Electronic Supplementary Information

PEDOT-PSS Coated VS_2 Nanosheets Anodes for High Rate and Ultrastable Lithium-Ion Batteries

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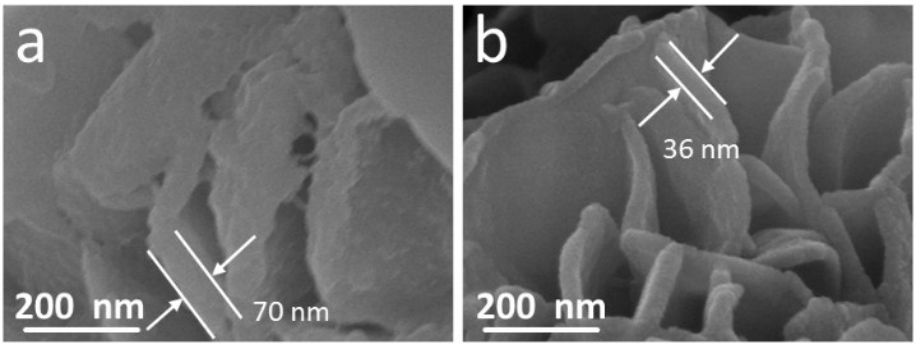

Fig. S1 SEM images of (a) $1VS_2$@PEDOT-PSS and (b) $10VS_2$@PEDOT-PSS.

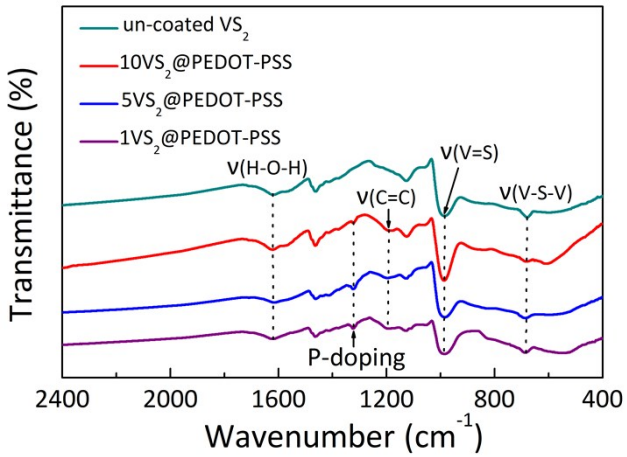

Fig. S2 FTIR spectra of un-coated VS_2 and *x*VS_2@PEDOT-PSS.

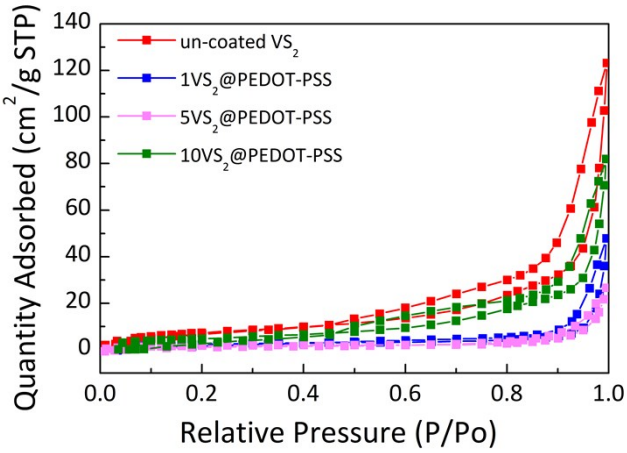

Fig. S3. Nitrogen adsorption-desorption isotherm lines of un-coated VS_2 and *x*VS_2@PEDOT-PSS.

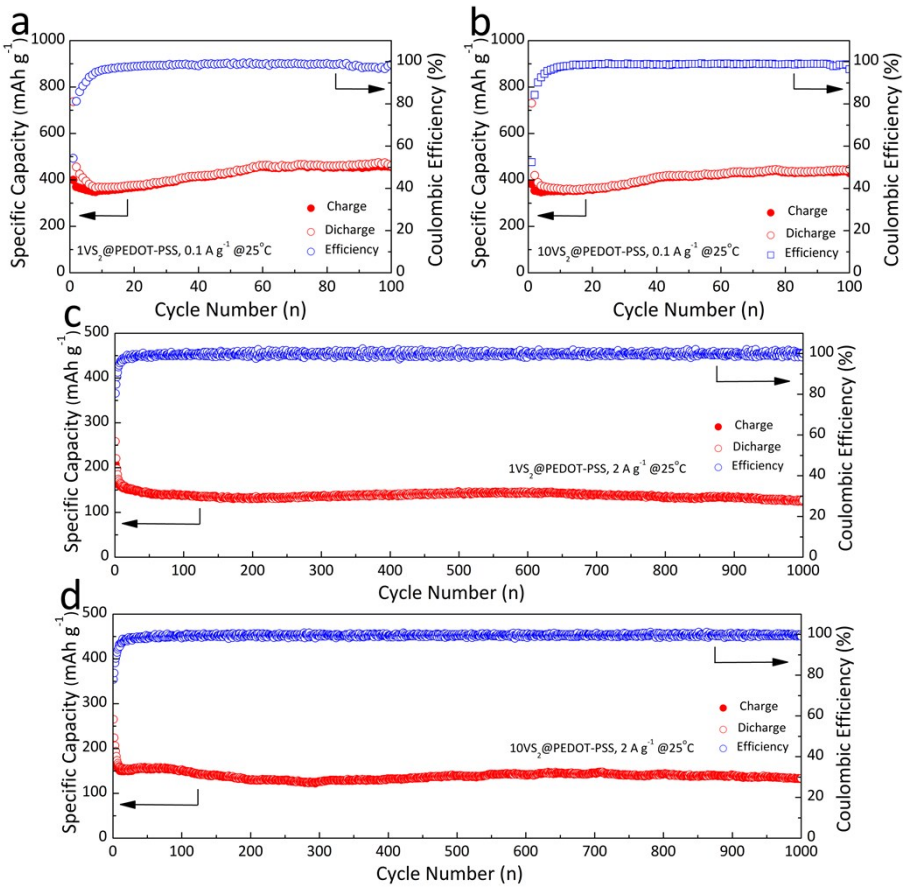

Fig. S4. Cycling performance of (a) $1VS_2$@PEDOT-PSS and (b) $10VS_2$@PEDOT-PSS at 0.1 A g^{-1}. Cycling performance of (c) $1VS_2$@PEDOT-PSS and (d) $10VS_2$@PEDOT-PSS at 2 A g^{-1}.

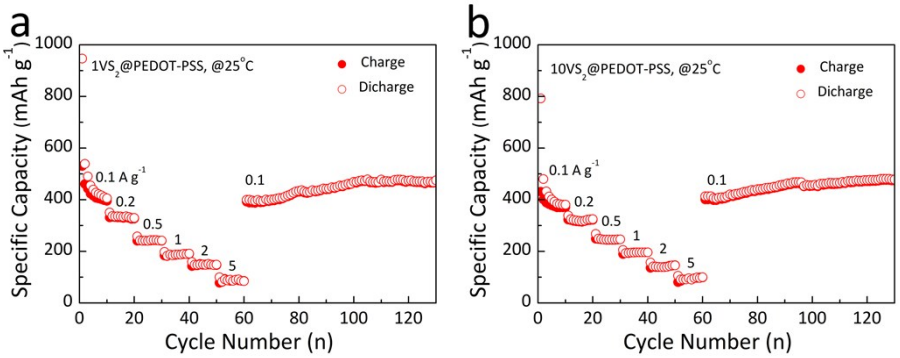

Fig. S5. Rate performance of (a) $1VS_2$@PEDOT-PSS and (b) $10VS_2$@PEDOT-PSS under different current densities of 0.1-5 A g^{-1}.

Table S1

The BET surface area and pores total volume of un-coated VS_2 and *x*VS_2@PEDOT-PSS.

	Un-coated VS_2	1VS_2@PEDOT-PSS	5VS_2@PEDOT-PSS	10VS_2@PEDOT-PSS
Surface area (m^2/g)	28.98	9.54	6.68	17.86
Total volume (m^3/g)	0.19	0.07	0.04	0.13