

Fig. S1. LSPR of (A) Ag colloids recorded in transmission mode and of (B) Ag colloidal paste recorded in reflectance mode.

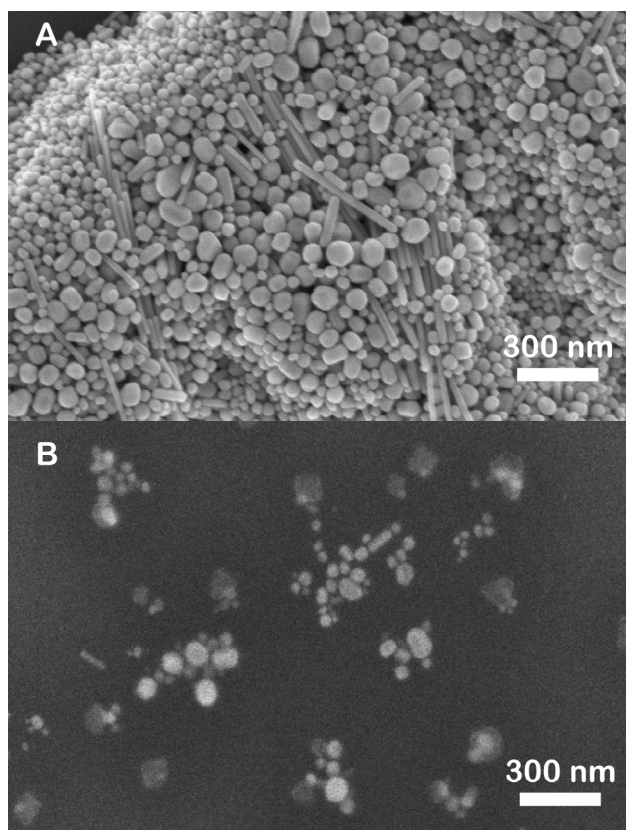


Fig. S2 SEM micrographs of (A) Ag colloidal paste and (B) Ag colloids.

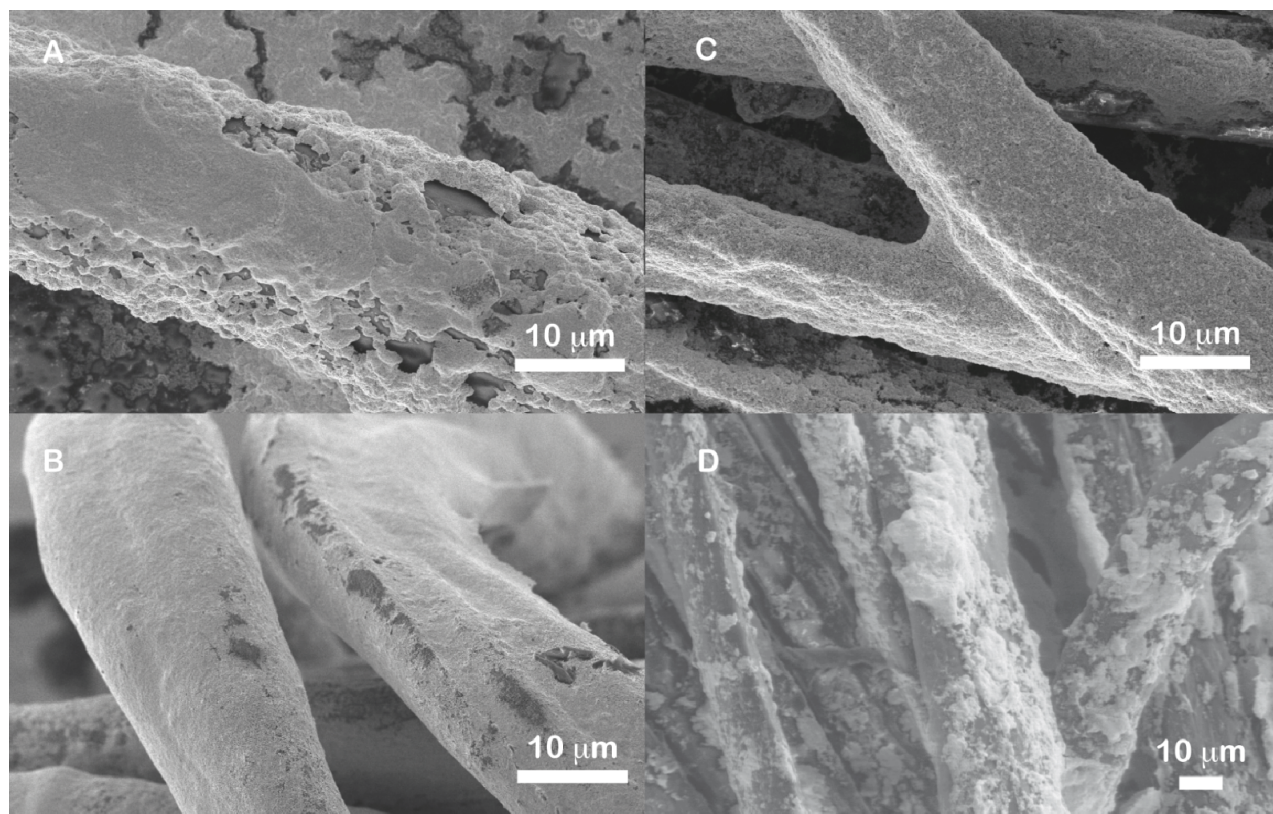


Fig. S3 SEM micrographs at high magnification of natural fibers coated with Ag colloidal paste: (A) wool, (B) silk, (C) cotton and (D) flax.

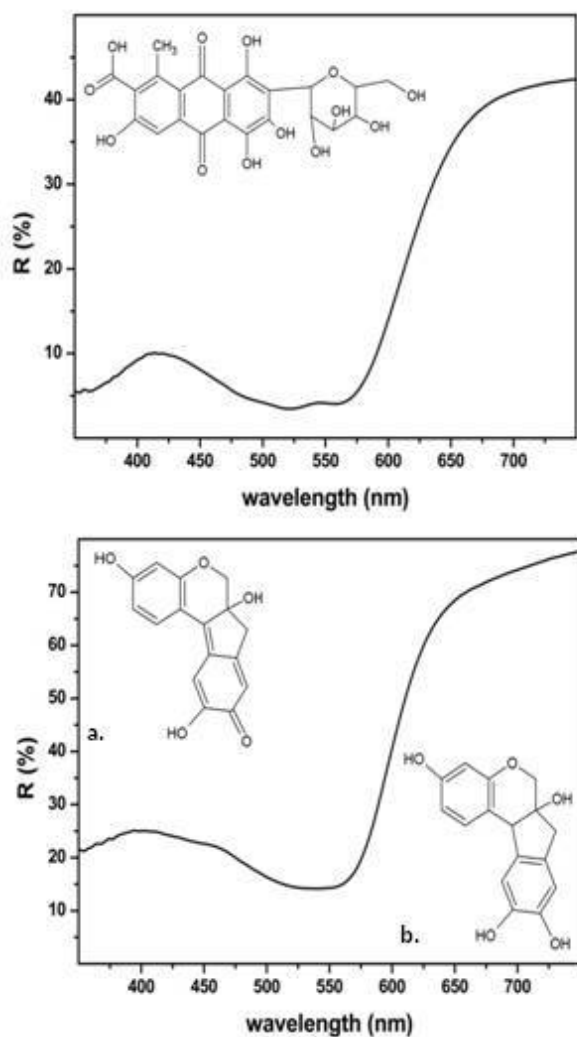


Fig. S4 Top: reflectance spectrum of a reference fiber (wool) dyed with cochineal and chemical structure of carminic acid. Bottom: reflectance spectrum of a reference fiber (wool) dyed with brazilwood and chemical structures of a) brazilein and b) brazilin. Reflectance spectra were recorded by employing a Corona45Vis spectrophotometer by Zeiss (Oberkochen, Germany), equipped with a halogen source A10 (350-1000 nm) and fiber optics arranged with $0^{\circ}/0^{\circ}$ geometry.

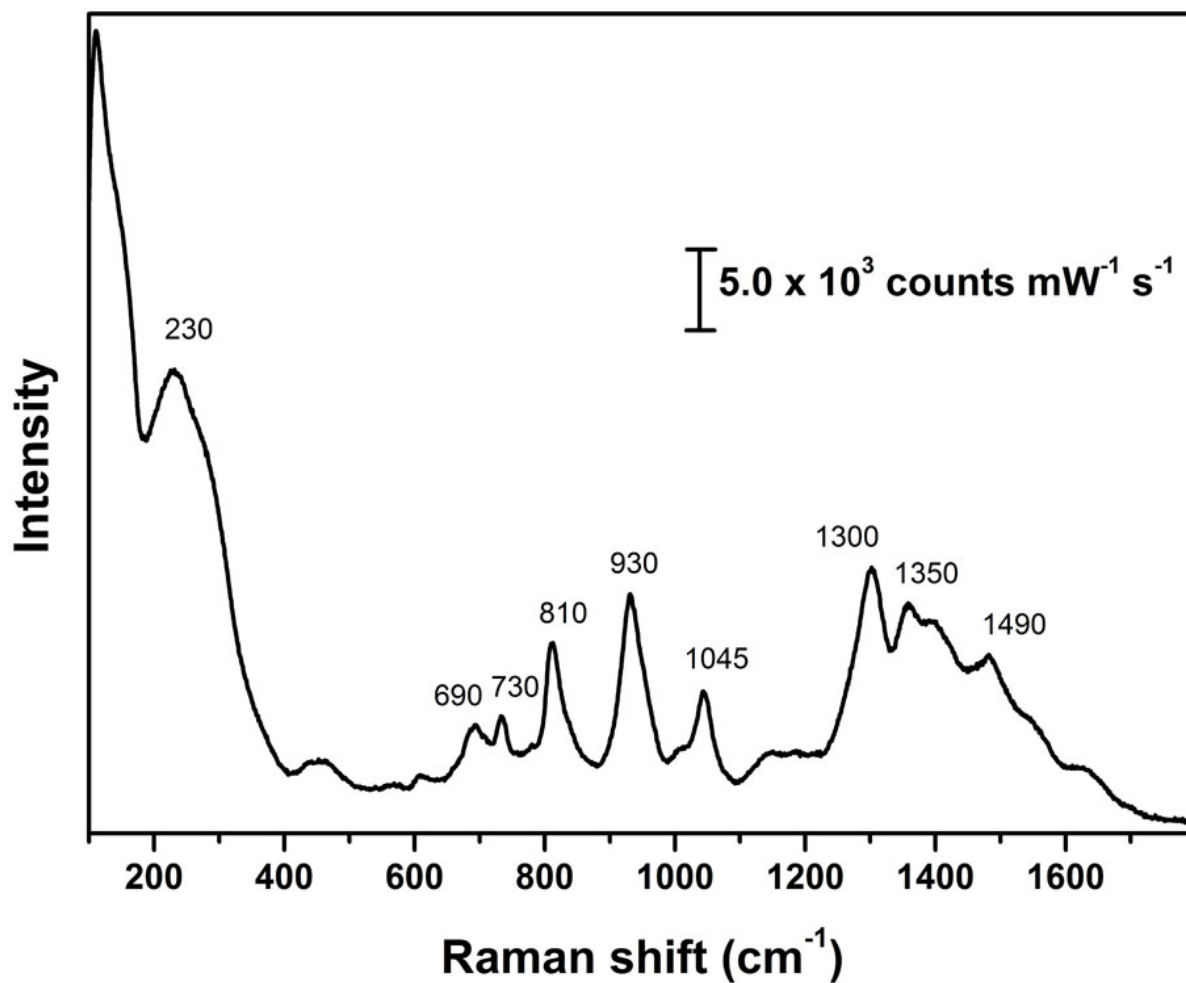


Fig. S5 SER spectrum of Ag colloidal paste spread on a microscope slide. SER spectrum obtained using $\lambda_{\text{ex}}=633$ nm.

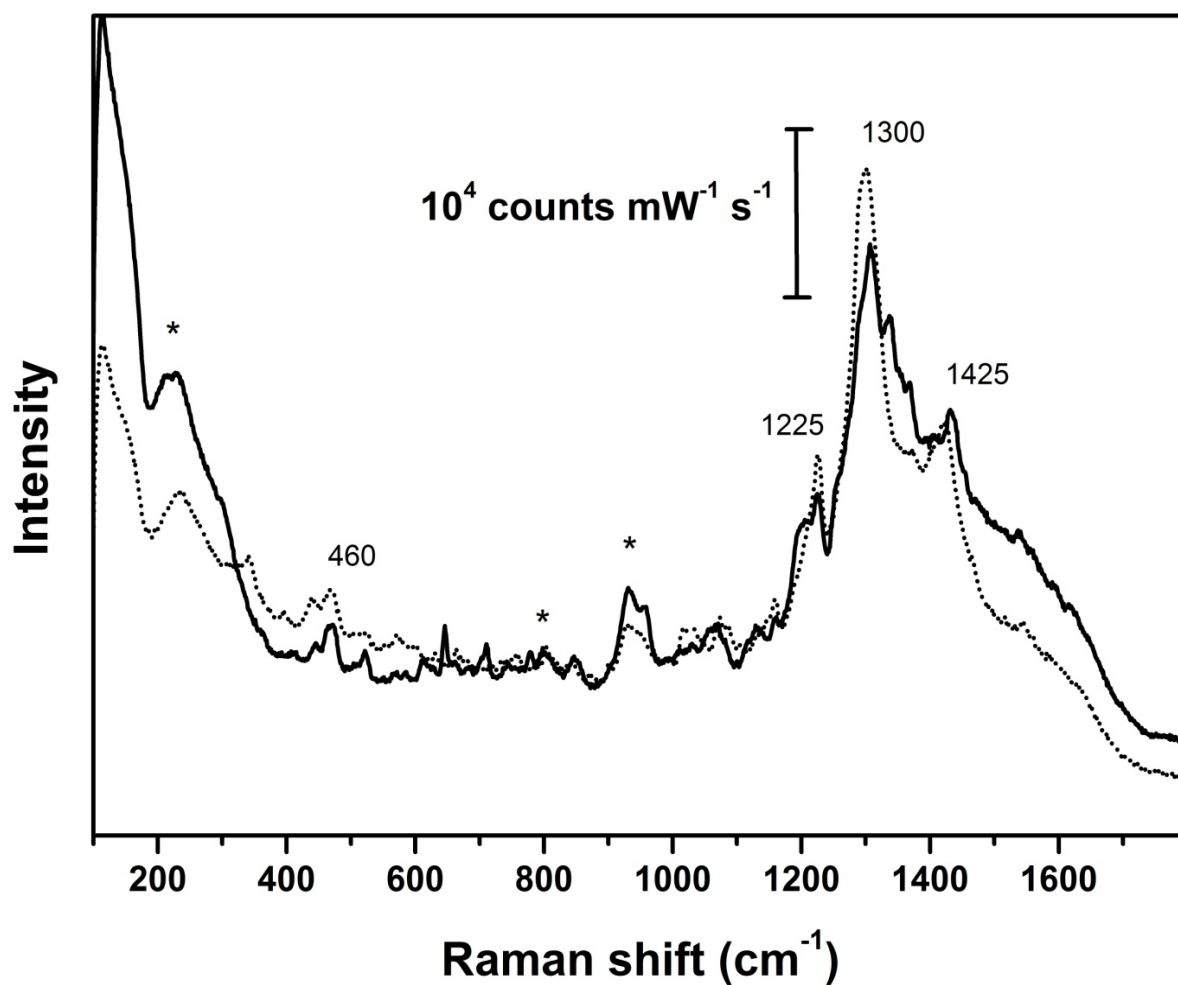


Fig. S6 SER spectra of reference animal fibers dyed light red with cochineal; dotted line: wool fleece; solid line: silk cloth; asterisks indicate peaks belonging to Ag colloidal paste. SER spectra obtained using $\lambda_{\text{ex}}=633$ nm.

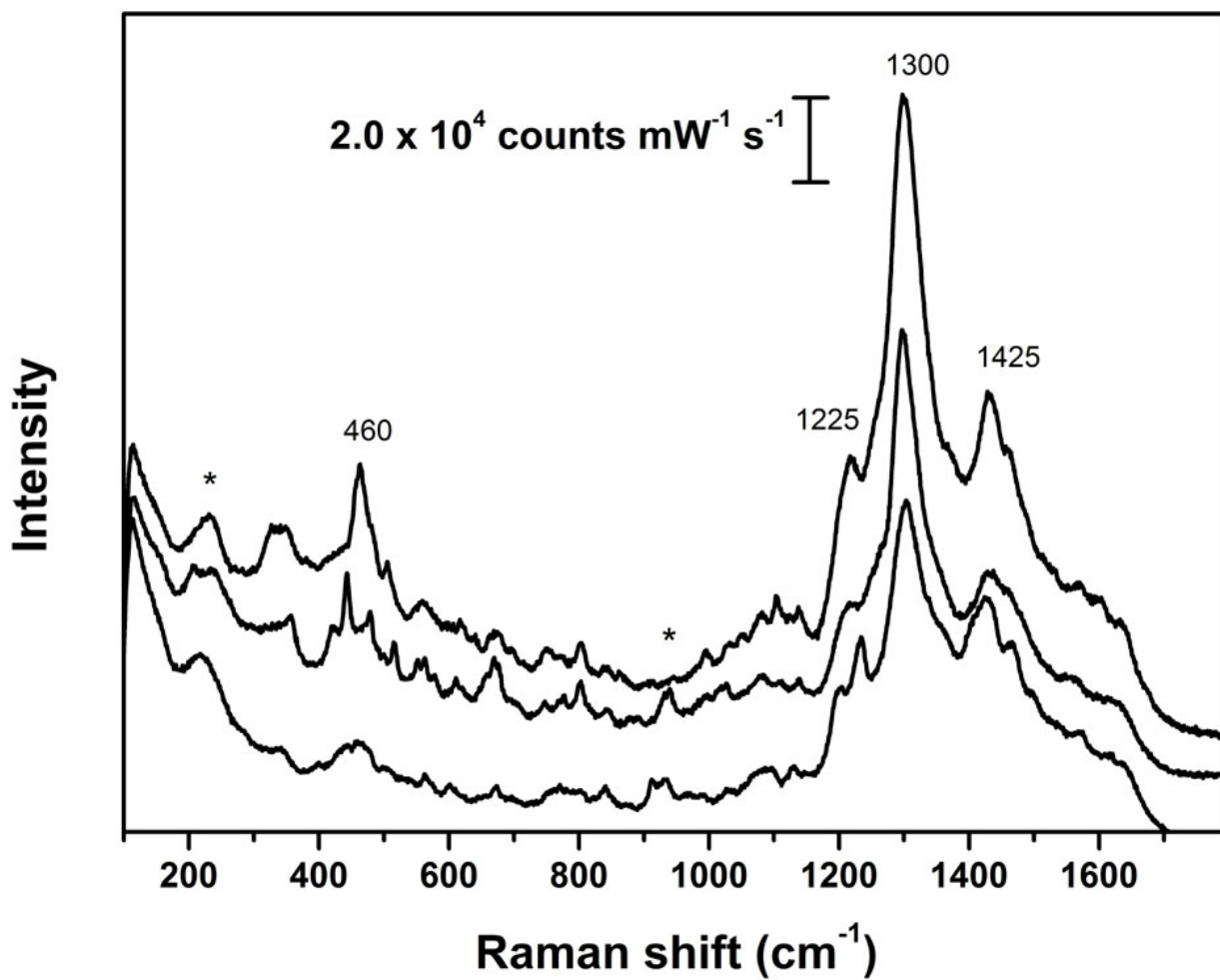


Fig. S7 SER spectra obtained on sample 1978.173e; asterisks indicate peaks arising from Ag colloidal paste. SER spectra obtained using $\lambda_{\text{ex}}=633$ nm.

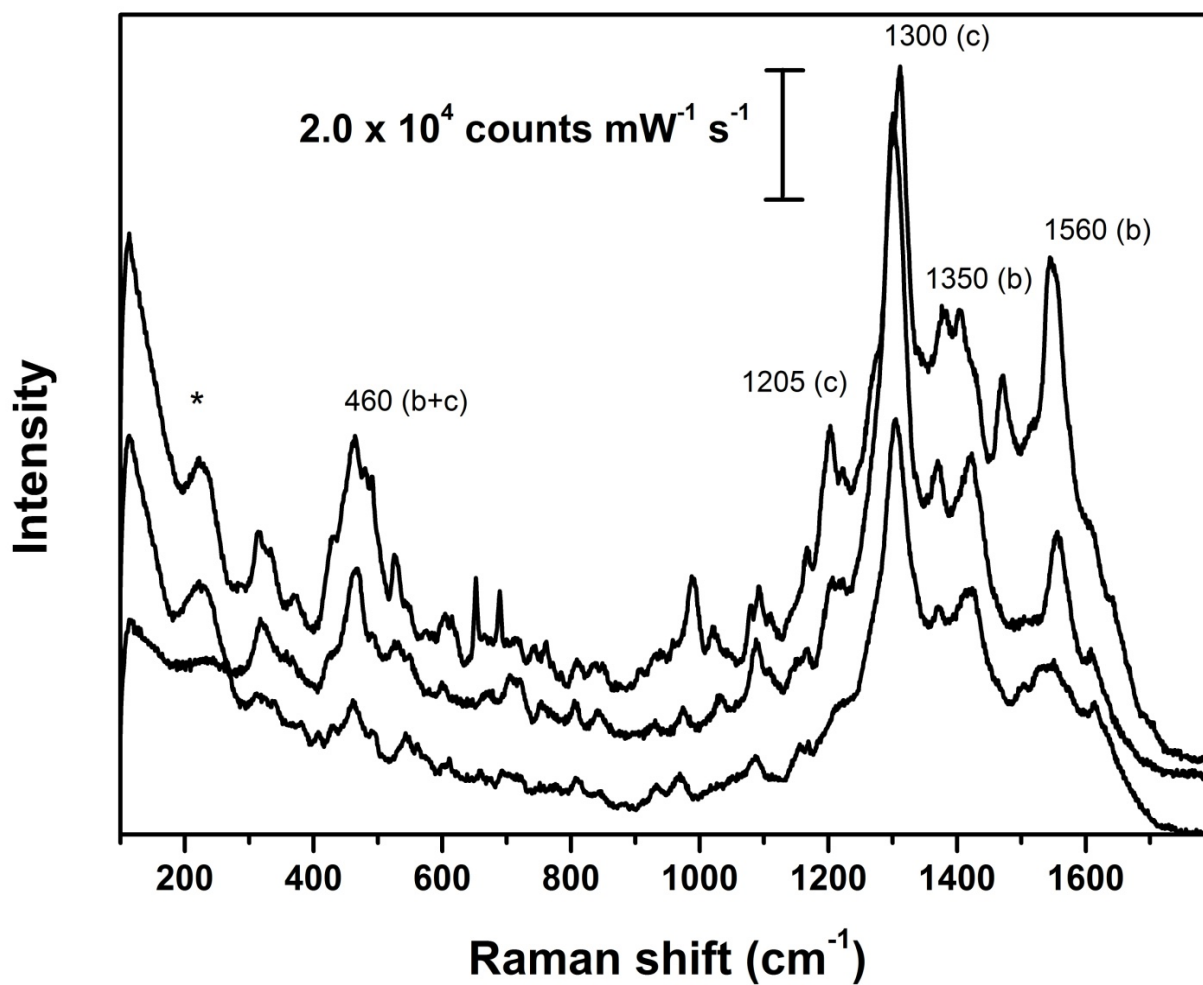


Fig. S8 SER spectra obtained on sample 1986.47; asterisks indicate peaks arising from Ag colloidal paste; b and c indicate the most diagnostic peaks for brazilwood and cochineal, respectively. SER spectra obtained using $\lambda_{\text{ex}}=633$ nm.

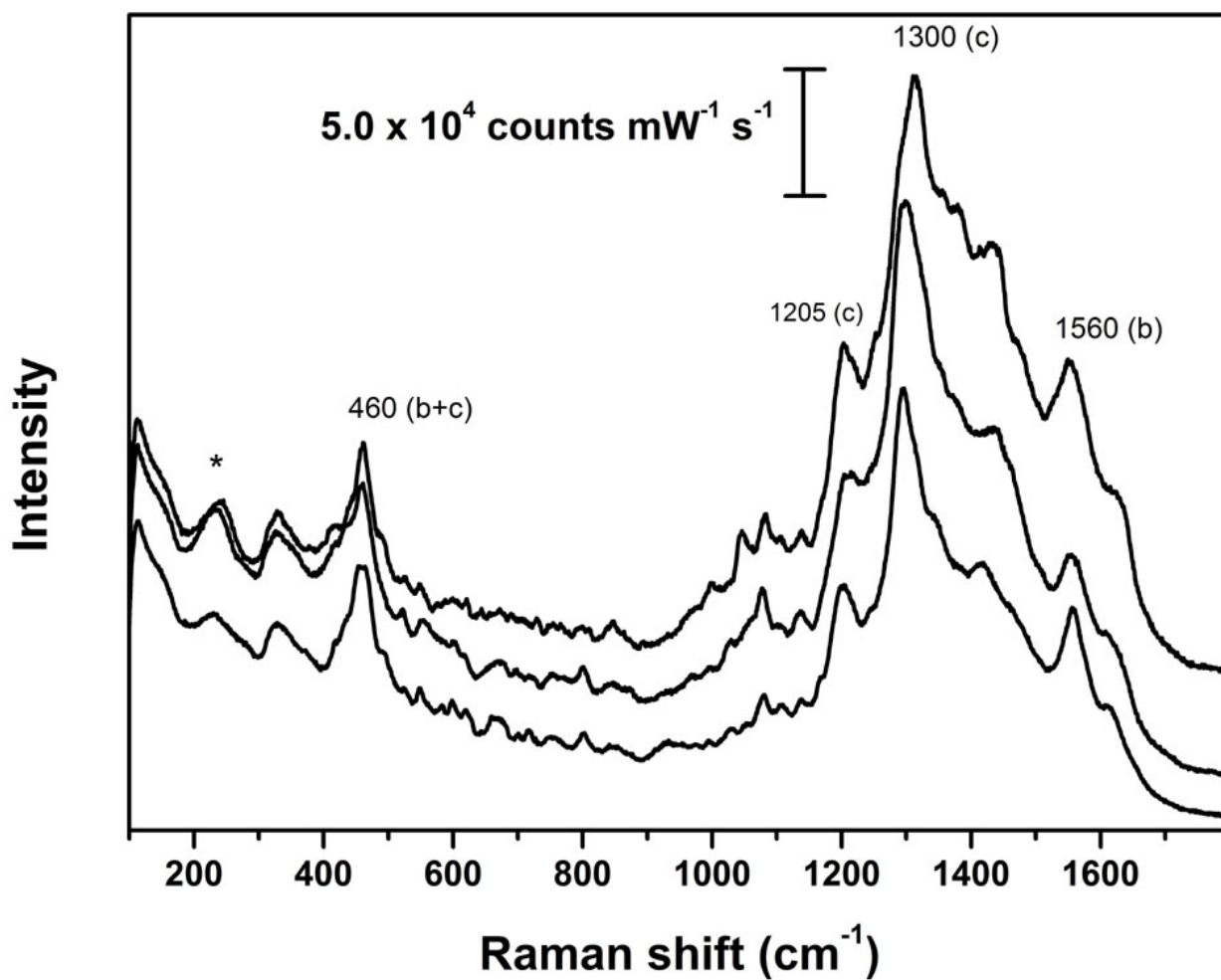


Fig. S9 SER spectra obtained on sample 1985.681; asterisks indicate peaks arising from Ag colloidal paste; b and c indicate the most diagnostic peaks for brazilwood and cochineal, respectively. SER spectra obtained using $\lambda_{\text{ex}}=633$ nm.

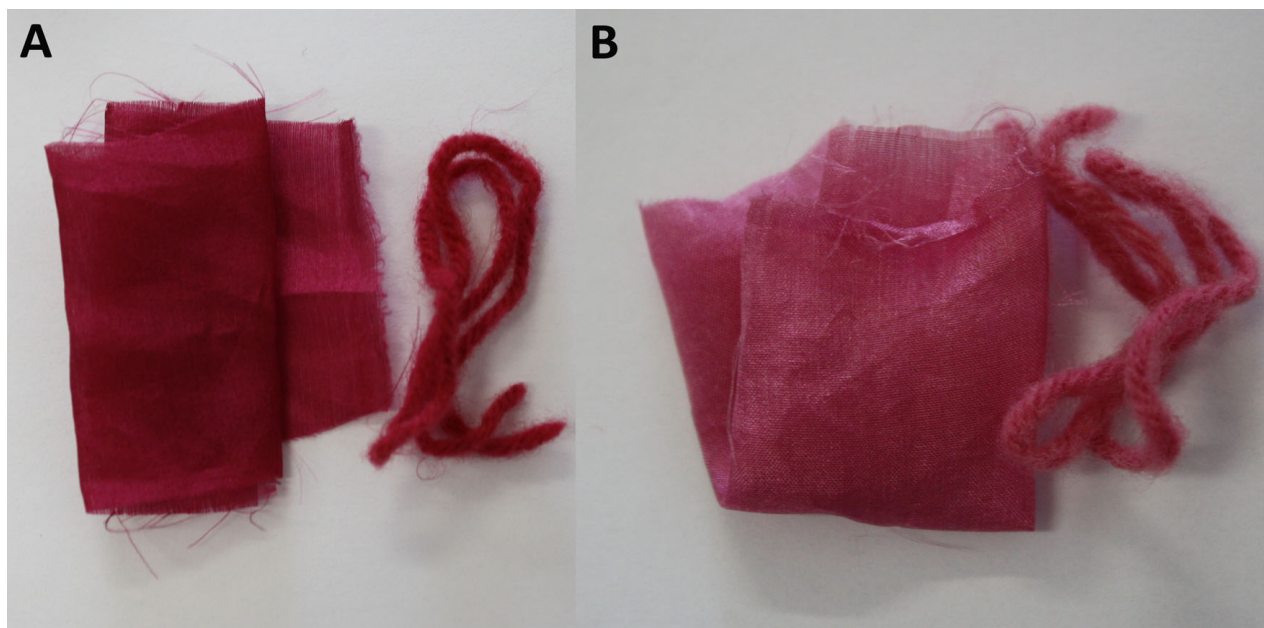


Fig. S10 Reference samples of wool and silk dyed with cochineal to obtain (A) intense and (B) light red.