Sub-nanometer Co$_3$O$_4$ Clusters Anchored on TiO$_2$(B) Nano-sheets: Pt Replaceable Co-catalysts for H$_2$ Evolution

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Supporting Information

Figure S1. TEM Bright field (BF) image of samples, (a) pure TiO$_2$(B) before Co loading, (b) a control experiment performed under identical synthesis conditions of Co10, without TiO$_2$(B) nanosheets, produced big aggregates of Co$_3$O$_4$ nanoparticles, (c) Co25, (d) Co50, (e) HAADF image of Co5, (f) BF image of Co25 with a larger magnification.

Figure S2. The TiO$_2$(B) samples with various Co loading dosages.

Figure S3. (a) UPS spectra of TiO$_2$(B) nanosheets, and pure Co$_3$O$_4$ aggregates. (b) XPS valence edges of samples TiO$_2$(B), Co10, Co25 and pure Co$_3$O$_4$.

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†Electronic Supplementary Information (ESI) available: The experimental details, the additional characterization of the used catalysts including TEM, XPS and UPS. See DOI: 10.1039/x0xx00000x