Supporting Information

A novel structured catalyst: gold supported on thin bimetallic (Ni, Co) carbonate hydroxide nanosheet arrays

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Supplementary Figures and Tables

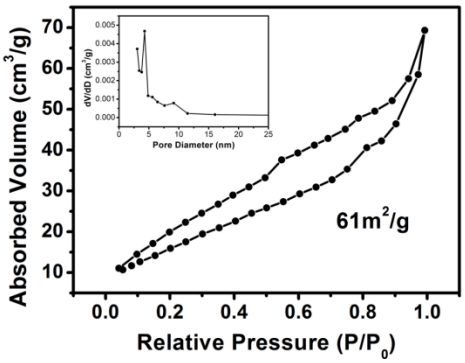

Fig. S1 N_2 adsorption–desorption isotherm and PSD (inset) of NiCoCH-NSAs.

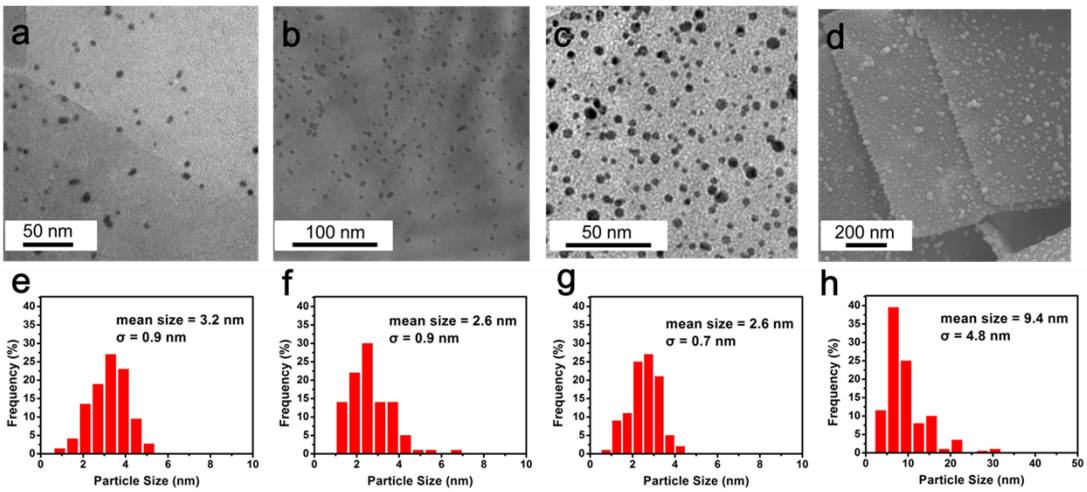

Fig. S2 TEM images of obtained (a) 0.1 wt%, (b) 0.7 wt% and (c) 2.8 wt% Au/NiCoCH-NSAs; (d) SEM image of obtained 8.1 wt% Au/NiCoCH-NSAs. (e-h) The corresponding Au particle size distribution histograms of Au/ NiCoCH-NSAs samples with different Au loading amount.

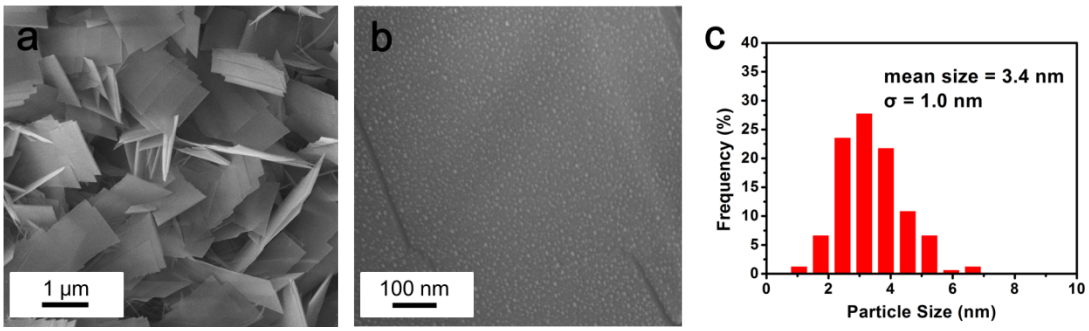

Fig. S3 SEM images of 2.8 wt% Au/NiCoCH-NSAs (a, b) and corresponding particle size distribution histogram of Au loaded on NiCoCH-NSAs (c) after being recycle-used for six times.

Table S1 Summary of the loading amount, average size of Au and catalytic activity of Au/NiCoCH-NSAs for the 4-NP reduction reaction.

Samples	Au nanoparticles loading (wt%)[1]	Mean size of Au nanoparticles (nm)	K (min-1)
0.1 wt% Au/NiCoCH-NSAs	0.1	3.2 ± 0.9	0.24
0.7 wt% Au/NiCoCH-NSAs	0.7	2.6 ± 0.9	0.27
2.8 wt% Au/NiCoCH-NSAs	2.7	2.6 ± 0.7	0.30
8.1 wt% Au/NiCoCH-NSAs	7.8	9.4 ± 4.8	0.29

[1] The value was determined by ICP.