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Hydrogenation of bio-derived succinic acid over supported rhenium catalysts prepared by microwave-assisted thermolytic method

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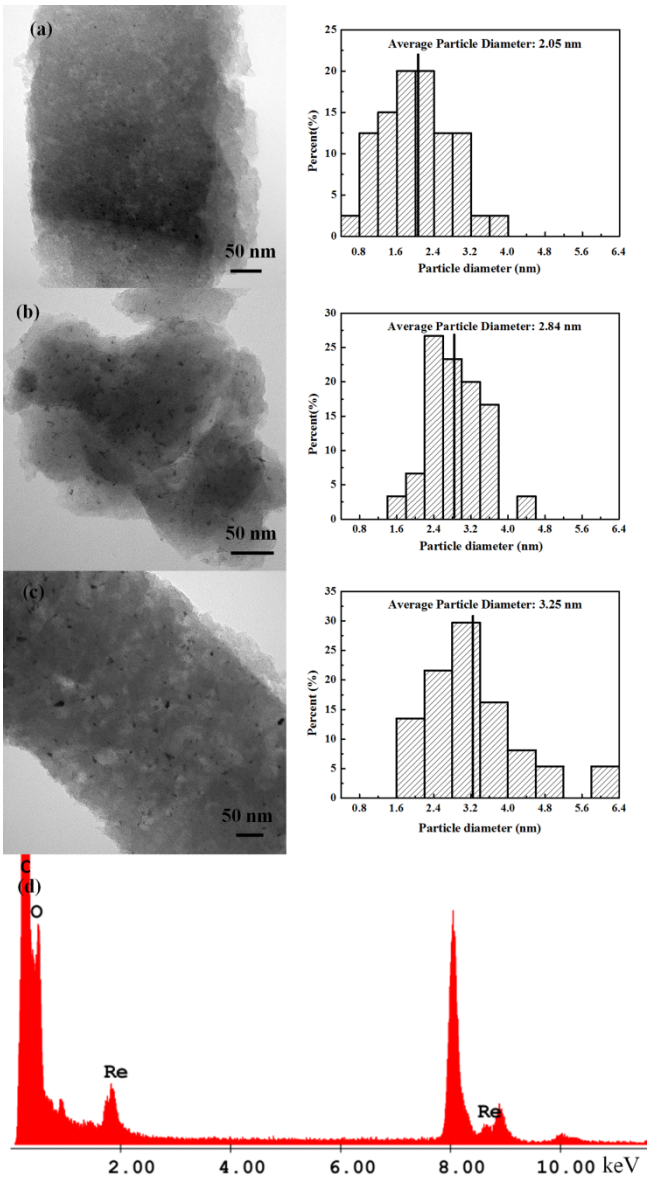

Fig. 1S TEM images of supported Re catalysts (a: Re/C-5, b: Re/C-7, c: Re/C-10) and (d) the EDX spectra of Re/C-5.

In Fig. 1S, above 100 particles were measured when calculating the average particle size of Re/C-5 catalyst. Fig. 1S(d) shows the EDX spectra of Re/C-5. The characteristic peak at 8.05 keV corresponds to Cu-Kα energy from the substrate material. The EDX spectra also shows that the catalysts have C-Kα (0.31 keV) and O-Kα (0.53 keV). The peaks at 1.84 keV, 8.63 keV and 10.01 keV are attributed to Re-Mα, Re-Lα and Re-Lβ respectively.[1]

Table 1S. ICP results of rhenium in reaction liquid.

Recycle	1	2	3	4	5
Re content in reaction liquid	0.17 ppm	0.17 ppm	0.18 ppm	0.19 ppm	0.21 ppm

Reference

1 A.V. Uscategui, E. Mosquera, L. Cifuentes, Mater. Lett., 2013, 94, 44-46.