

Supporting Information

Au-TiO₂ Nanocomposites and Efficient Photocatalytic Hydrogen Production under UV-visible and Visible Light Illuminations. Comparison of Different Crystalline Forms of TiO₂

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Figure S1. N₂ adsorption/desorption isotherms of (a) P25, (b) Au/P25, (c) Anatase commercial, (d) Au/anatase commercial, (e) Anatase aerogel, (f) Au/anatase aerogel

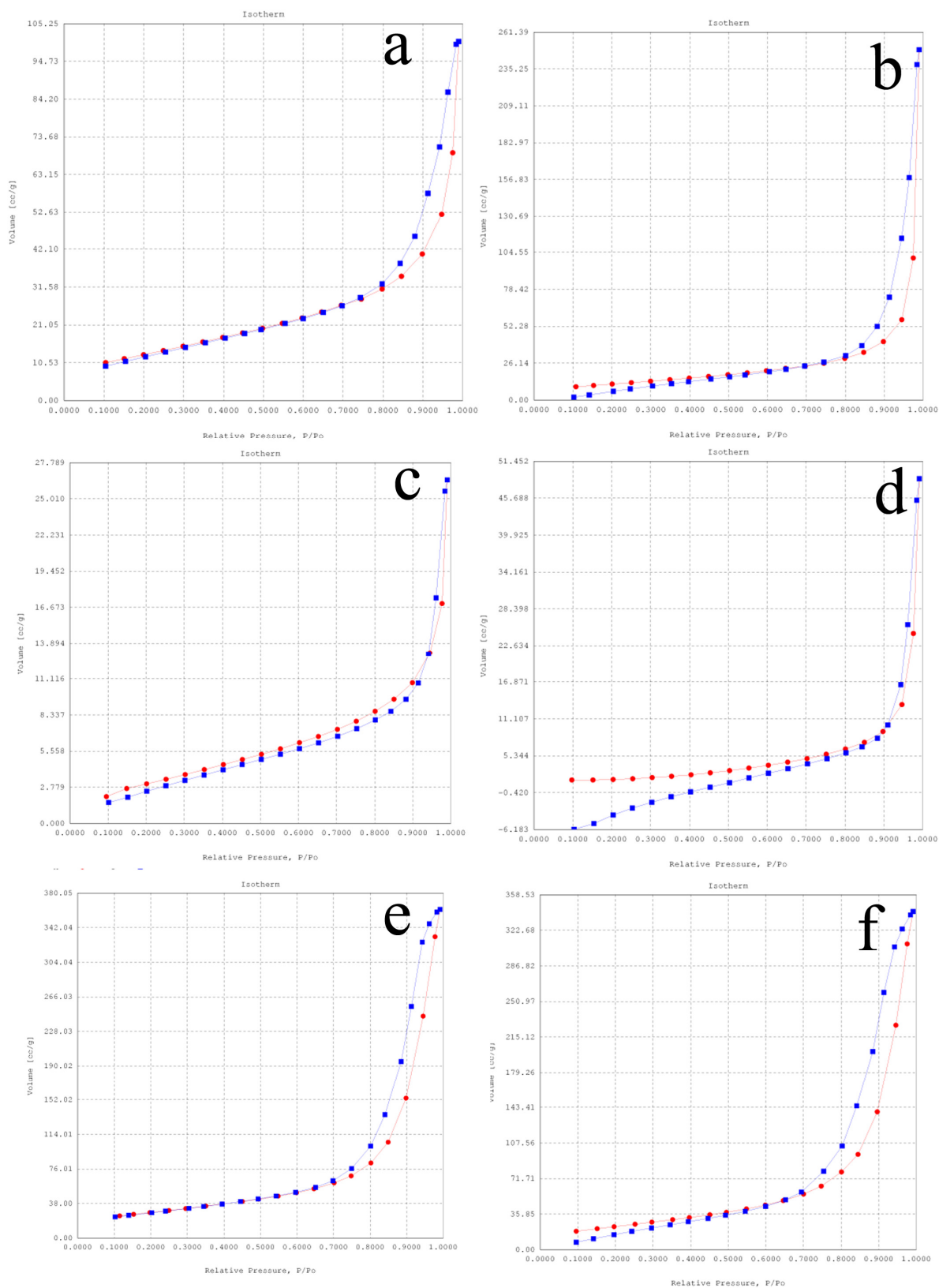


Figure S2. N₂ adsorption/desorption isotherms of (a) Rutile, (b) Au/rutile

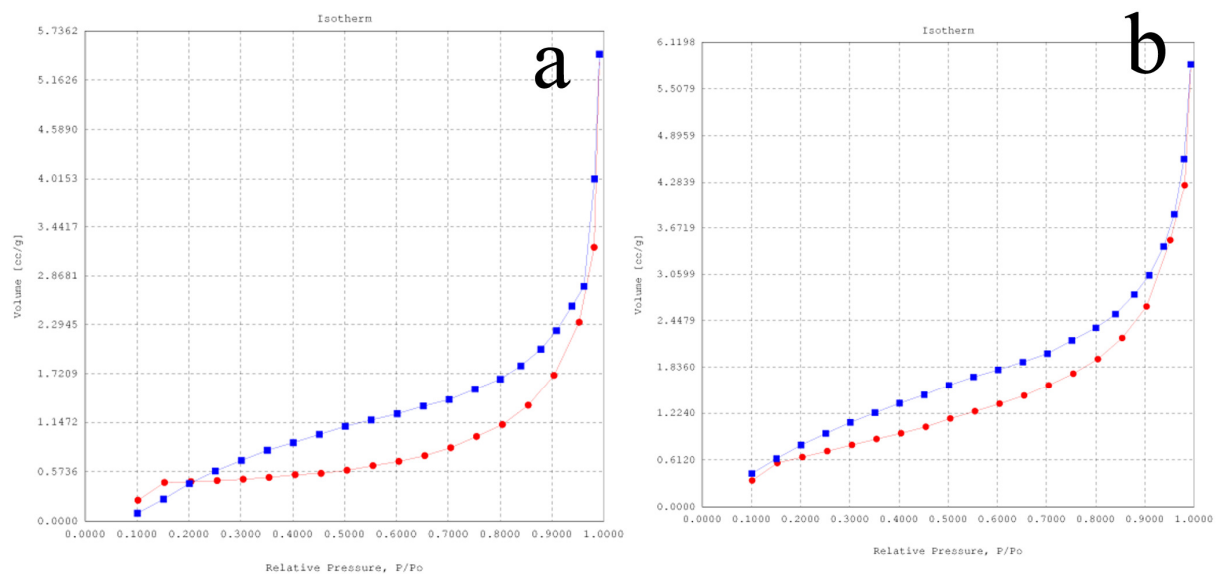


Table S1. BET surface area analysis details of TiO₂, and Au/TiO₂ samples

Catalyst	Surface area	Pore size	Pore volume
	(m ² /g)	(Å)	(cc/g)
P25	48	24	0.15
Au/P25	42	24	0.38
Anatase commercial	13	16	0.04
Au/anatase commercial	5.6	43	0.07
Anatase aerogel	102	171	0.56
Au/anatase aerogel	89	167	0.53
Rutile	1.7	17	0.01
Au/rutile	3.2	16	0.001

Table S2. Amount of Au loading in various photocatalysts prepared by the SMAD method

Catalyst	Au loading (wt %)
Au/P25	1.0
Au/anatase commercial	1.5
Au/anatase aerogel	1.2
Au/rutile	1.5

Figure S3. Powder XRD pattern of (a) Au/P25, (b) Au/anatase commercial, (c) Au/anatase aerogel, and (d) Au/rutile [Red: Au (JCPDS # 04-784), blue: anatase (JCPDS # 21-1272), and green: rutile (21-1276) reflections]

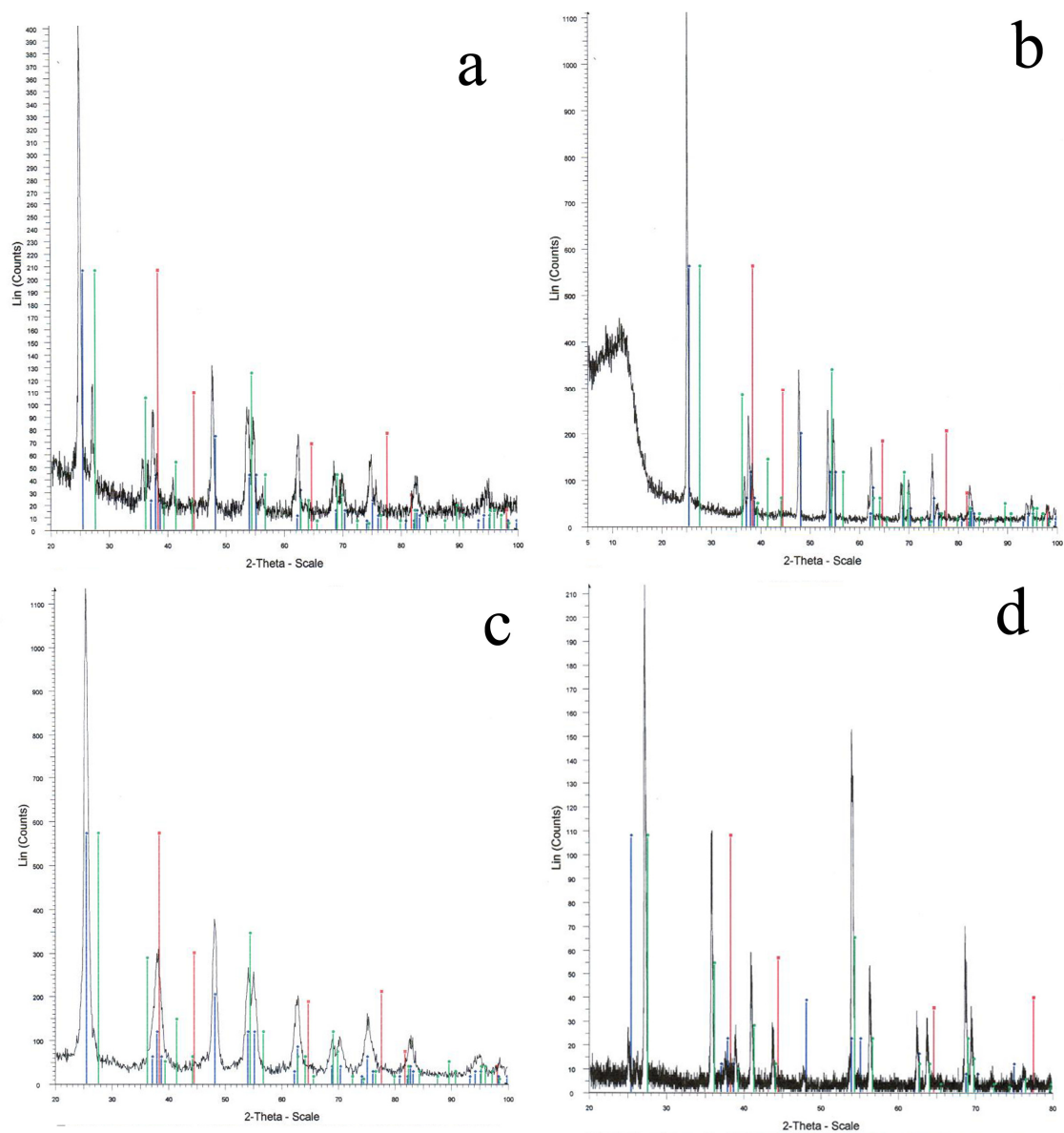


Figure S4. UV-visible spectrum of 2M NaNO_2

