Supporting information

for

Enhanced catalytic hydrodechlorination of 2,4-dichlorophenol over Pd catalysts supported on nitrogen-doped graphene

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**Figure 1S**: XRD patterns of Pd catalysts supported on GN-3.

![XRD patterns of Pd catalysts supported on GN-3](image1)

**Figure 2S**: XPS spectra of graphene and GN-3 in the C 1s region.

![XPS spectra of graphene and GN-3 in the C 1s region](image2)
**Figure 3S:** The catalytic HDC of 2,4-DCP over Pd(2.8)/GN-3. Solid and open symbols represent two separate runs. (▲, △) 2,4-DCP, (■, □) 2-CP and (◆, ◇) phenol.

**Figure 4S:** Influence of catalyst dosage on the initial HDC rate. Catalyst: Pd(2.8)/GN-3
**Figure 5S:** Catalytic HDC of 2,4-DCP over (a) Pd(2.7)/graphene and (b) Pd(2.8)/GN-3. Reaction conditions: pH 12. Catalyst dosage: 0.25 g l\(^{-1}\), 2,4-DCP concentration: 3.0 mM.