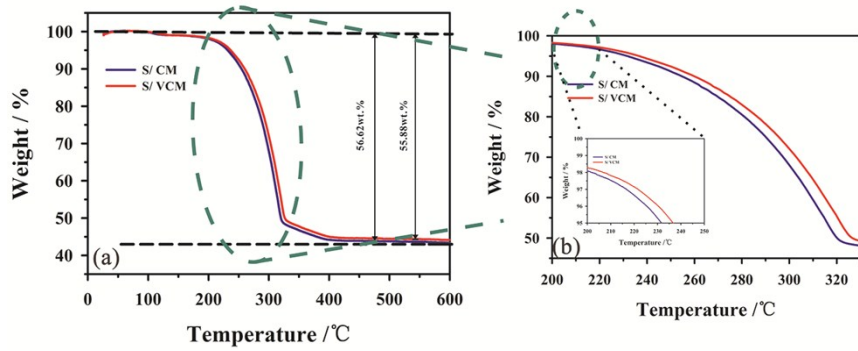
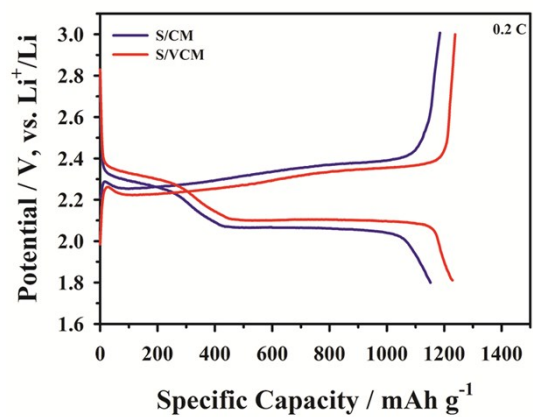


**Fig. S1.** SEM image of (a) S/VCM, EDX mappings of S/VCM: (b) C, (c) S, (d) V and (e) O.



**Fig. S2.** (a) TG curves for the S/CM and S/VCM composites under Ar atmosphere; (b) the enlarged image of (a).



**Fig. S3.** The initial second discharge/charge curves of the S/CM and S/VCM composite cathodes at 0.2 C.

**Table S1.** Pore structure parameters of CM and VCM.

sample	$S_{\text{BET}}$ ( $\text{m}^2\text{g}^{-1}$ )	V ( $\text{cm}^3\text{g}^{-1}$ )
CM	713.4	0.816
VCM	698.2	0.768