



**Fig. S1.** (a) N<sub>2</sub> adsorption-desorption isotherms of  $\text{Ti}_3\text{C}_2\text{T}_x$  and  $\text{Ti}_3\text{C}_2\text{T}_x@\text{C}$ . (d) Pore size distribution curves of  $\text{Ti}_3\text{C}_2\text{T}_x$  and  $\text{Ti}_3\text{C}_2\text{T}_x@\text{C}$ .