

Supporting Information

The Reaction Kinetics and Mechanism of Catalytic Decomposition of Hydrazine
nitrate on Ru/C Catalyst in Nitric Acid Solutions

Baole Li,^{*a‡} Tiansheng He,^{a‡} Chen Zuo,^a Zhi Cao,^a Taihong Yan^a and Weifang Zheng^{*a}

Department of Radiochemistry, China Institute of Atomic Energy, Beijing, 102413, China.

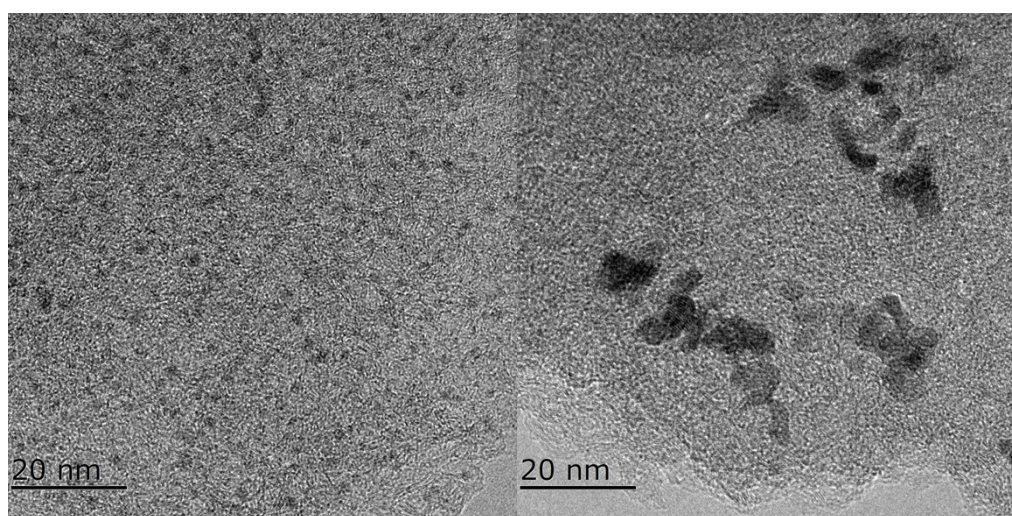


Fig.S1 TEM images for the fresh (left) and used (right) Ru/C catalyst.

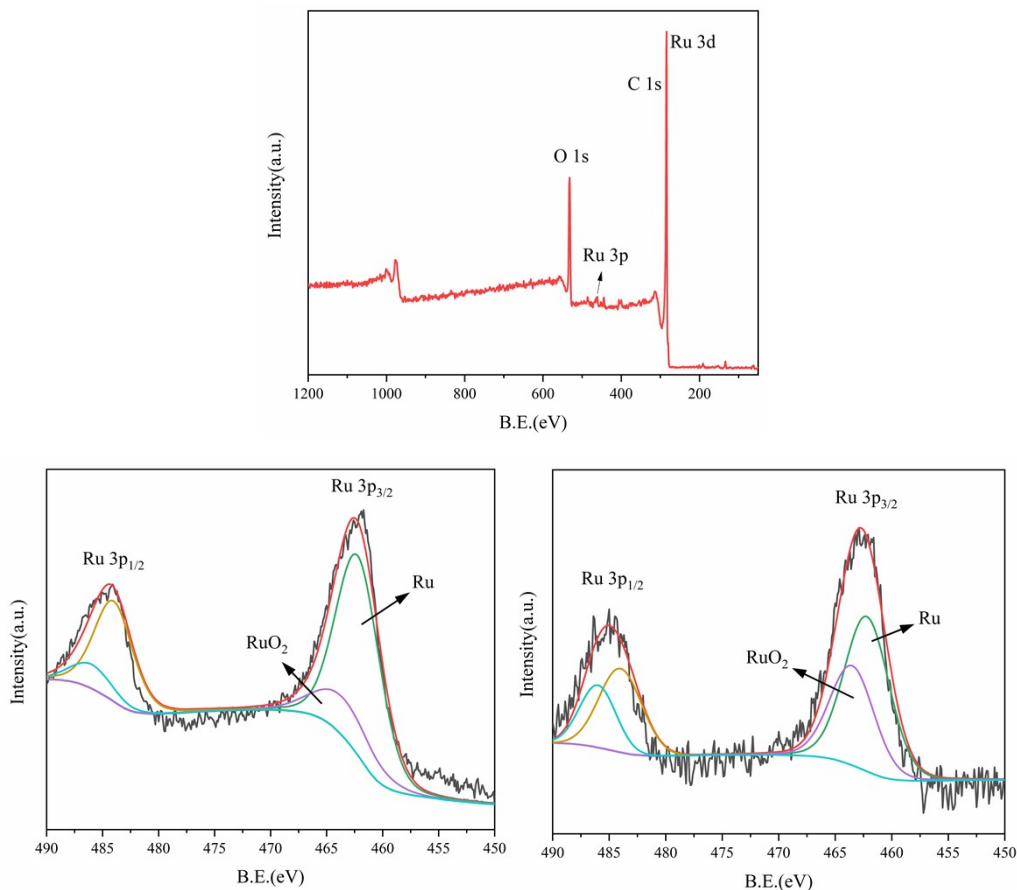


Fig. S2 XPS full spectrum of fresh Ru/C (top) and Ru 3p XPS spectra of Ru/C fresh catalyst (bottom left), used catalyst (bottom right)

Table S1 XPS results of fresh and reused Ru/C catalysts

Catalyst	Ru species	Peak area		Ru ⁰ / Ru ⁴⁺
		3p _{3/2}	3p _{1/2}	
Fresh	Ru ⁰	7763.032	3627.448	3.76
	Ru ⁴⁺	2077.023	960.738	
Used	Ru ⁰	3348.431	1633.251	1.57
	Ru ⁴⁺	2131.265	1040.130	

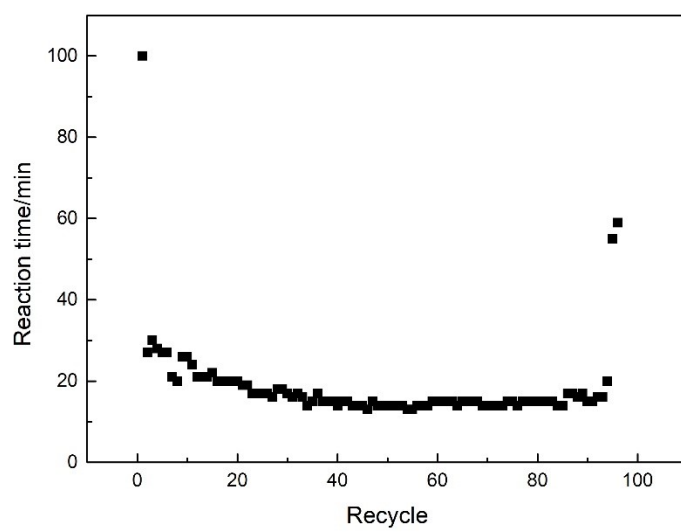


Fig.S3 Experimental results of Ru/C catalyst recycling performance