Supplementary Information:

Factors Affecting Oxygen Evolution through Water Oxidation on Polycrystalline Titanium Dioxide

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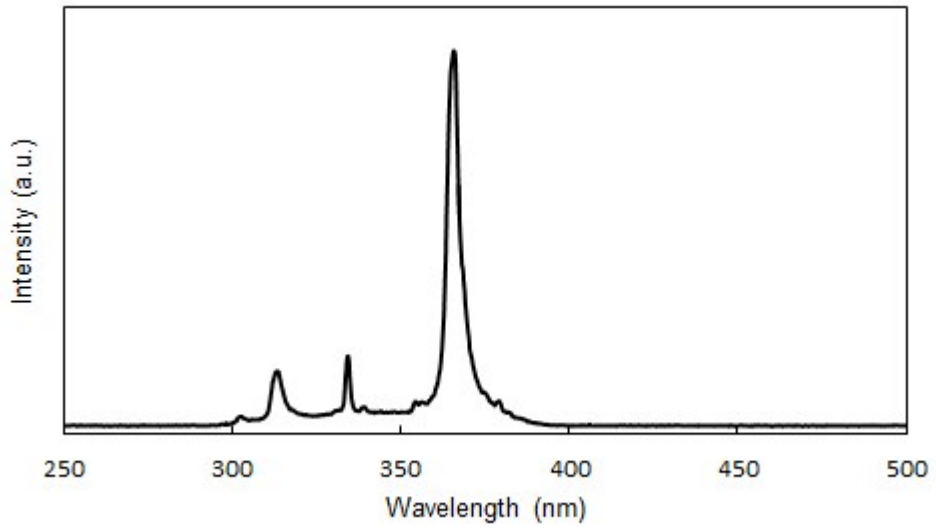

Fig. S1 Emission spectrum of super-high-pressure Hg lamp through a U330 bandpass filter.

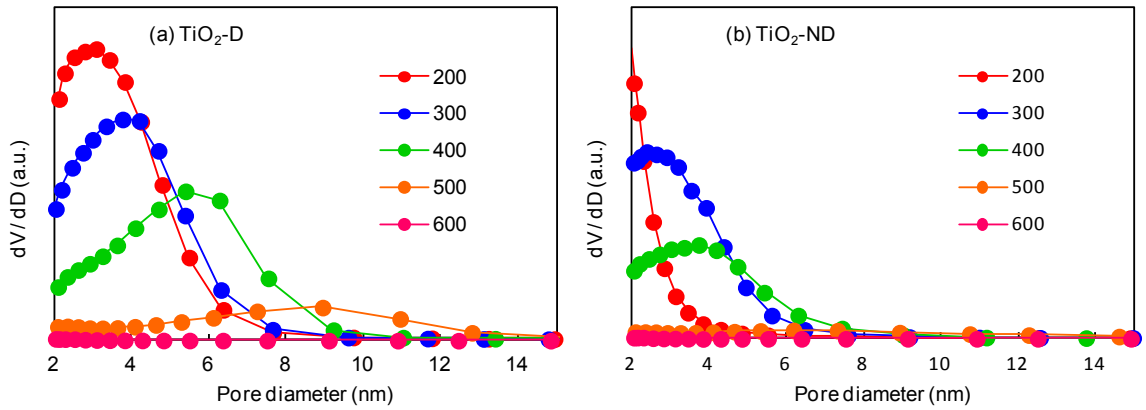

Fig. S2 Pore size distributions of (a) TiO_2-D and (b) TiO_2-ND calcined at 200–600°C for 2 hours.

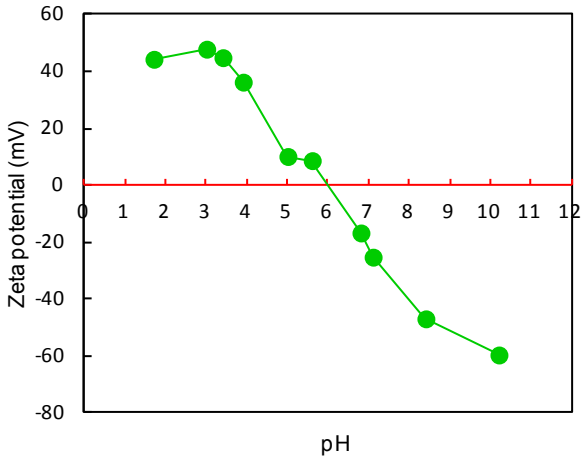

Fig. S3 Zeta potential of TiO_2 nanocolloid as a function of pH value.

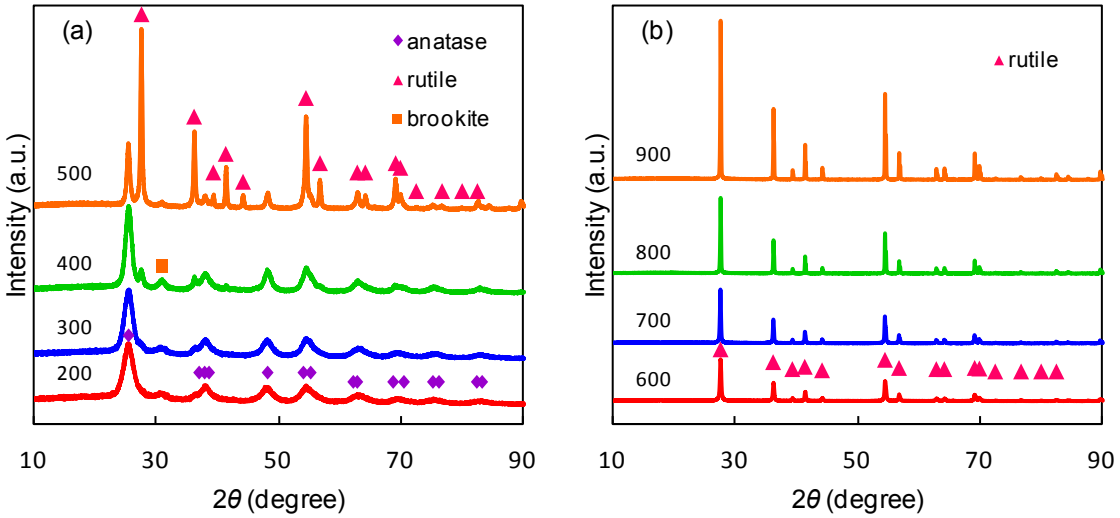

Fig. S4 XRD patterns of TiO_2-D calcined at (a) 200–500°C and (b) 600–900°C for 2 hours.

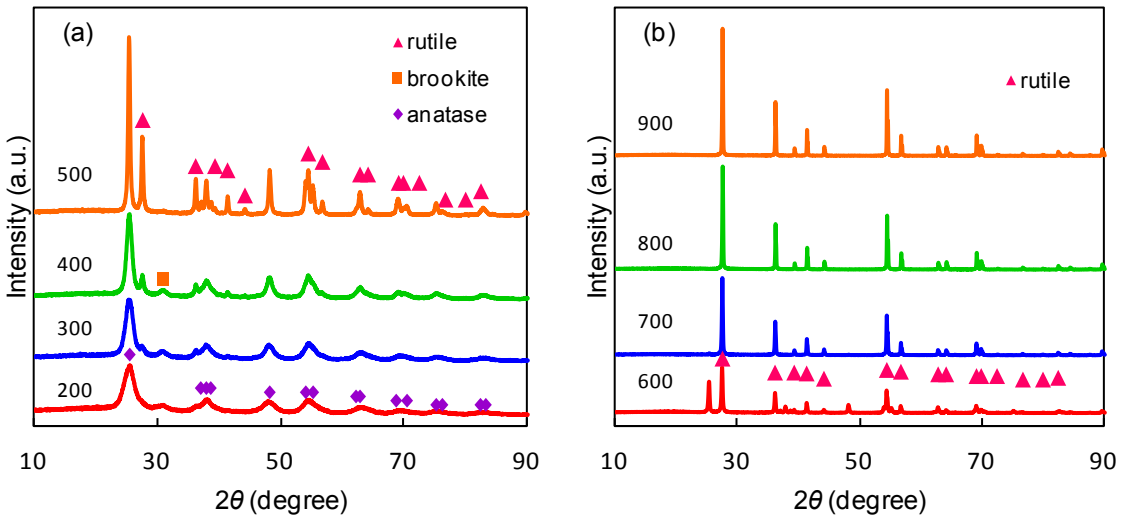

Fig. S5 XRD patterns of TiO_2-ND calcined at (a) 200–500°C and (b) 600–900°C for 2 hours.

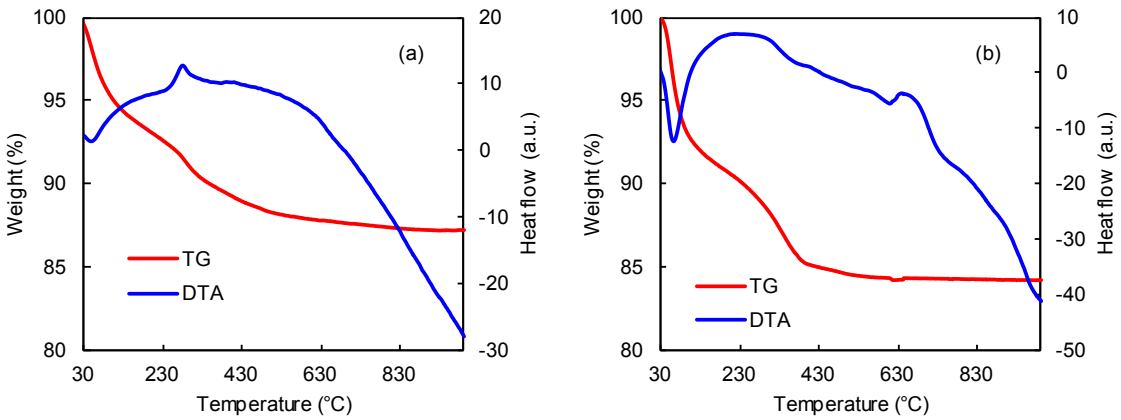

Fig. S6 TG and DTA curves for (a) TiO_2-D and (b) TiO_2-ND calcined at 200°C for 2 hours.

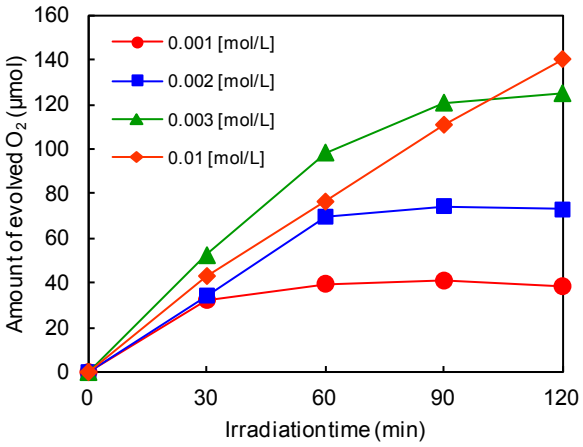

Fig. S7 Time courses of O_2 evolution from 0.001–0.01 mol L^{-1} $AgNO_3$ solution on TiO_2-ND calcined at 800°C for 2 hours under UV light irradiation.

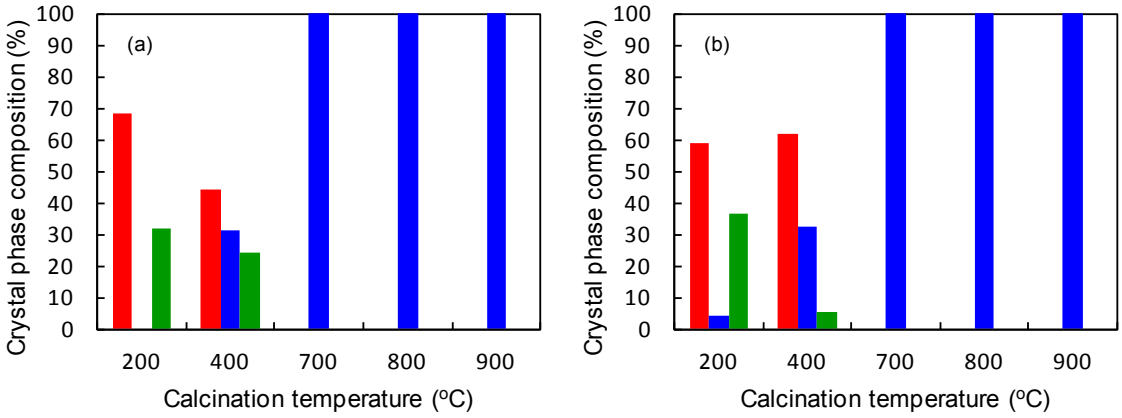

Fig. S8 Crystalline phase composition of (a) TiO_2-D and (b) TiO_2-ND calcined 200–900°C for 10 hours. (Red: anatase, green: brookite, blue: rutile.)

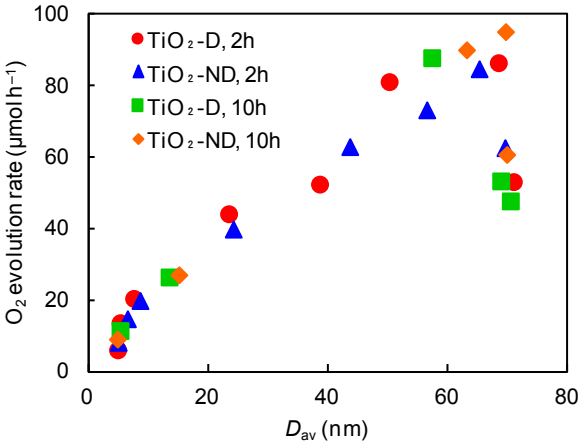

Fig. S9 Relationships between D_{av} and O_2 evolution rate on TiO_2-D and TiO_2-ND calcined at 200–900°C for 2 or 10 hours.