## Supplementary information

Geometrical structure and electronic properties of Ni-cCN and Ni-pGN



Figure 1. Electron density of Ni-gCN depicted at an isovalue of 0.03 e/ Å<sup>3</sup> and FOD of Ni-gCN depicted at an isovalue of 0.01 e/ Å<sup>3</sup>: a) – Ni-cGN, b) – Ni-pGN

Interaction between HCH and Ni-cGN and Ni-pGN



Figure 2. Relative energies  $(E_{rel})$  of the configurations that occur during the adsorption of HCH

on Ni-cGN system, E<sub>final</sub> = 0.00 kJ mol<sup>-1</sup>.

The energy of the final product is assumed to be 0.00 kJ.mol<sup>-1</sup>.