Supporting Information

Ultrathin Hexagonal PbO Nanosheets Induced by Laser Ablation in Water for Chemically Trapping Surface-Enhanced Raman Spectroscopy Chips and Detection of Trace Gaseous H_2S

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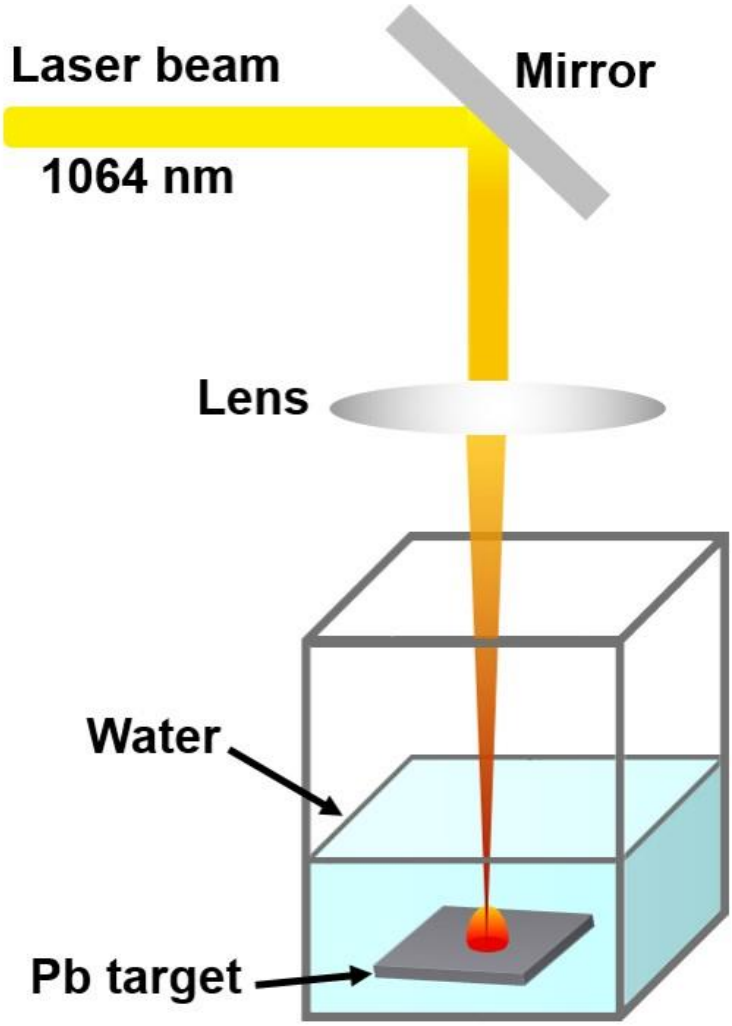

Figure S1: Schematic illustration of the experimental setup for laser ablation of a Pb target in deionized water.

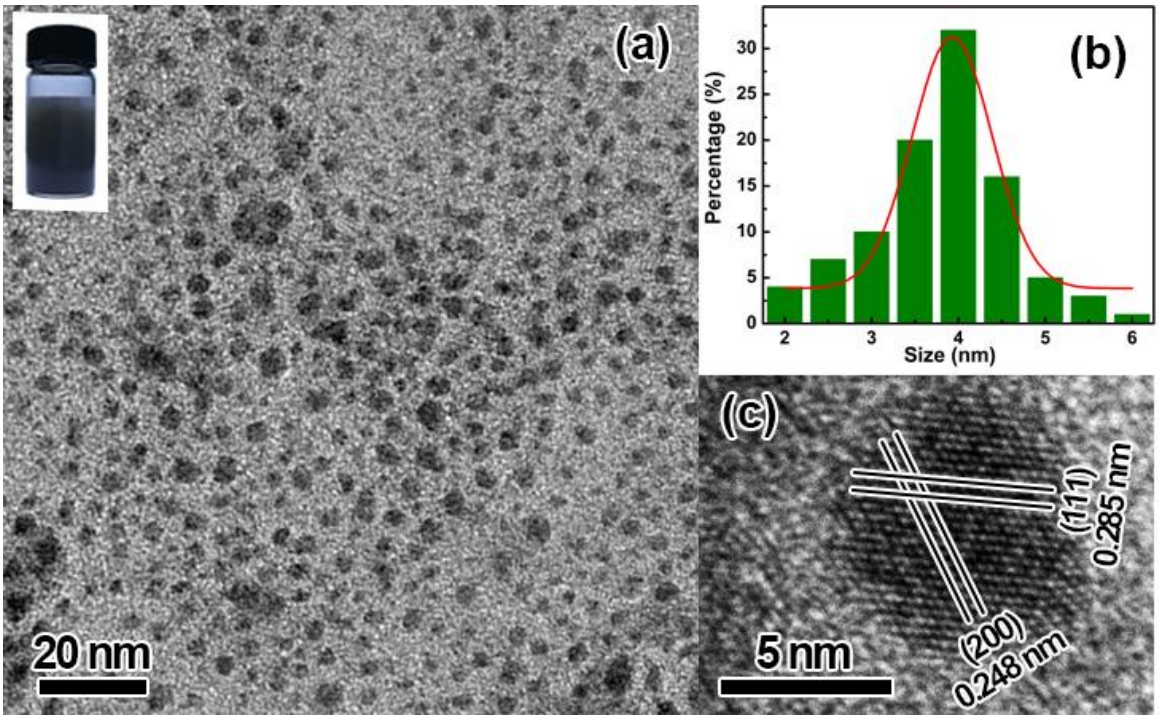

Figure S2: TEM observations of the products obtained after laser-ablating the Pb target in water for 5 min. (a): A TEM image. The inset is the photo of the as-prepared colloidal solution in a bottle. (b): The Histogram of the ultrafine NPs' size in (a). (c): A typical HRTEM image of NP.

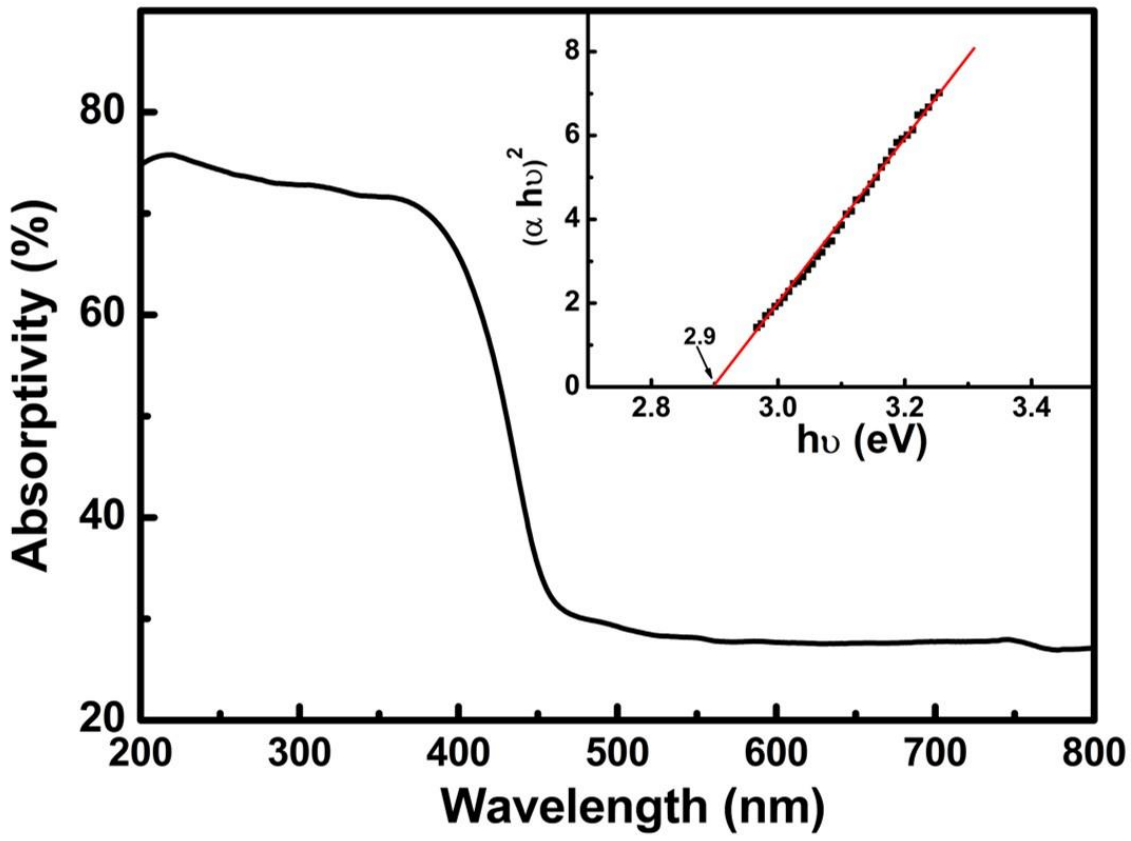

Figure S3: The optical absorption spectrum of the β-PbO nanosheets from the diffuse reflection spectral measurements. The inset is the plot of $(\alpha h\upsilon)^2$ vs $h\upsilon$ in the edge region.

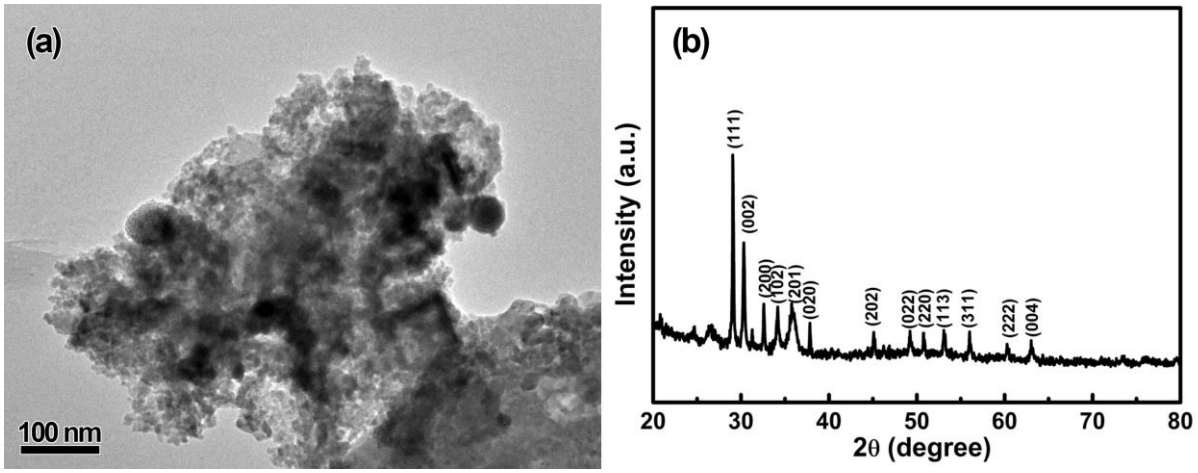

Figure S4(a): TEM image of the products obtained after laser ablation of the Pb target in SDS aqueous solution for 5 min and ambient ageing for 30 min. (b): The XRD pattern of the products in (a). The indexes correspond to those of β-PbO.

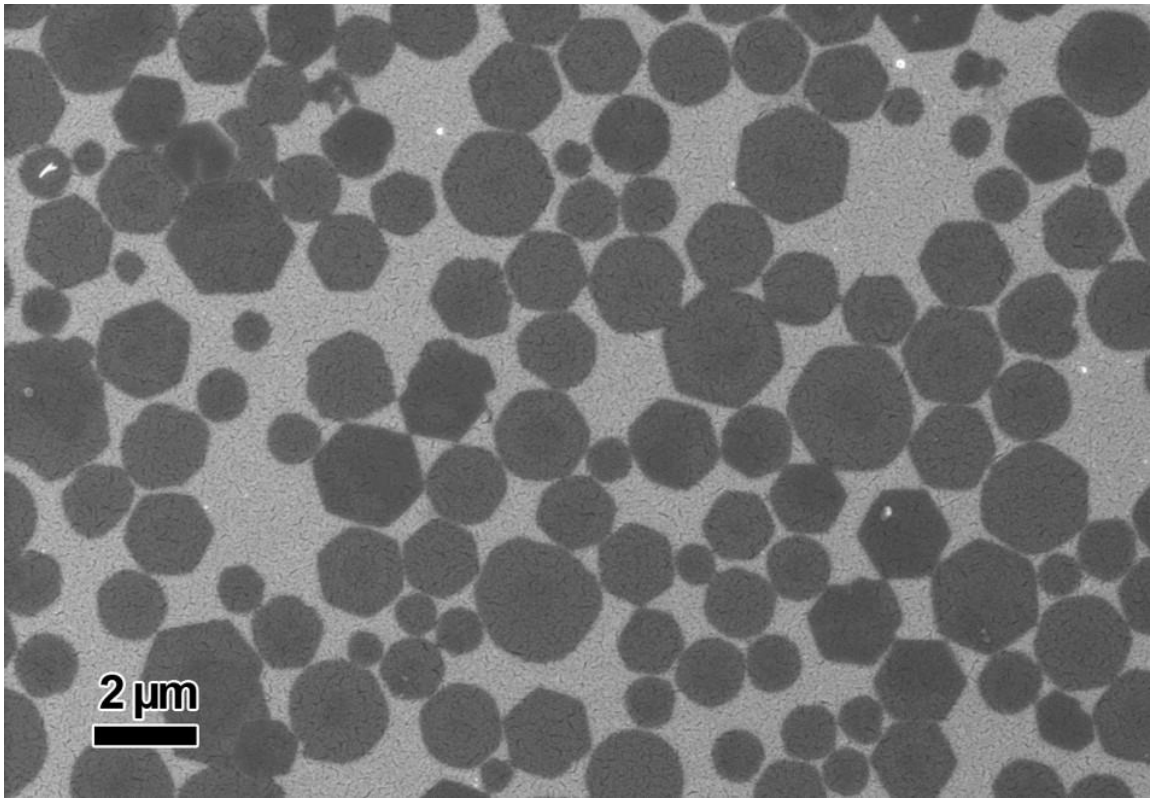

Figure S5: A typical FESEM image of the composite SERS chip after 5 rounds of testing.