Electronic Supplementary Information for

Supports Matter: Unraveling the Role of Charge-Transfer over the Plasmonic Catalytic Activity of Silver Nanoparticles

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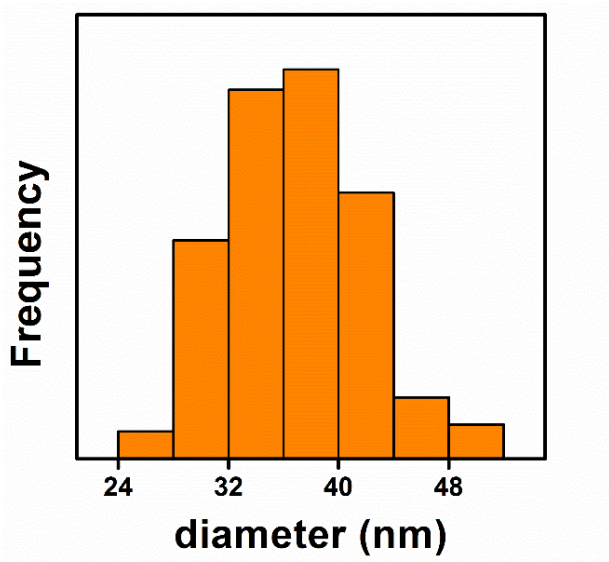

Figure S1. Histogram of size distribution for Ag NPs that were obtained by measuring the diameter of 200 nanoparticles from SEM images.

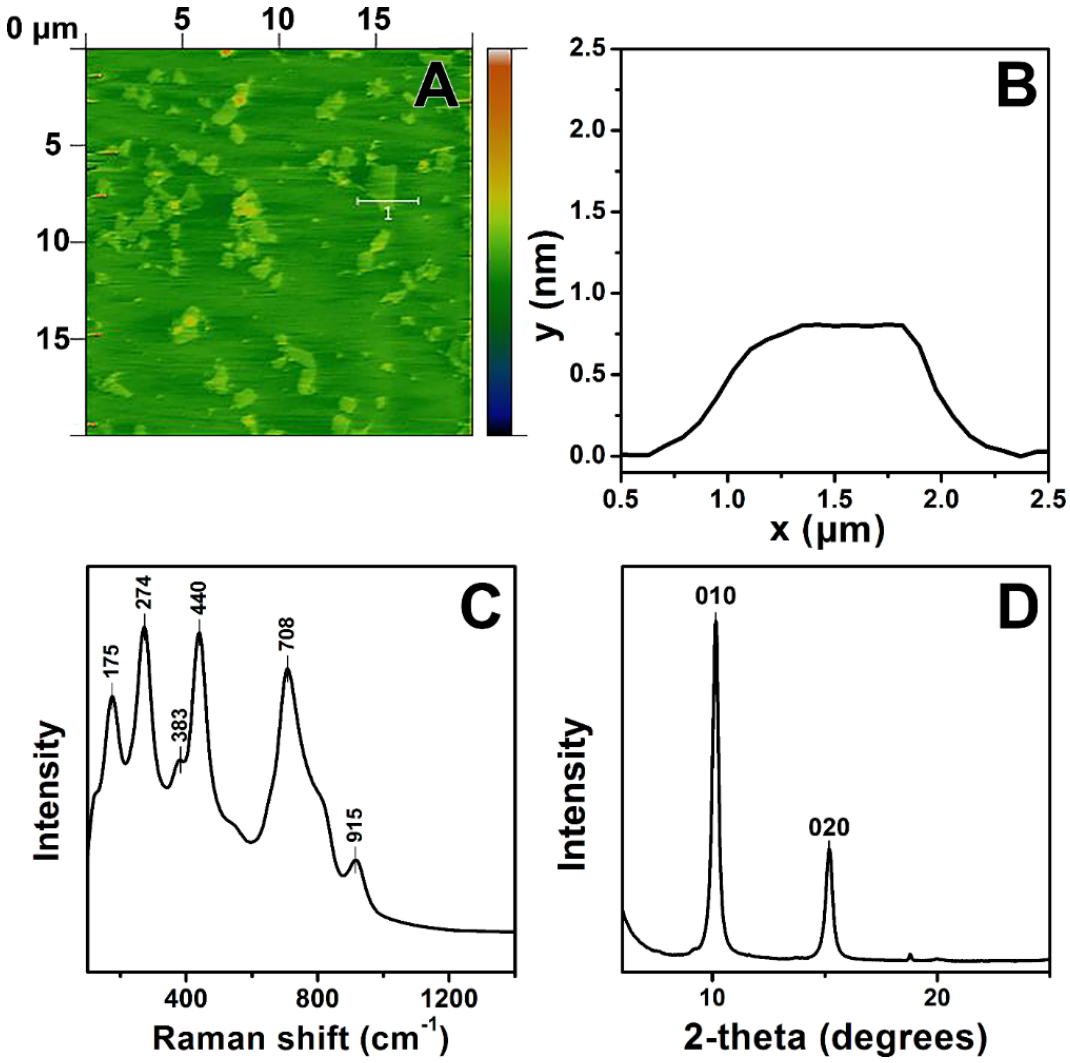

Figure S2. AFM image (A), AFM line profile (B) from the region (white trace) depicted in (A), Raman spectrum (C), and XRD diffractogram for the Ti_xO_2 nanosheets.

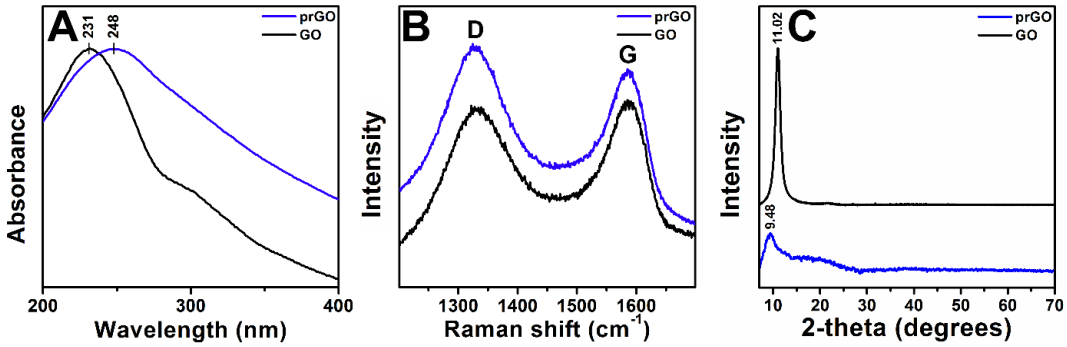

Figure S3. UV-VIS spectra (A), Raman spectra (B), and XRD diffractograms (C) for GO (black trace) and prGO (blue trace).

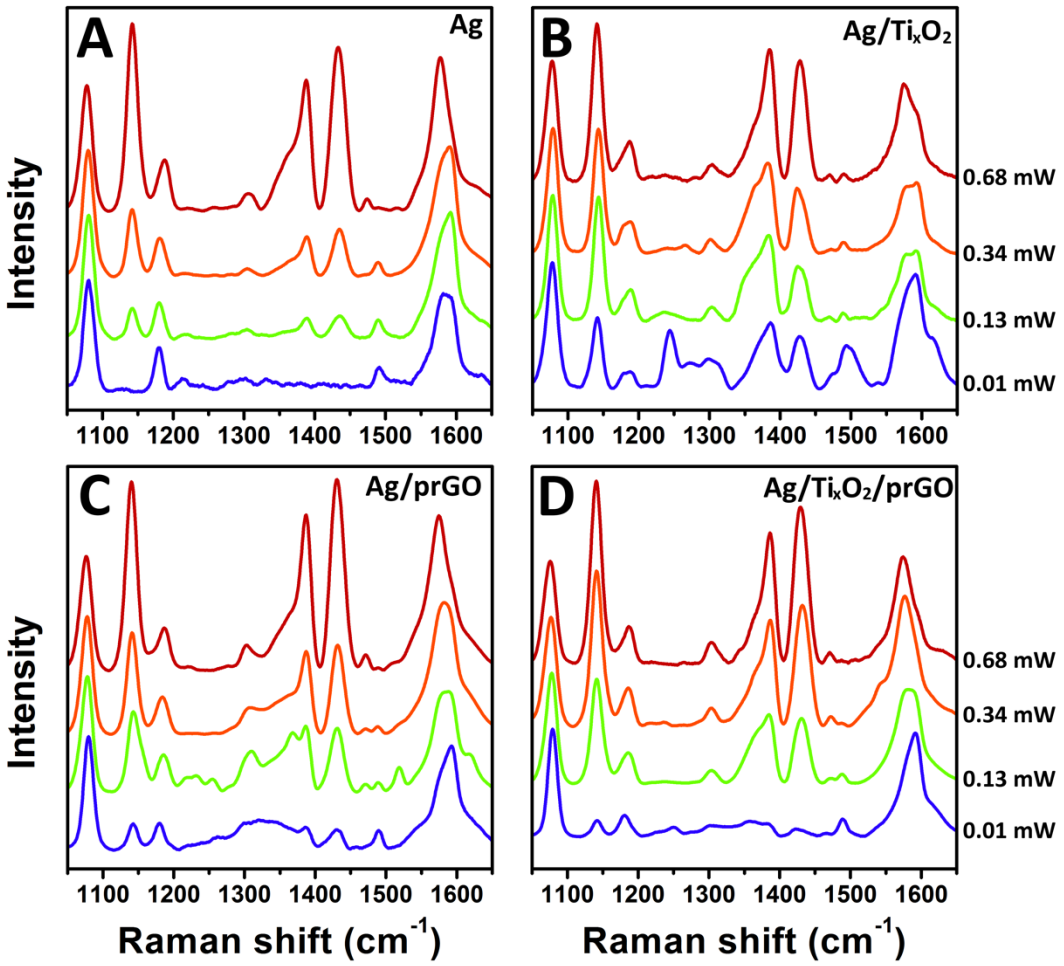

Figure S4. Laser-power-dependent SERS spectra for Ag NPs (A), Ag/Ti_xO_2 (B), Ag/prGO (C), and Ag/Ti_xO_2/prGO that had been functionalized with PATP. All spectra were normalized with respect to the band located at 1081 cm^{-1} for the ease of comparison.

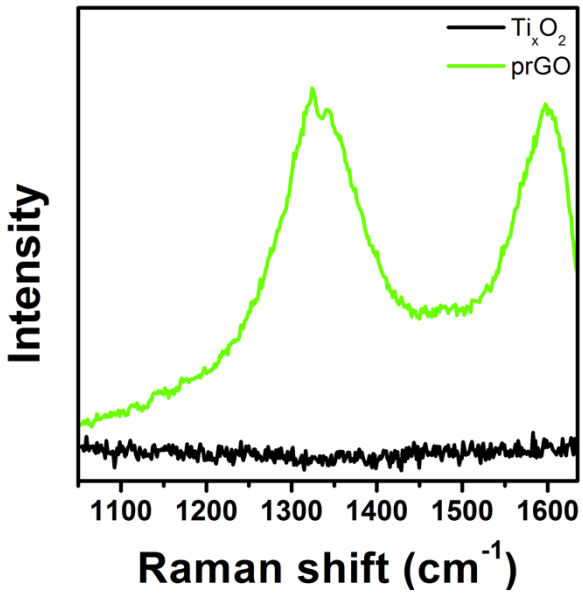

Figure S5. Raman spectra registered for Ti_xO_2 and prGO (black and green traces, respectively) that had been functionalized with PATP in the absence of Ag NPs under similar experimental conditions as described in Figure 4.

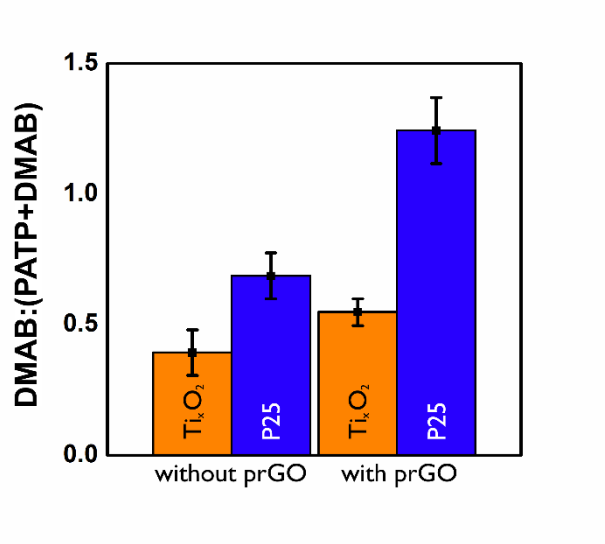

Figure S6. PATP conversion as expressed by the 1433:1081 1081 cm^{-1} DMAB:(DMAB+PATP) intensity ratios for Ag NPs supported over Ti_xO_2 nanosheets and Degussa P25 titanium oxide with and without prGO. The hybrid materials corresponded to Ag/Ti_xO_2, Ag/P25, Ag/Ti_xO_2/prGO, and Ag/P25/prGO from left to right, respectively.