



Fig. S19 (a) The XRD patterns of $\text{Ti}_3\text{C}_2\text{T}_x\text{-CTAB}$ and $\text{Ti}_3\text{C}_2\text{T}_x\text{-CTAB-Br}_2$ (after $\text{Ti}_3\text{C}_2\text{T}_x\text{-CTAB}$ reacting with bromine species). (b) SEM image of $\text{Ti}_3\text{C}_2\text{T}_x\text{-CTAB-Br}_2$.