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Two-Dimensional MoS_2: A Platform for Constructing Three-Dimensional Structures by RAFT Polymerization

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Results and discussion

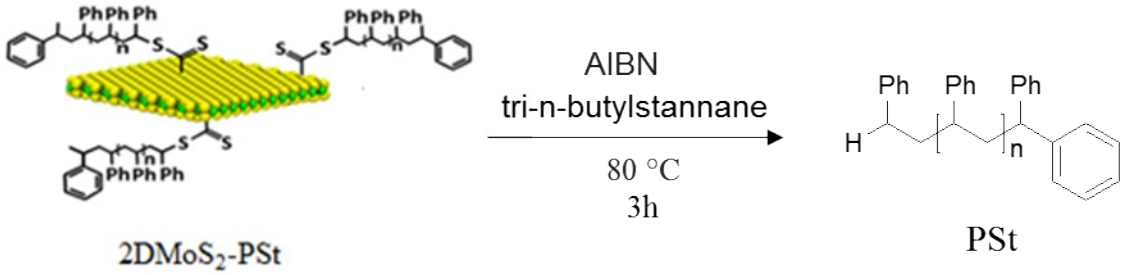

Fig. S1. End Group Removal from RAFT-Synthesized Polymers.

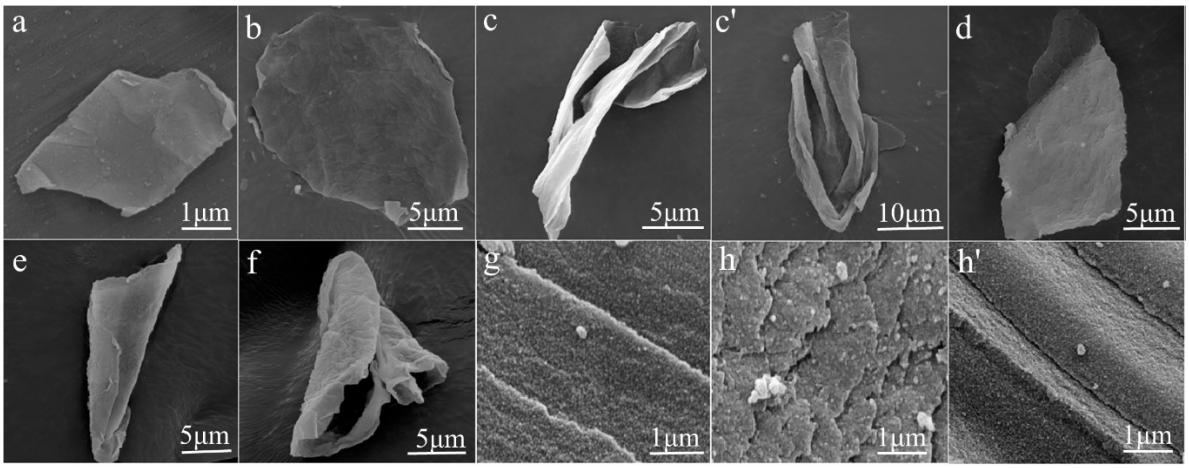

Fig. S2. SEM images of (a) MoS_2, (b) 2DRAFT agent, (c, c') $2DMoS_2$-PSt, (d) $2DMoS_2$-P(St-AM); SEM images of $2DMoS_2$-PStc synthesized using various weight ratios of $2DMoS_2$ –PSt: DVB, (e) 1:1, (f) 1:5, (g) 1:10 and (h,h') 1:15, related to 0.05 g of $2DMoS_2$ –PSt.

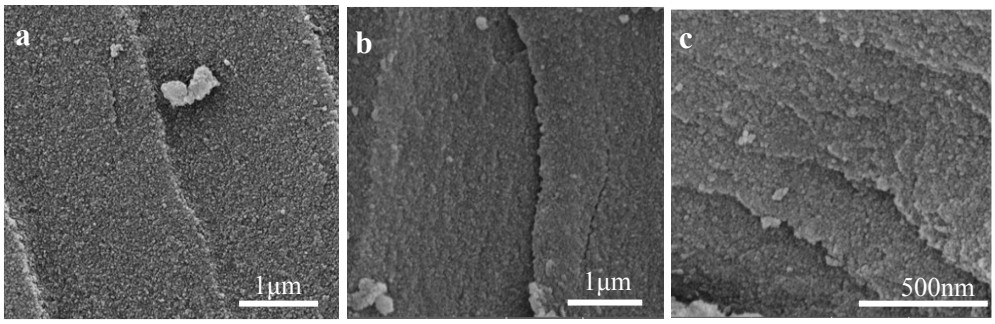

Fig. S3. SEM images of $2DMoS_2$-PStc synthesized using (a,b) 1:10 and (c) 1:15 weight ratios of $2DMoS_2$ –PSt: DVB.

The temperatures corresponding to 5 and 10 wt% weight loss ($T_{-5\%}$ and $T_{-10\%}$), which are used to evaluate the decomposition of nanostructure on the onset stage, and 50 wt% weight loss ($T_{-50\%}$) are also reported in Table S1.

Table S1. TGA data using various weight ratios of $2DMoS_2$ –PSt: DVB, (a) 1:1, (b) 1:5, (c) 1:10 and d) 1:15, in N_2 atmosphere

Sample	$T_{-5\%}$ (°C)	$T_{-10\%}$ (°C)	$T_{-50\%}$ (°C)	Char residue[a] %
a	250	382	416	0.2
b	363	388	424	0.12
c	372	398	445	0.01
d	408	421	452	0.002

[a] at 700 °C