Supplementary information

Plasmonic nanopapers: flexible, stable and sensitive multiplex PUF tags for unclonable anti-counterfeiting applications

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**Fig. S1.** Zeta potential of the building blocks: AgNCs (red curve) and CNFs (black curve).

**Fig. S2.** Three the most common shapes of cubes with different orientations.
Fig. S3. The plasmonic nanopaper and A4 paper with the ultrasonic-resistant experiment: (a) before and (b) after ultrasonication for 30 min with power of 400 W.

Fig. S4. Spot-to-spot SERS spectra of 1 µM benzenethiol adsorbed on the plasmonic nanopaper.
**Fig. S5.** Photographs of the Lycurus Cup in reflected light (left) and transmitted light (right) (from.britishmuseum).