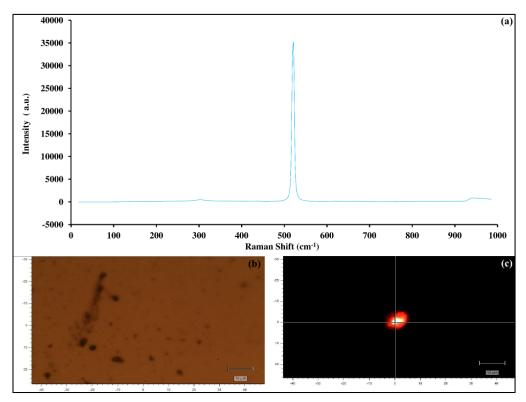
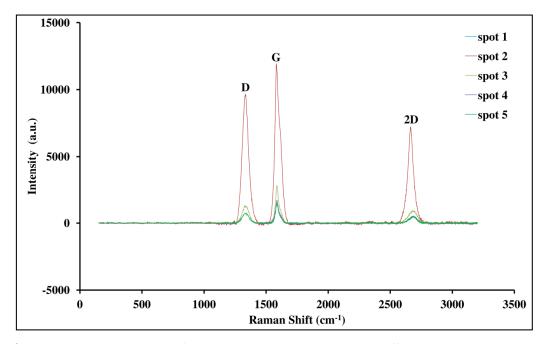
## **Supplementary Materials**



**Figure S1.** (a) Raman spectrum of solid silicon standard showing Raman peak at 520.5 cm<sup>-1</sup>, which indicates that the Raman system is wavenumber-calibrated; (b) optical micrograph of solid silicon; and (c) optical micrograph of the laser spot.



**Figure S2.** Raman spectrum of graphene-coated Cu–Ni alloy at different spots, showing the uniformity of graphene over the sample surface.