Supporting Information

Charge Transfer Induced Polymerization of EDOT Confined between 2D Titanium Carbide Layers

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To determine the polymer content, we carried out the thermogravimetric analysis (TGA) for pristine Ti$_3$C$_2$Tx and Ti$_3$C$_2$Tx/PEDOT hybrid as shown in Figure S1. We set 450 °C as the cut-off temperature, as the burning of MXene and its hybrids beyond this temperature leads to oxidation of Ti$_3$C$_2$Tx which, in turn, increases the sample weight. The weight loss in the MXene TGA curve is due to the trapped water between the layers.

![Figure S1: Thermogravimetric analysis for pristine Ti$_3$C$_2$Tx and Ti$_3$C$_2$Tx/PEDOT hybrid.](grafico.png)