Supporting Information

## Facile *in situ* Synthesis of Silver Nanoparticles on Boron Nitride Nanosheets with Enhanced Catalytic Performance

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Figure S1. EDS mapping of BNNS@TA-Fe.



Figure S2. Photos of BNNS/Ag-1, BNNS/Ag-2, BNNS/Ag-3 dispersion (0.1 mg/mL).



**Figure S3**. TEM images of (a) BNNS/Ag-1 and (b) BNNS/Ag-2. The size distributions of Ag nanoparticles on BNNS/Ag-1 and BNNS/Ag-2 are shown in (c) and (d), respectively.



Figure S4. The change of Ag NPs formed on BNNS with the dosage of  $Ag(NH_3)_2OH$ .



Figure S5. TEM images of (a) BNNS/Au and (c) BNNS/Pd, and HR-TEM images of (b) Au and (d) Pd nanoparticles.