Electronic Supplementary Information

Photocatalytic Reduction of Carbon Dioxide over Ag Cocatalyst-Loaded $ALa_4Ti_4O_{15}$ (A=Ca, Sr, and Ba) Using Water as a Reducing Reagent

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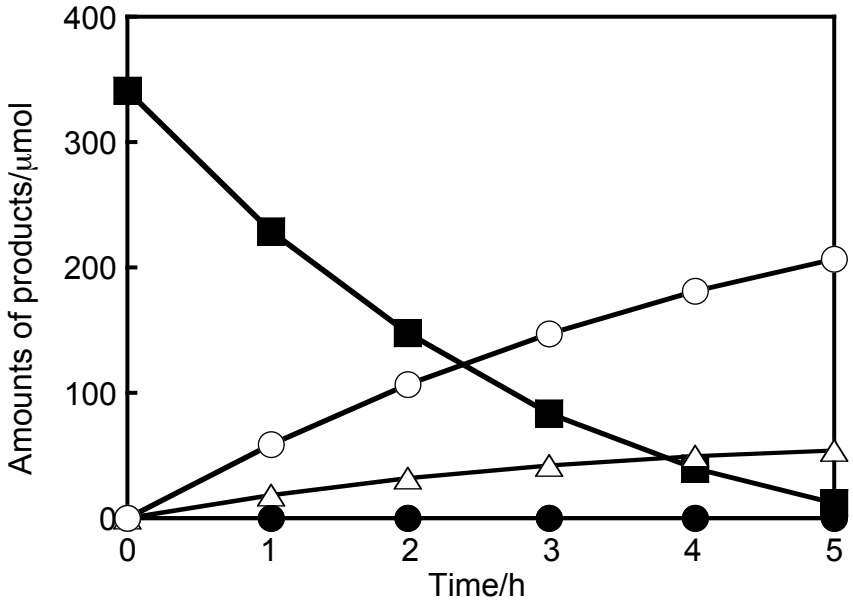

Figure S1. Decomposition of HCOOH over a bare $BaLa_4Ti_4O_{15}$ photocatalyst in an aqueous medium. Catalyst: 0.3 g, water: 360 ml, Ar flow system (15 mL min^{-1}), a 400W high pressure mercury lamp, an inner irradiation quartz cell, HCOOH (■), H_2 (○), O_2 (●), CO (△).

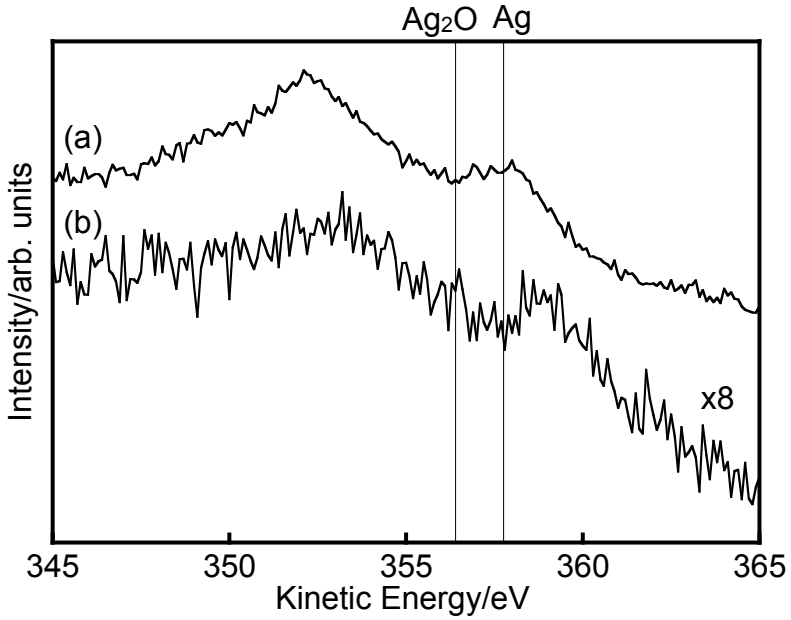

Figure S2. Ag($M_4N_{4,5}N_{4,5}$) Auger spectra of $BaLa_4Ti_4O_{15}$ photocatalyst loaded with Ag (2 wt%) by a liquid-phase chemical reduction method (a) before and (b) after 20 hours of photocatalytic reaction. The kinetic energy due to Ag and Ag_2O was obtained from reference 52.

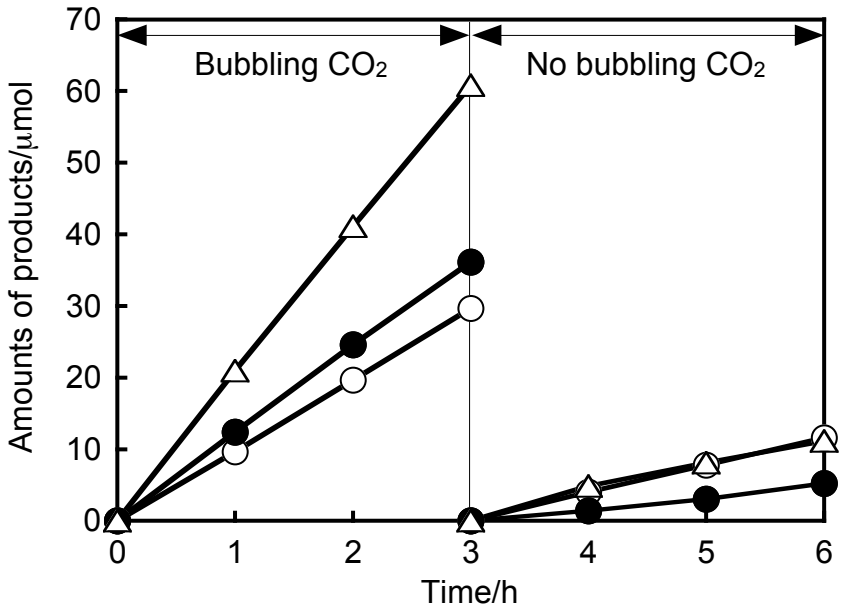

Figure S3. Photocatalytic CO_2 reduction over Ag(2 wt%)/$BaLa_4Ti_4O_{15}$ with and without bubbling CO_2 gas. Catalyst: 0.3 g, water: 350 ml, CO_2 flow system (15 mL min^{-1}), a 400W high pressure mercury lamp, an inner irradiation quartz cell, H_2 (○), O_2 (●), CO (△).

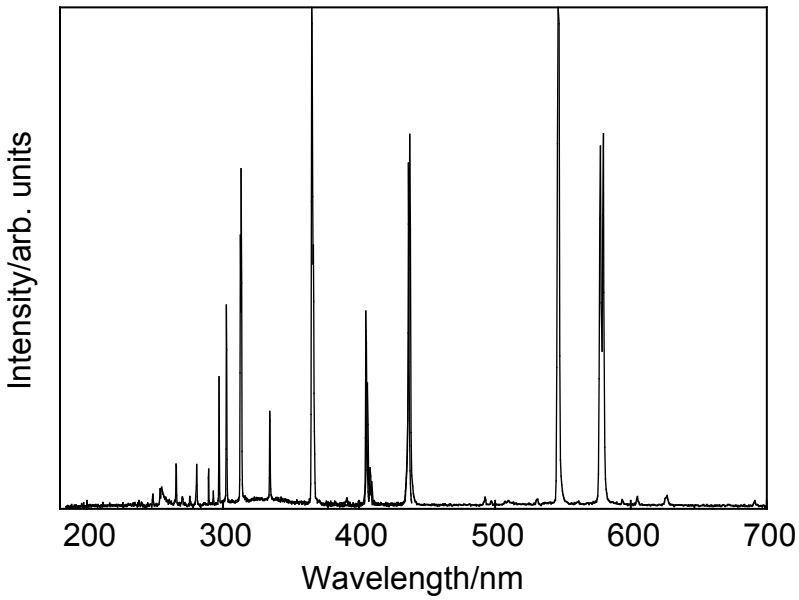

Figure S4. A spectrum of incident light from a light source of a 400 W high-pressure mercury lamp + a quartz cell.