Supporting information

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1. SEM image of thin film silver

**Figure S1.** Scanning electron microscopy image of a thermally evaporated silver thin film.
2. SEM image of SNW

**Figure S2.** Scanning electron microscopy images of the top-view of an a) AAO template, b) silver nanowire array and c) side-view image of the silver nanowire array.
3. Stability study of silver nanograss as a SERS substrate

![Graph](image)

**Figure S3.** Plot of SERS intensity (1142 nm) of p-ATP (10⁻⁵ M) deposited silver nanograss vs time. The laser (λ = 633 nm) on the sample was 500 μW and the integration time was 10 s.
4. Schematic route of the preparation of patterned silver nanograss

![Schematic diagram of preparation process](image)

**Figure S4.** Schematic route of preparation of patterned silver nanograss.
5. CV at various concentrations of hydrogen peroxide

**Figure S5.** Cyclic voltammograms of a) thin film silver, b) SNG0.8, c) nanograss and d) SNW in the presence of H$_2$O$_2$ at various concentrations (from the top: 0, 0.01, 0.1, 1, 2 and 3 mM) under 1x PBS solution (pH 7.0). Scan rate = 50mV/s.