Electronic Supplementary Material (ESI) for Photochemical & Photobiological Sciences.

Supporting Information

on

Visible light assisted hydrogen generation from complete decomposition of hydrous hydrazine using rhodium modified TiO_2 photocatalyst

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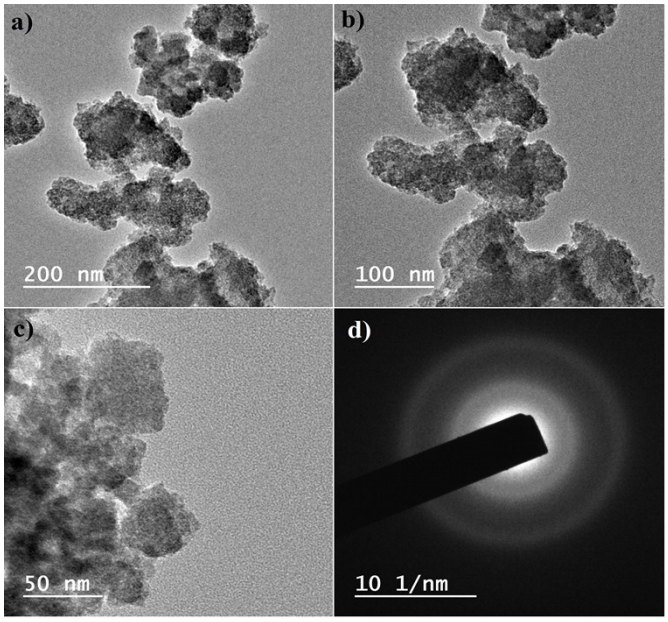

Fig. S1. HR-TEM images of TiO_2-Rh nanoparticles after reaction

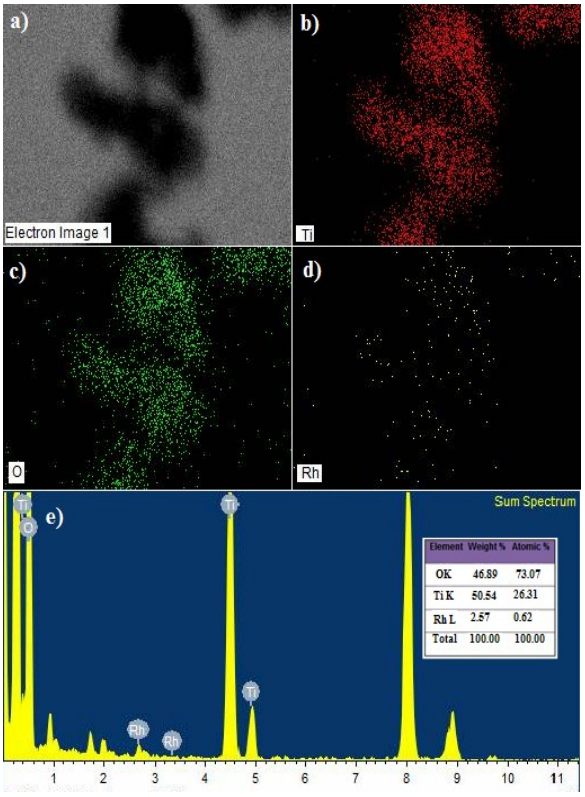

Fig. S2. HR-TEM elemental mapping of TiO_2-Rh nanoparticles after reaction a) electron image, b) titanium, c) oxygen, d) Rhodium, and e) EDX pattern showing elemental composition.

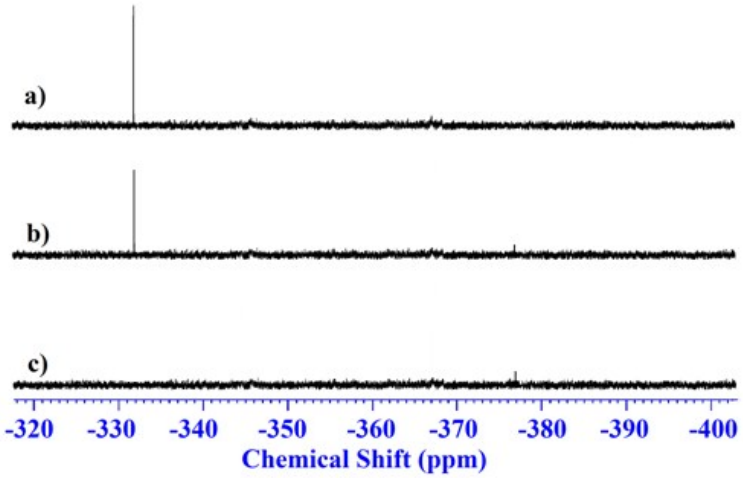

Fig. S3. ^{15}N NMR spectra (signal of an external reference (CD_3NO_2) were used as a lock, δ = 0.0): a) Hydrazine solution before reaction, b) reaction mixture after 6 h of (a), and c) after completion of the reaction (12 h) of (a) by using TiO_2–Rh NP photocatalyst.

Table S1: Chemical composition (at %) determined from XPS survey spectra of initial particles and after 5 catalytic runs

Cycle N°	C_{1s}	O_{1s}	Ti_{2p}	P_{2p}	Rh_{3d}
0	47.8	38.0	9.7	3.6	1.1
1	49.3	37.3	9.4	3.0	1.0
5	47.3	39.5	9.2	3.1	0.9