

## SUPPORTING INFORMATION

### Porous aluminium decorated with rhodium nanoparticles – preparation and use as platform for UV SERS

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#### Supporting Note #1 – Additional SEM micrographs

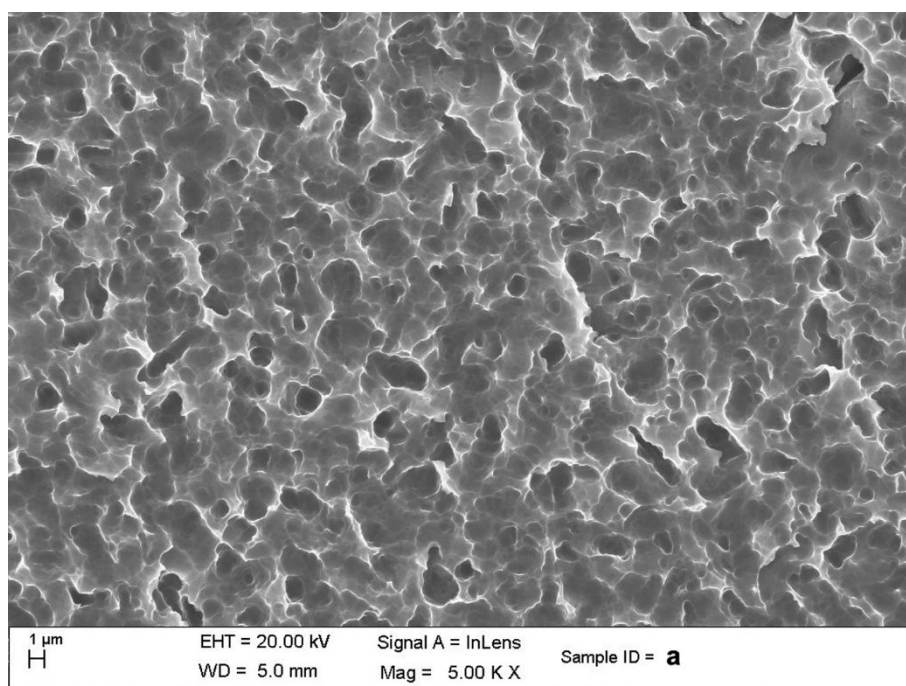
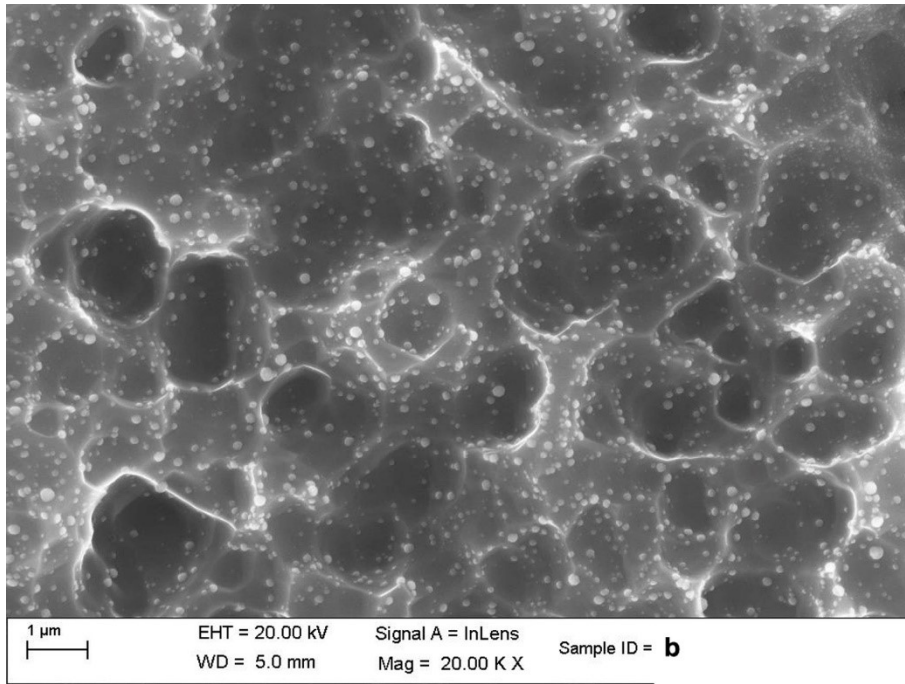
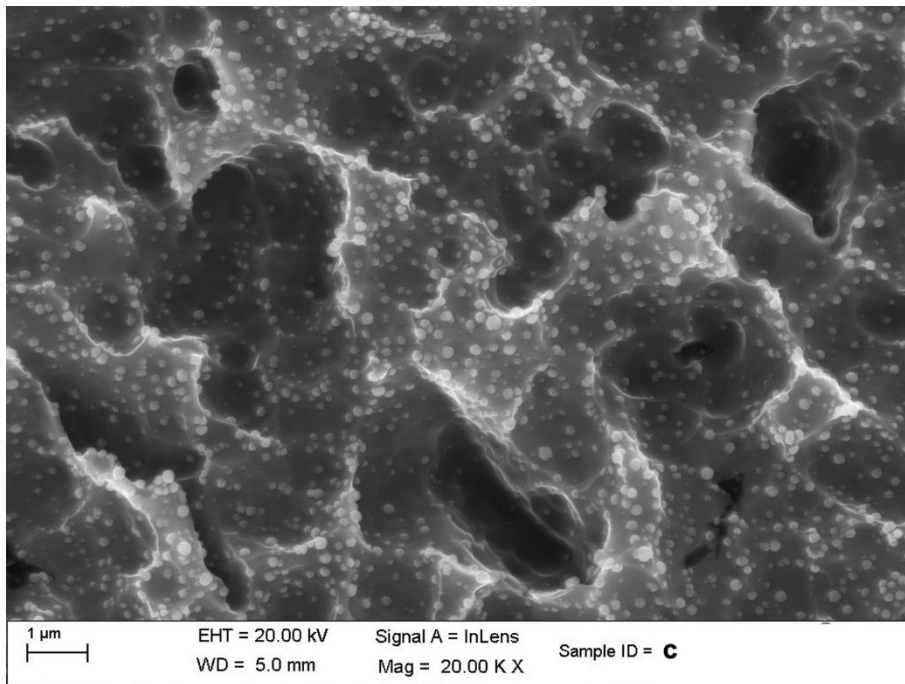


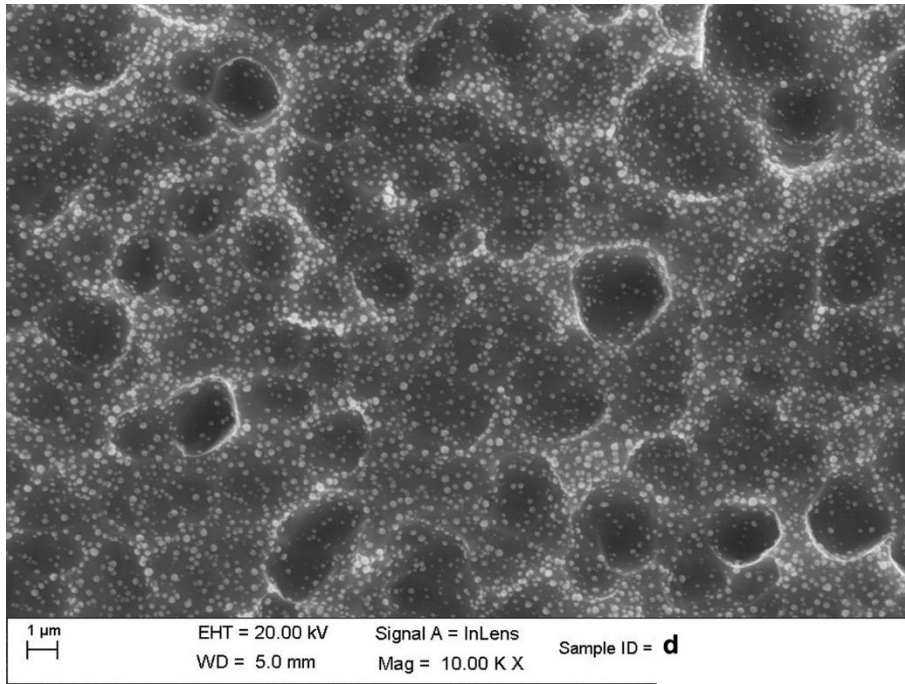
Fig. S1. SEM micrograph of the prepared sample (a)



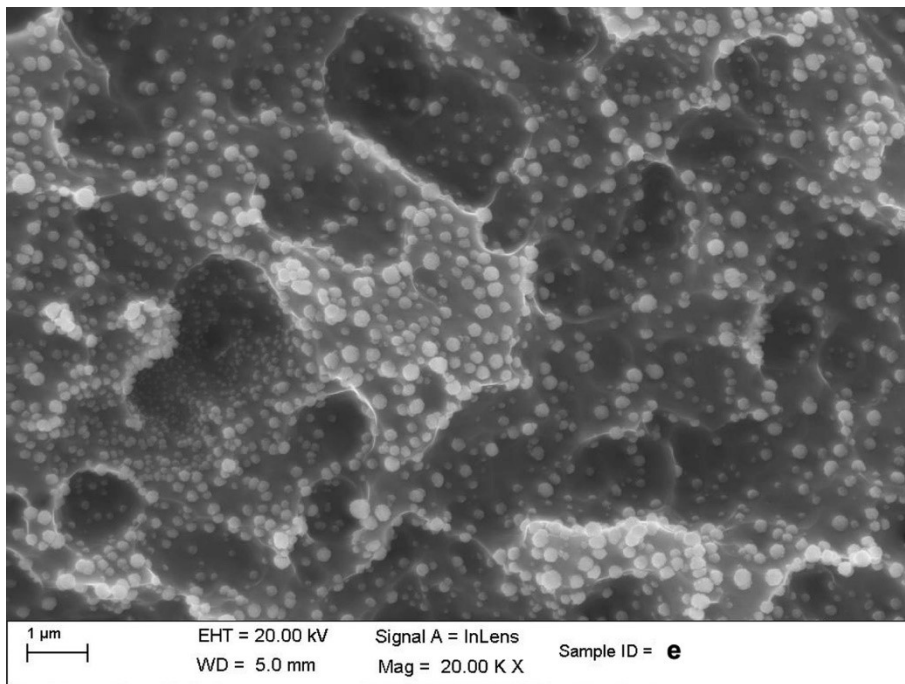
**Fig. S2.** SEM micrograph of the prepared sample (b)



**Fig. S3.** SEM micrograph of the prepared sample (c)



**Fig. S4.** SEM micrograph of the prepared sample (d)



**Fig. S5.** SEM micrograph of the prepared sample (e)

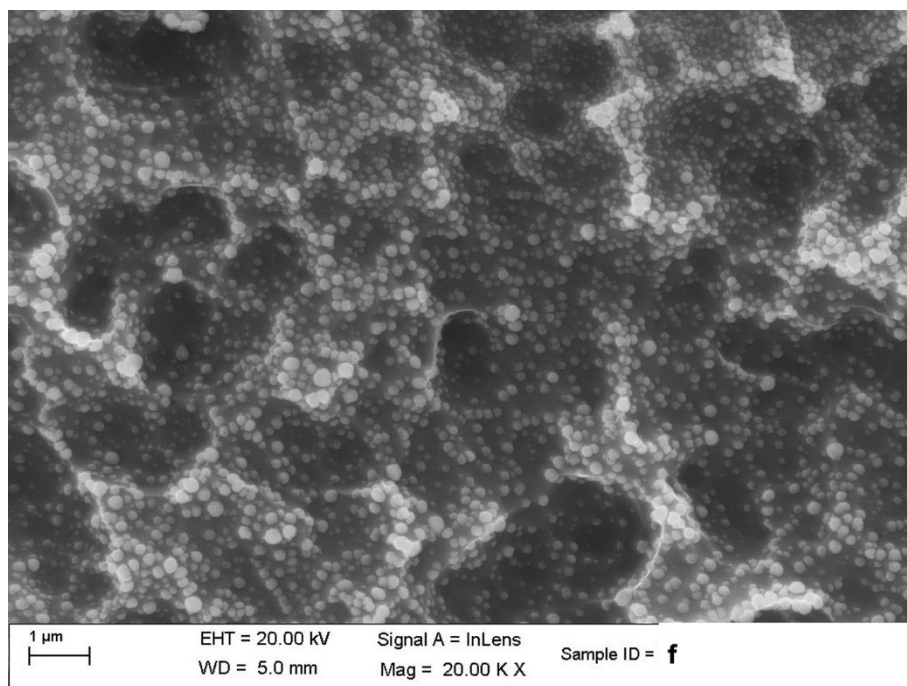


Fig. S6. SEM micrograph of the prepared sample (f)

### Supporting Note #2 – AFM Maps

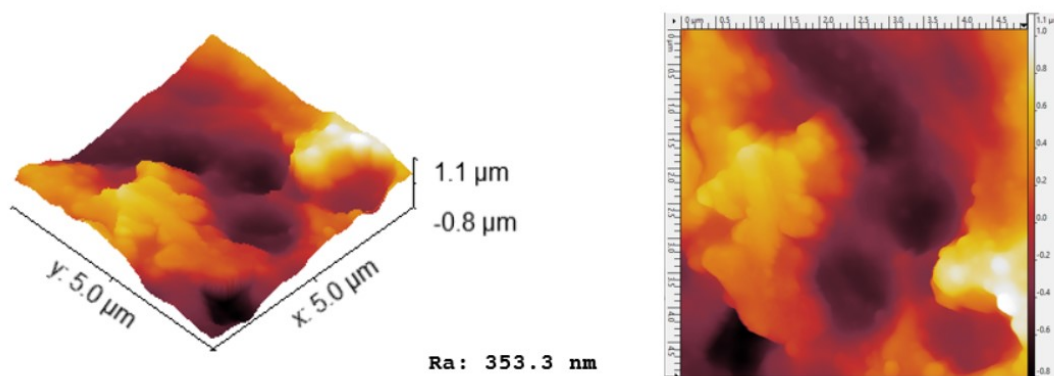
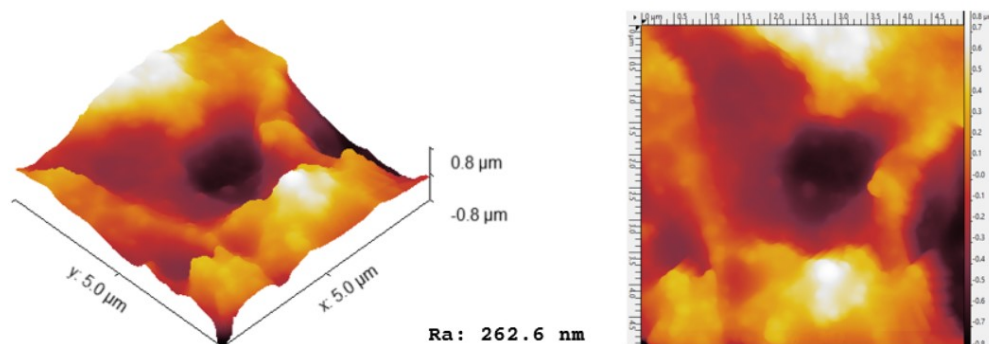
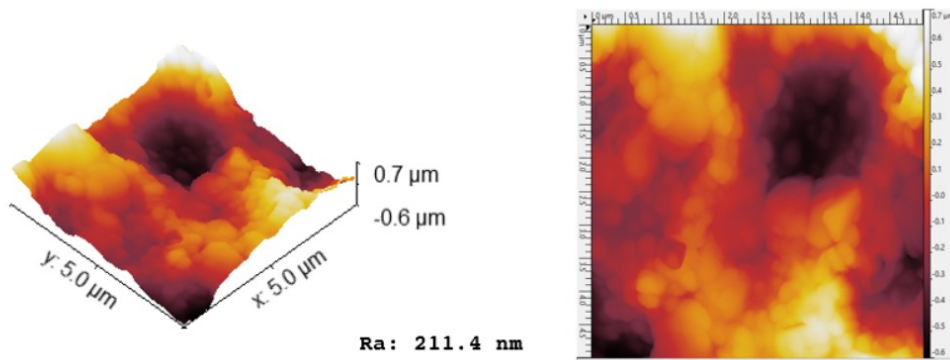


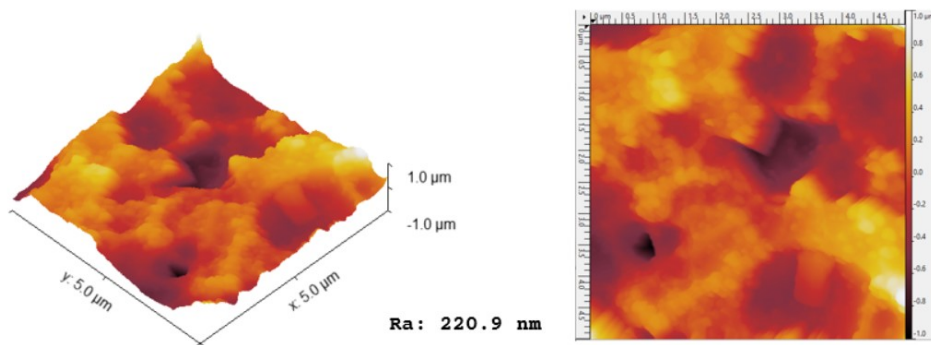
Fig. S7. AFM map of the prepared sample (b)



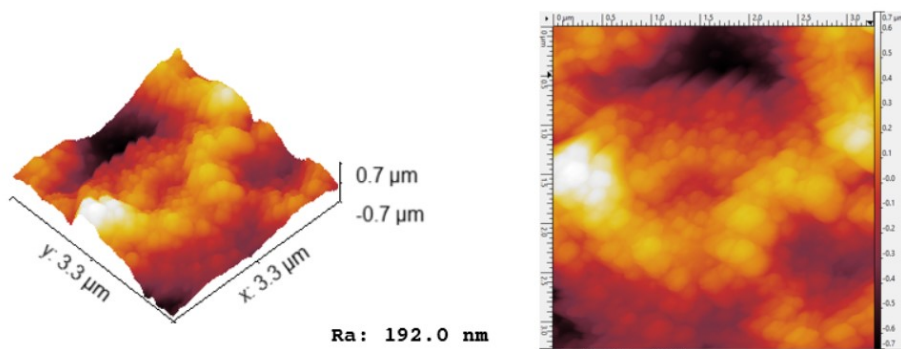
**Fig. S8.** AFM map of the prepared sample (c)



**Fig. S9.** AFM map of the prepared sample (d)

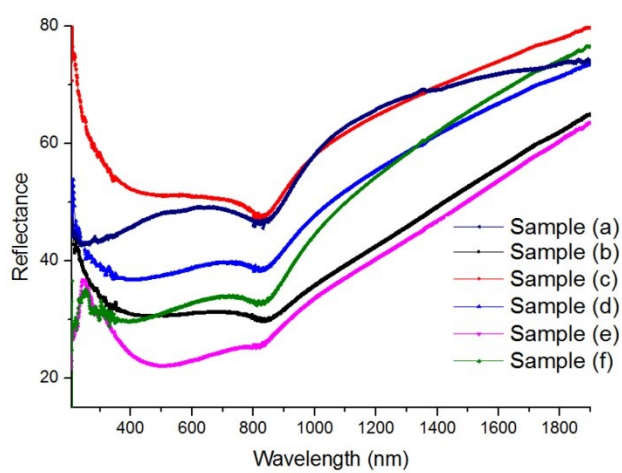


**Fig. S10.** AFM map of the prepared sample (e)



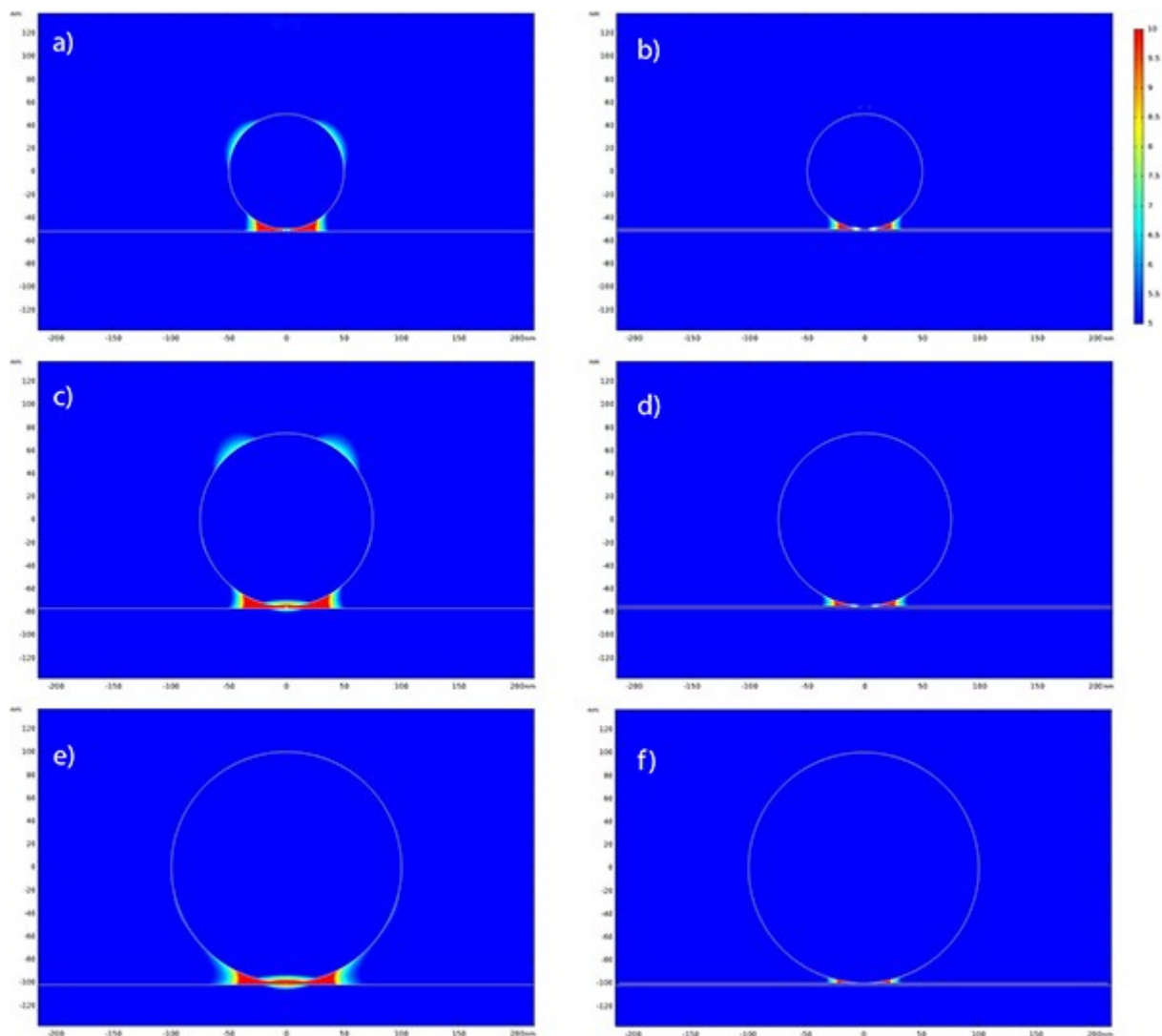
**Fig. S11.** SEM micrograph of the prepared sample (f)

### Supporting Note #3 – Reflectance Spectra



**Fig. S12.** Total Reflectance spectra of the samples.

### Supporting Note #4 – Additional FEM simulations



**Fig. S13.** FEM simulations of a Rh nanoparticle deposited on an Al film. Excitation wavelength 266 nm (illumination from the top). Electromagnetic field enhancement factor. (a) Rh nanoparticle with a diameter of 100 nm; (b) Rh nanoparticle with a diameter of 100 nm on a film of Al considering an additional 2 nm Al<sub>2</sub>O<sub>3</sub> layer in the gap; (c) Rh nanoparticle with a diameter of 150 nm; (d) Rh nanoparticle with a diameter of 150 nm on a film of Al considering an additional 2 nm Al<sub>2</sub>O<sub>3</sub> layer in the gap; (e) Rh nanoparticle with a diameter of 200 nm; (f) Rh nanoparticle with a diameter of 200 nm on a film of Al considering an additional 2 nm Al<sub>2</sub>O<sub>3</sub> layer in the gap.