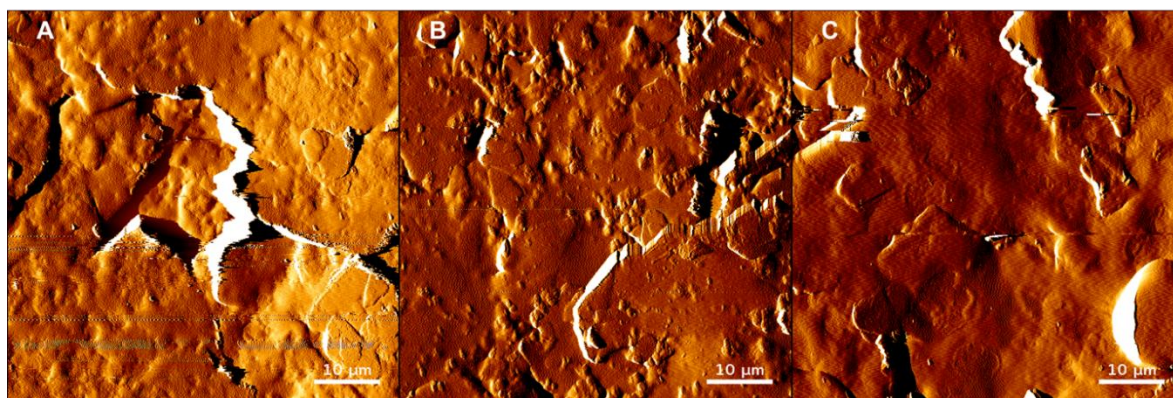
Element	Weight (wt)%	Atomic %	Error %
Cu K	59.1	30	3
C K	20.9	56.2	8.5
Ag L	12.7	3.8	1.6
O K	3.9	7.8	8.6
Sn L	2	0.6	2.7
Al K	0.8	0.9	7.9
Si K	0.7	0.8	6.9

**Table S3.** EDX quantitative chemical composition of sample C in a concentration descending manner.

Element	Weight (wt)%	Atomic %	Error %
Cu K	48.2	19.8	3
C K	30.9	67.1	8.2
Ag L	11.4	2.8	1.9
O K	4.7	7.7	9
Sn L	2.6	0.6	3.3
Al K	1.1	1	6.9
Si K	1	1	5.9



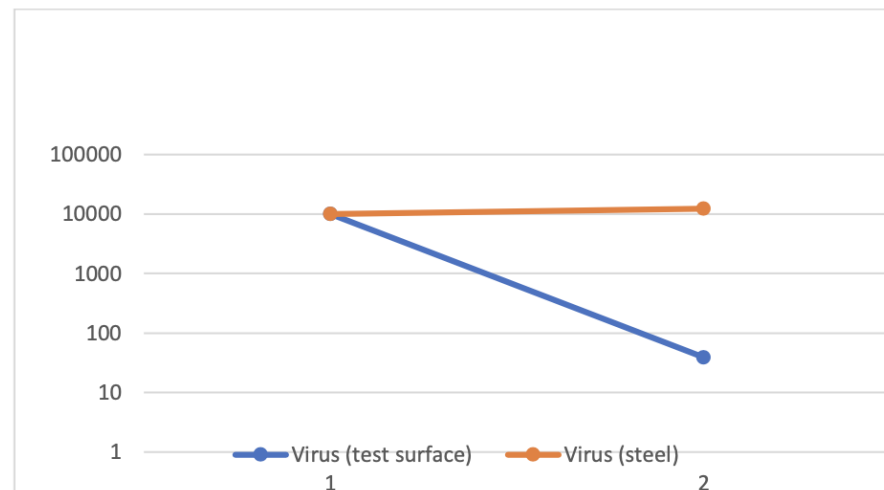
**Figure S1.** XRD patterns of Cu-Ag nanocomposite surfaces using Cu K $\alpha$  radiation over a 30° to 100° 2 $\theta$  range with blue and green lines indicating Cu and Ag diffraction peaks with ICDD reference patterns for Cu and Ag, respectively.



**Figure S2.** AFM amplitude error images showing the rough surfaces of samples A, B, and C.

**Table S4.** Culture results expressed as the presence of cytopathic effects (CPE) on cells and Ct values of the RT-PCR performed on post-culture media.

-	1 min		5 min		10 min	
-	CPE	Ct values	CPE	Ct values	CPE	Ct values
<b>Sample A</b>	+	No Ct	-	No Ct	-	34.52
<b>Sample B</b>	-	No Ct	+	34.82	+	No Ct
<b>Glass</b>	+++	16.87	+++	12.01	+++	14.50



**Figure S3.** A logarithmic scale (10 000 equates  $\log_4 \text{TCID}_{50}$ ) showing no reduction in infectious murine norovirus (MNV) amount on stainless steel (as a negative control) after 30 min in comparison with the observed tremendous viral reduction on the tested surface (sample C) in a preliminary investigation.