## Supplementary information:

## Large-scale Silver Nanoislands Stabilized by Magnetron-sputtered Polytetrafluoroethylene Film as Substrates for Highly Sensitive and Reproducible Surface-enhanced Raman Scattering (SERS)



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Fig. S1. RSD of spectral maps taken for different MB concentrations on different substrate batches (A, B and C) with all parameters optimised. The maps in graphs A, B and C1 were measured 2 days after the substrate preparation and the maps in graph C2 were measured 5 months after the substrate preparation (being stored in normal laboratory conditions). The meaning of the  $V_{i1}$  coefficients is the same as in Fig. 5.



Fig. S2. RSD of spectral maps taken on different areas of the A batch for different MB concentrations. The meaning of the V<sub>i1</sub> coefficients is the same as in Fig. 5.



Fig. S3. Comparison of SERS and non-SERS (resonance Raman) spectra of MB. Non-SERS spectrum is averaged from 1000 spectra taken across the drop. Spectra are offset for clarity, but the relative proportion between corresponding band intensities (above spectral background) is maintained.