

Supplementary Information

Laser Assisted Exfoliation of MXenes

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Fig. S1. Tyndall effect of 0.5 mg/ml supernatant of the colloid solution prepared by (a) 30 min US and (b) 30 min LA.

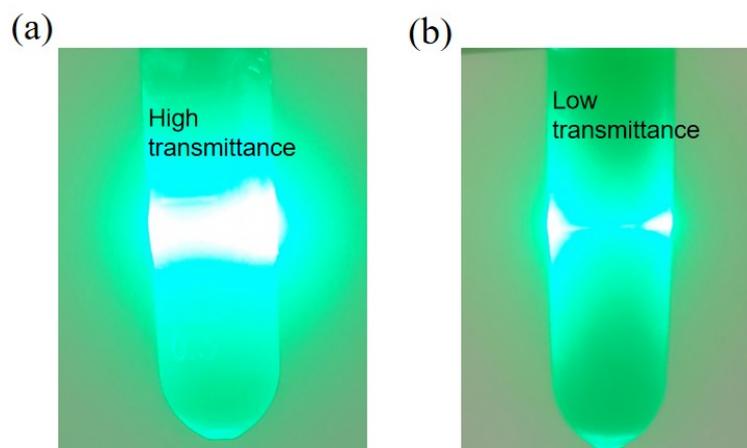


Fig. S2. SEM images of (a, d) unetched Ti_3AlC_2 particles, (b, e) etched but unexfoliated $\text{Ti}_3\text{C}_2\text{T}_x$ nanoflakes, (c) US exfoliated and LA exfoliated $\text{Ti}_3\text{C}_2\text{T}_x$ nanoflakes.

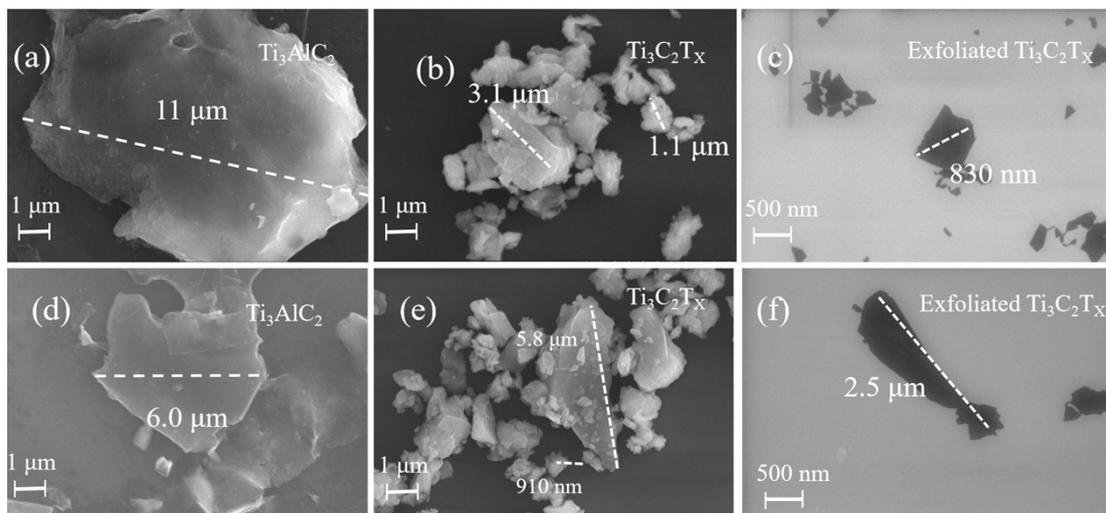


Fig. S3. SEM images of $Ti_3C_2T_x$ nanoflakes exfoliated by (a, b) US and (c, d) LA.

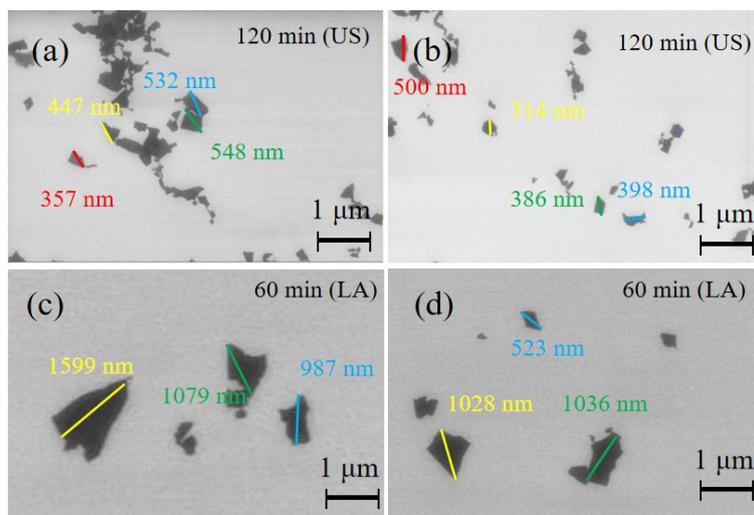


Fig. S4. (a-d) Size distribution of the US $Ti_3C_2T_x$ nanoflakes prepared for 30-120 min. (e-h) Size distribution of the LA $Ti_3C_2T_x$ nanoflakes prepared for 30-120 min.

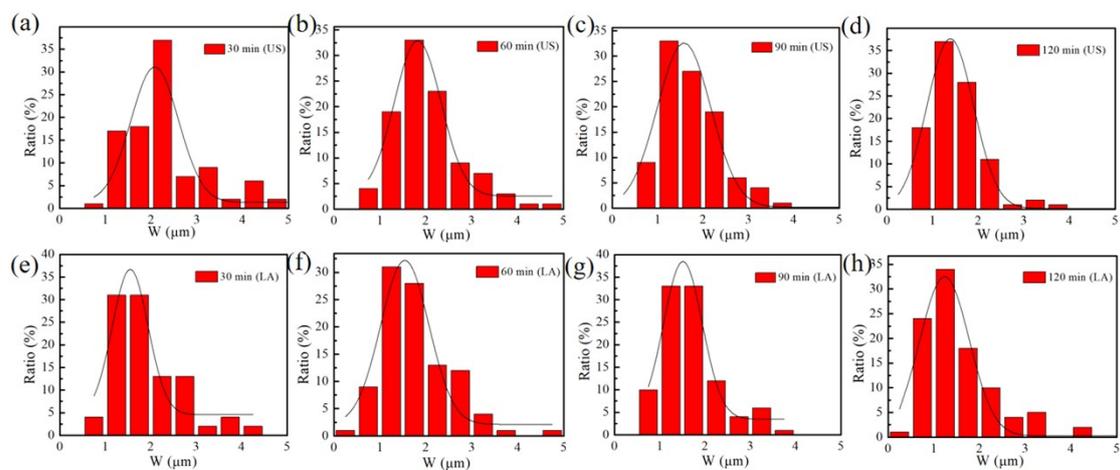


Fig. S5. (a-d) Thickness distribution of the US $Ti_3C_2T_x$ nanoflakes prepared for 30-120 min. (e-h) Thickness distribution of the LA $Ti_3C_2T_x$ nanoflakes prepared for 30-120 min.

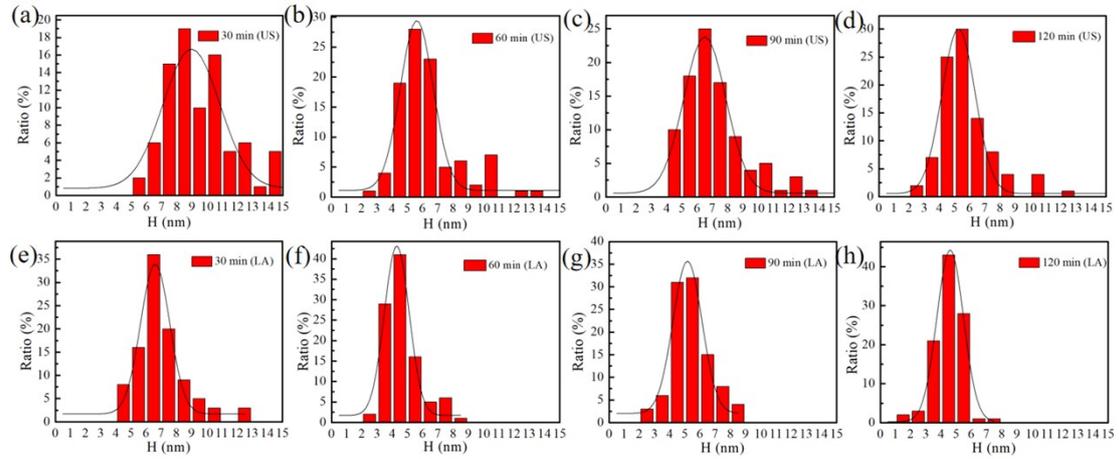


Fig. S6. (a) The relative error ($\Delta W/W$) of the $Ti_3C_2T_x$ size. (b) The relative error ($\Delta H/H$) of the $Ti_3C_2T_x$ thickness .

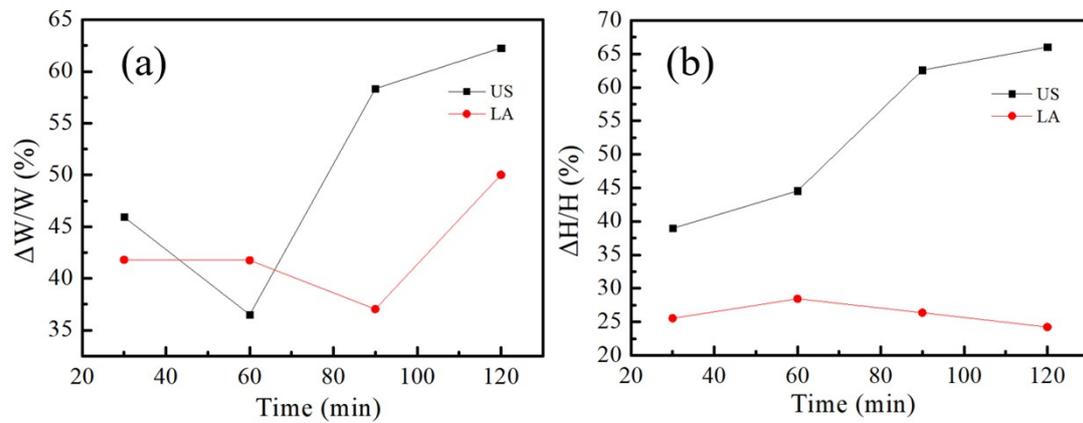


Fig. S7. Fine XPS spectrum of Ti 2p for $Ti_3C_2T_x$ prepared by (a) 60 min US, (b) 60 min LA and (c) 120 min US. Fine XPS spectrum of O 1s for $Ti_3C_2T_x$ prepared by (d) 60 min US, (e) 60 min LA and (f) 120 min US.

