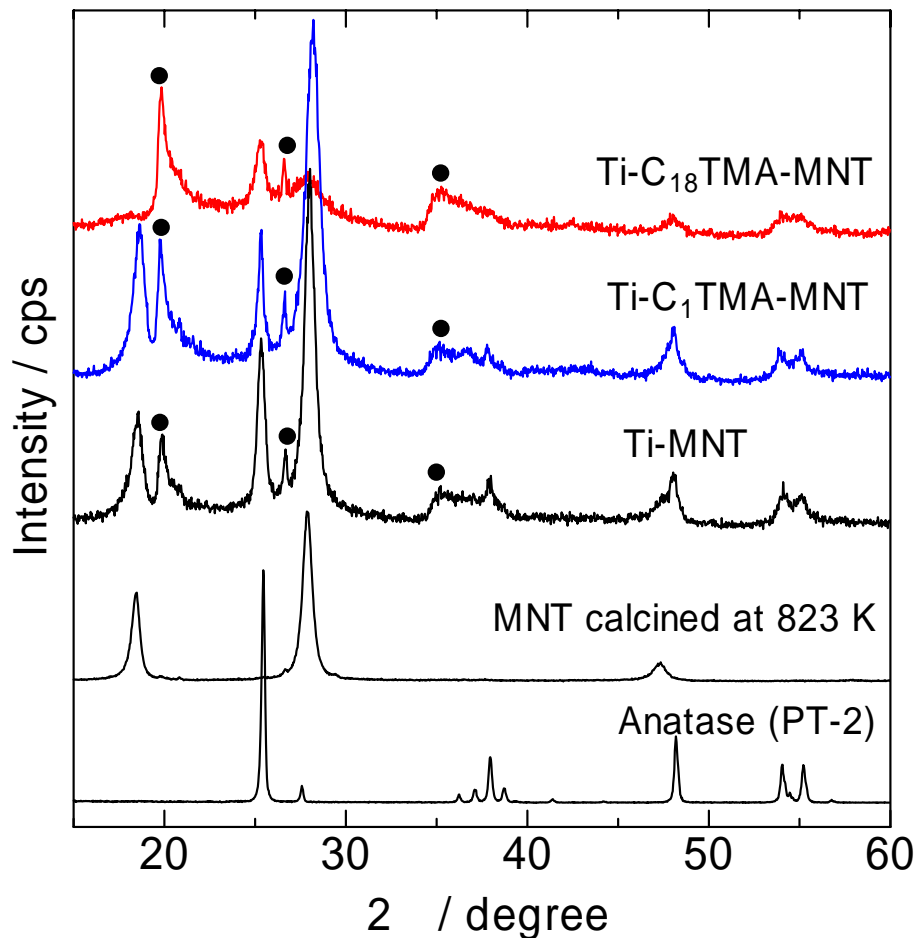


Supplement Fig. 1 Effect of TiP/scCO<sub>2</sub> treatment time on powder XRD patterns of (a) MNT, (b) C<sub>1</sub>TMA-MNT and (c) C<sub>18</sub>TMA-MNT, respectively. The measurements were performed by Rigaku RAX using Cu-K $\alpha$  radiation ( $\lambda = 1.54186 \text{ \AA}$ ) at room temperature. Data collected in the  $2\theta$  range from 1 to 10 with a step size 0.02 degree and a scan speed of 0.6 degree /min. No remarkable peak was observed on all calcined samples.



Supplement Fig. 2 Powder XRD patterns of (a) MNT, (b) C<sub>1</sub>TMA-MNT and (c) C<sub>18</sub>TMA-MNT comparing with MNT calcined at 823 K and with anatase powders (PT-2). The measurements were performed by Rigaku RAX using Cu-K $\alpha$  radiation ( $\lambda = 1.54186 \text{ \AA}$ ) at room temperature. Data collected in the  $2\theta$  range from 10 to 60 with a step size 0.03 degree and a scan speed of 1.0 degree /min. Some unknown peak (●) were observed and their assignment is under investigation.