

Thermal-effect dominated plasmonic catalysis on silver nanoislands

Ting Kong,^{a, b} Bowen Kang,^b Wei Wang,^c Tanja Deckert-Gaudig,^c Zhenglong Zhang,^{*b}

Volker Deckert,^{*c, d}

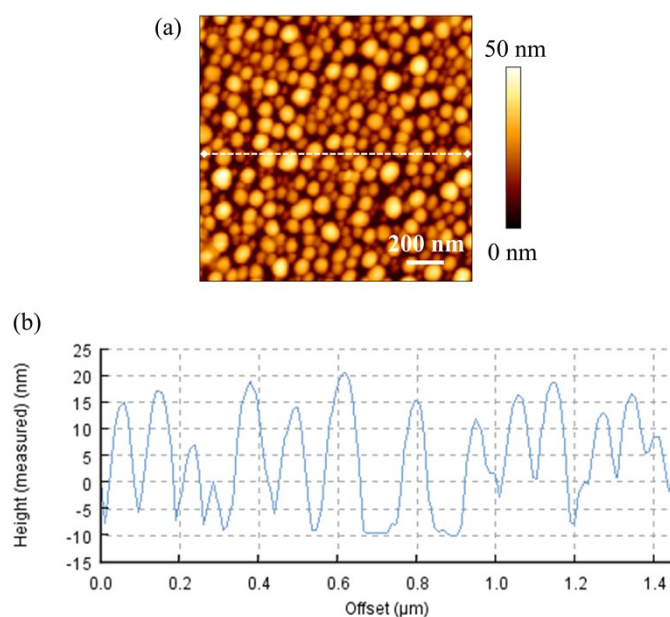


Fig. S1 (a) AFM topography image and (b) the measured height image of Ag NPs extracted from the white dashed line of the AFM image.

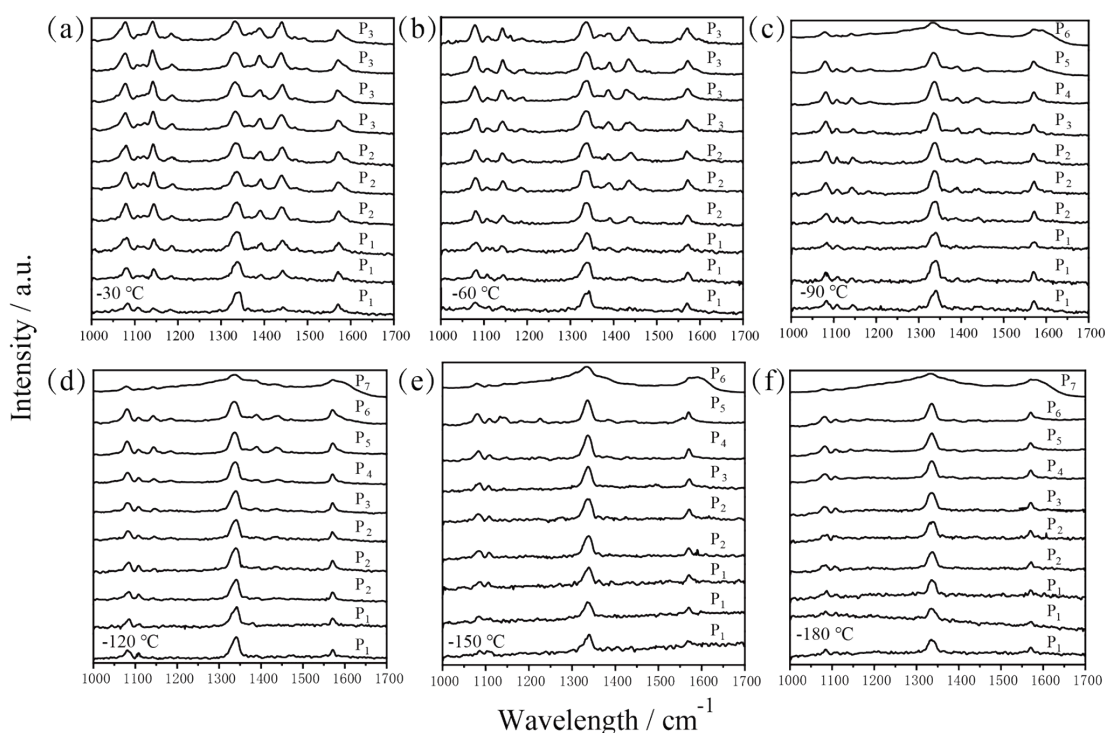


Fig. S2 (a-f) Time-dependent in situ SERS spectra of plasmon-induced photocatalytic reaction at low temperature (-30~-180 °C) under a 633 nm laser at different excitation light intensities. The time interval is 1 min when the spectra acquired from bottom to top and the corresponding laser power are P_1 : 15 μ W; P_2 : 30 μ W; P_3 : 60 μ W; P_4 : 0.1 mW; P_5 : 0.3 mW; P_6 : 0.5 mW; P_7 : 1.0 mW, respectively.

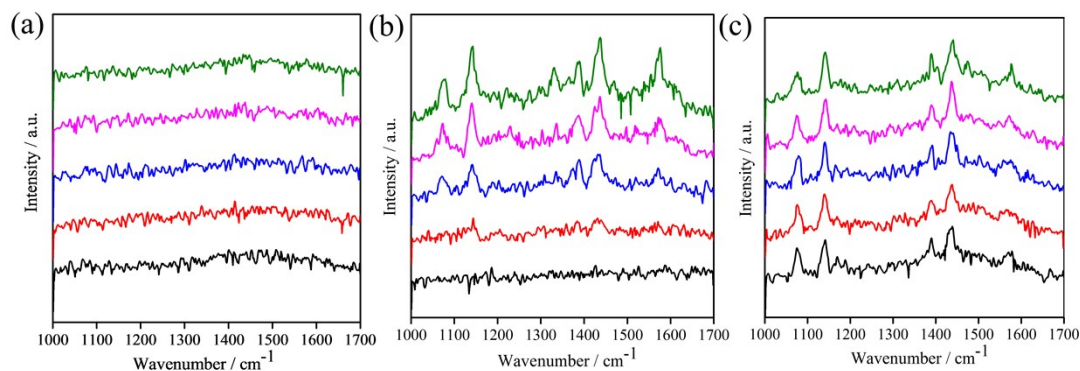


Fig. S3 (a-c) Time-dependent SERS spectra of plasmon-induced photocatalytic reaction of 4-ATP under a 633 nm laser (11.48 μ W) at room temperature and high temperature of 50 °C and 100 °C, respectively.

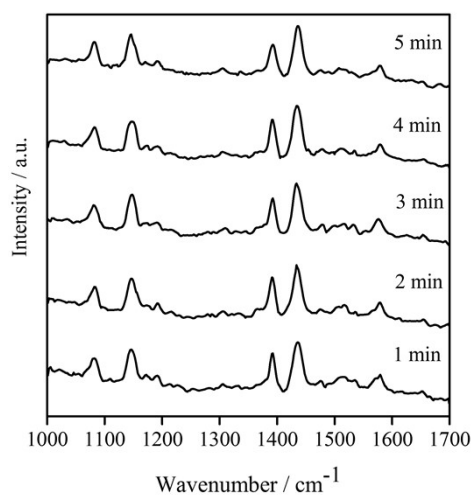


Fig. S4 Time-dependent SERS spectra of plasmon-induced photocatalytic reaction of 4-ATP under a 633 nm laser ($11.48 \mu\text{W}$) at the temperature of $-180 \text{ }^\circ\text{C}$.