



Supplementary Materials

Ru@Carbon Nanotube Composite Microsponge: Fabrication in Supercritical CO₂ for Hydrogenation of *p*-Chloronitrobenzene

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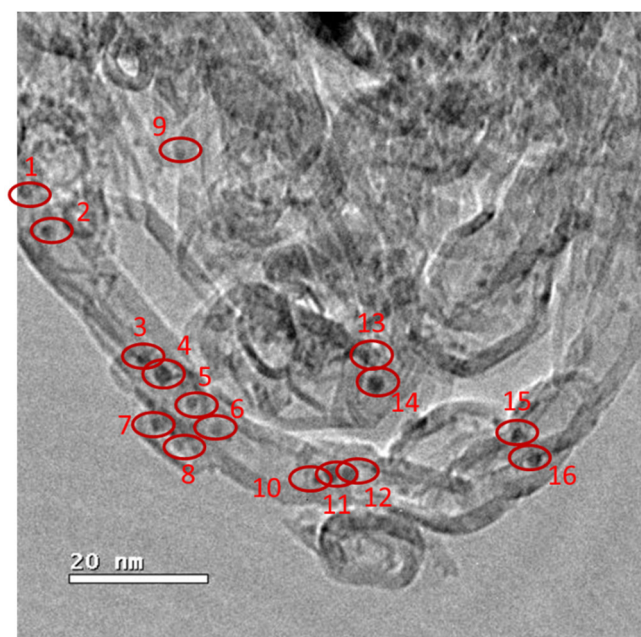
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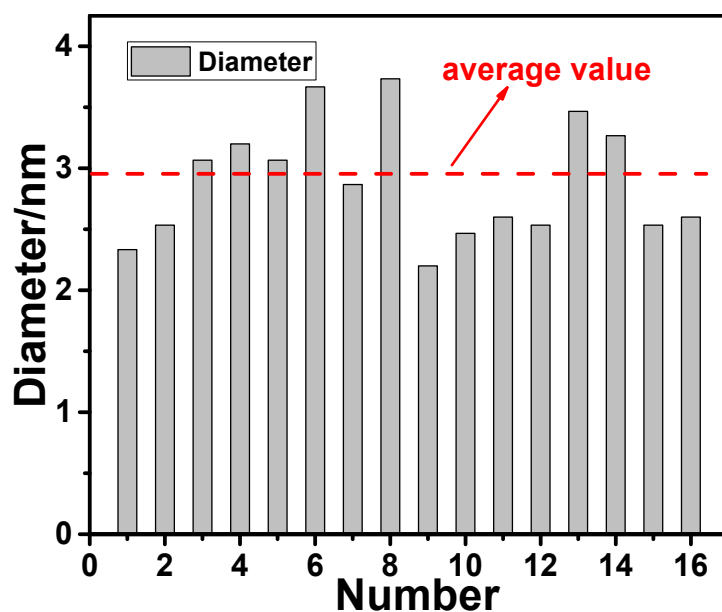
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(a)



(b)

Figure S1. Size of particle diameter measured: (a) Ru particles selected, (b) corresponding diameter size.

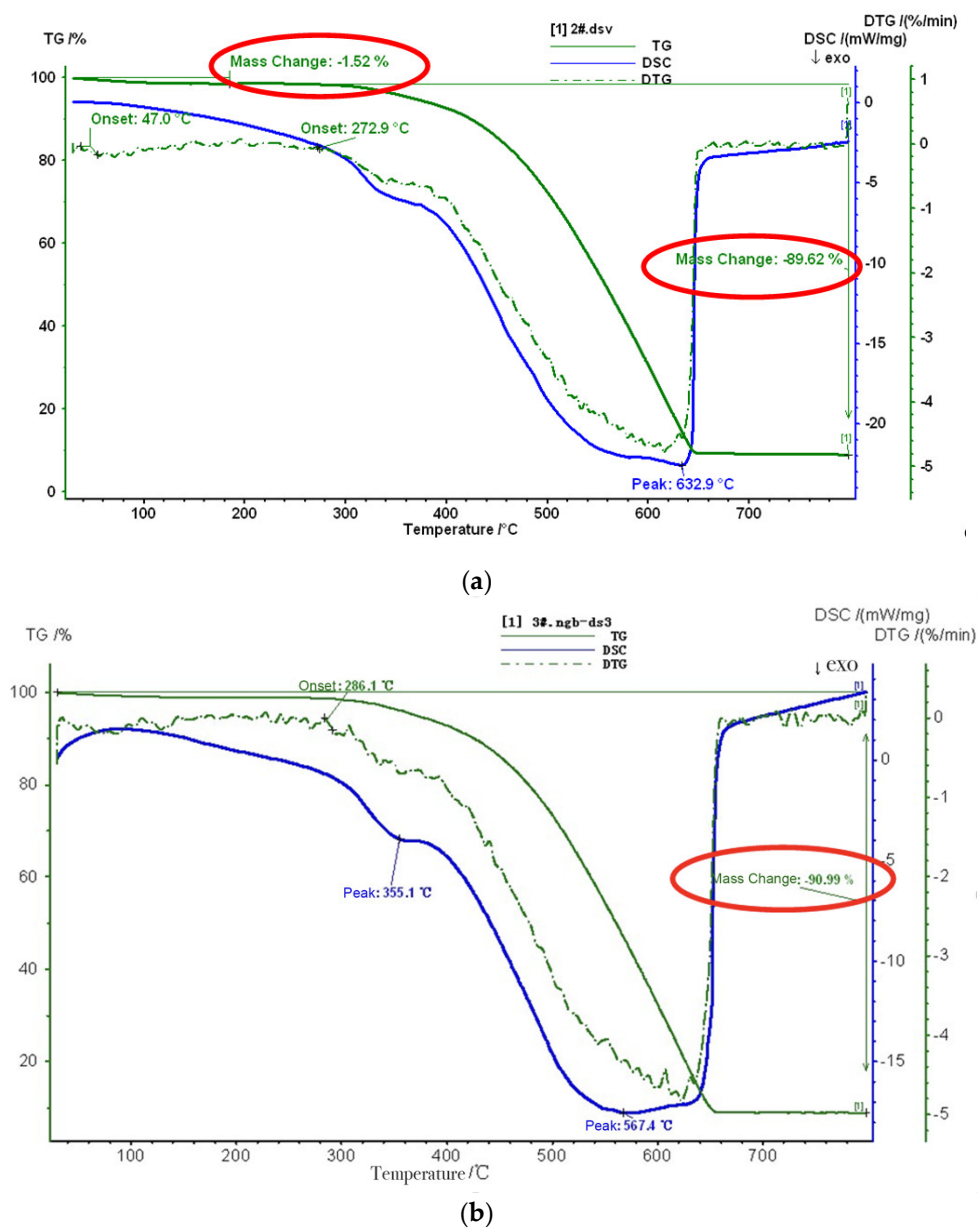


Figure S2. TG and DTG curves of (a) CR1 and (b) CR2.

The purity of CNTs provided by the manufacturer is about 95%, and grayscale of ash of CNTs in the total composition is $5\% \times 0.6 / (0.6 + 0.0811) = 4.4\%$, where „0.6” and „0.0811” represent the mass of CNTs and $\text{RuCl}_3 \cdot n\text{H}_2\text{O}$, respectively. According to the mass change, the ruthenium of load capacity in CR1 and CR2 is $8.9\% - 4.4\% = 4.5\%$ and $9.0\% - 4.4\% = 4.6\%$, respectively. The quality ratio of ruthenium is only 4.6 wt%, the mass fraction of ruthenium loading on the outside of CNT is 0.58 wt%. The loading content of internal ruthenium of CR2 is: $4.6\% - 0.58\% = 4.02\%$, and the ruthenium into the internal accounts for $4.02\% / 4.6\% = 87.4\%$.

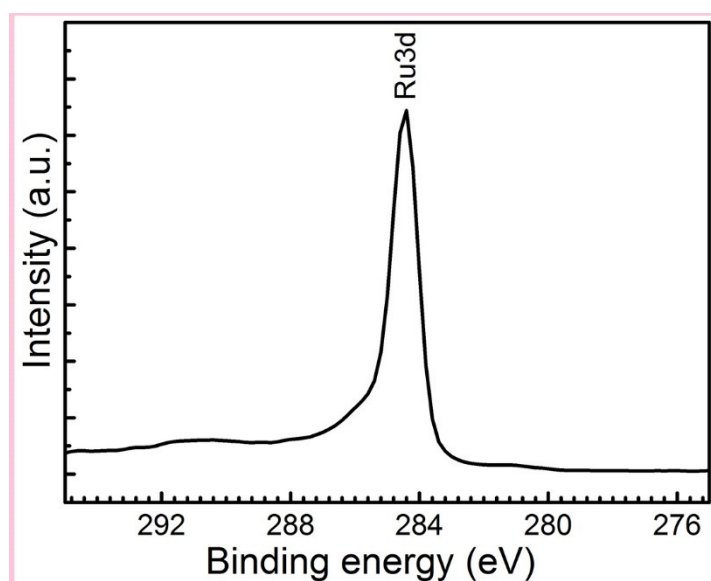


Figure S3. Fine XPS spectra of Ru3d of CR2.