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Supporting information

Charge behavior in plasmonic photocatalyst composed of Au and TiO_2

Go Kawamura*, Tomoki Arai, Hiroyuki Muto, Atsunori Matsuda

Department of Electrical and Electronic Information Engineering, Toyohashi University of Technology, 1-1 Hibarigaoka, Tempaku-cho, Toyohashi, Aichi 441-8580, Japan

*Correspondence: gokawamura@ee.tut.ac.jp (G.K.)



Figure S1 XRD patterns of TiO₂ and Au/TiO₂.



Figure S2 Optical extinction spectra of TiO_2 and Au/TiO_2 with and without Ag deposition by UV or Vis light irradiation



Figure S3 XPS spectra of MnO_x -deposited Au/TiO₂. Pure MnO, Mn_2O_3 and MnO_2 were purchased and measured for reference. The energy region of spectra was decided to obtain the peaks of Mn $2p_{3/2}$.



Figure S4 Size distributions of Ag NPs deposited on TiO_2 or Au, and histograms showing the number of Ag NPs deposited on each site. The Ag NPs were deposited by UV radiation with 3 different intensities.



Figure S5 Size distributions of Ag NPs deposited on TiO_2 or Au, and histograms showing the number of Ag NPs deposited on each site. The Ag NPs were deposited by Vis irradiation with 3 different intensities.



Figure S6 Histograms showing the number of MnO_x deposited on each site. The MnO_x was deposited by UV radiation with 3 different intensities.