High-Conductive Multilayer TiO_X-$Ti_3C_2T_X$ Electrocatalyst for Longevous Metal-Oxygen Battery under a High Rate

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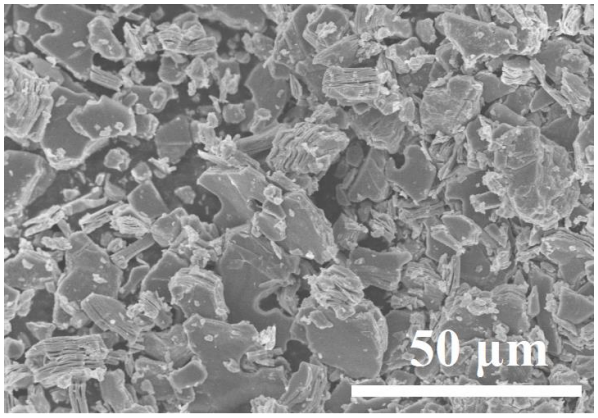

Figure S1. SEM image of TiO_X-$Ti_3C_2T_X$.

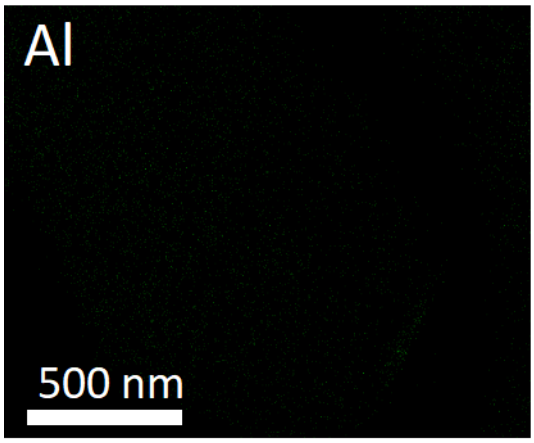

Figure S2. EDS mapping images of Al element for TiO_X-$Ti_3C_2T_X$.

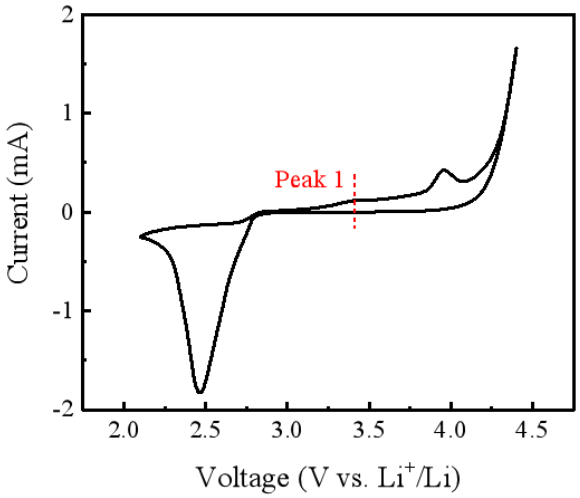

Figure S3. cyclic voltammetry (CV) curves of TiO_X@$Ti_3C_2T_X$.

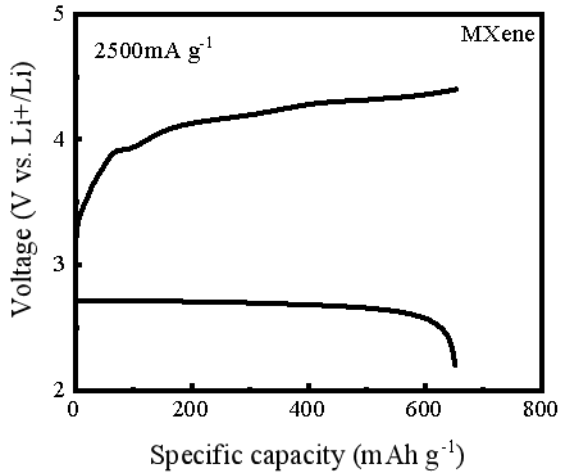

Figure S4. Initial full discharge/charge curves of TiO_X-$Ti_3C_2T_X$ based LOBs at 2500 mA g^{-1} (The specific capacities are normalized by the weight of actual whole electrodes).

Table S1. EDS elemental analysis of TiO_X-$Ti_3C_2T_X$.

Element	Weight %	Atomic %	Net Error%□C K
C	19.52	42.13	0.85
O	12.61	20.20	1.72
Al	1.04	0.98	3.98
Ti	67.83	36.69	0.57

Table S2. Comparison of battery performance of TiO_X-$Ti_3C_2T_X$ based electrode with other reported electrodes.

Material	**Current density**	**First discharge capacity**	**Cycling current density**	**Cycle number**	**Limited capacity**	**Rf.**
V-TiO_2/Ti_3C_2Tx	100 mA g^{-1}	11 487 mAh g^{-1}	100 mA g^{-1}	200	1000 mAh g^{-1}	[1]
N-TiO_2/$Ti_3C_2T_x$	100 mA g^{-1}	10122 mAh g^{-1}	500 mA g^{-1}	200	500 mAh g^{-1}	[2]
MoO_2/Mo_2C@RGO	100 mA g^{-1}	2365 mAh g^{-1}	200 mA g^{-1}	100	1000 mAh g^{-1}	[3]
MoO_2 NPs/CTs	0.2 mA cm^{-2}	9.3 mAh cm^{-2}	0.2 mA cm^{-2}	240	0.4 mA cm^{-2}	[4]
$MnCo_2O_4$/MoO_2@Ni	200 mA g^{-1}	4210 mAh g^{-1}	500 mA g^{-1}	400	1000 mAh g^{-1}	[5]
TiO_X-$Ti_3C_2T_X$	2500 mA g^{-1}	7169 mAh g^{-1}	2500 mA g^{-1}	100	1000 mAh g^{-1}	

References

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