



Left: $\text{Ti}_3\text{C}_2\text{T}_x$ MXene Right: $\text{Ti}_3\text{C}_2\text{T}_x$ -CTAB

Fig. S21 Photographs of bromine-containing $\text{Ti}_3\text{C}_2\text{T}_x$ (left) and $\text{Ti}_3\text{C}_2\text{T}_x$ -CTAB (right) powder after heating at 50°C for different time.

As shown in Fig. S21a–b, when bromine was added to $\text{Ti}_3\text{C}_2\text{T}_x$ MXene powder, obvious bromine vapor was