

Table S1. Atomic Concentration Table

Sample	Concentration of Carbon	Concentration of Potassium	Concentration ratio of C to K
K ⁺ -DB18C6@SWCNT	82.43	0.3709	0.00450
FePc/K ⁺ -DB18C6@SWCNT	84.43	0.3459	0.00410

Table S2. G-band peak positions, Raman intensity (I_D/I_G , I_{RBM}) and FWHM for pristine SWCNTs, DB18C6@SWCNTs, K⁺-DB18C6@SWCNTs, and FePc/K⁺-DB18C6@SWCNTs.

Sample	I_D/I_G	FWHM	I_{RBM}	G band peak position
Pristine SWCNT	0.28	5.0	806.3	1589.5
K ⁺ -DB18C6@SWCNT	0.27	8.0	447.0	1590.7
FePc/K ⁺ -DB18C6@SWCNT	0.15	5.7	1570.3	1589.0

Table S3. Experimentally measured values of pristine SWCNT.

catalyst	E_{onset} (V vs RHE)	$E_{1/2}$ (V vs RHE)	n (RRDE)
pristine SWCNT (Pt counter electrode)	0.617	0.521	2.89
pristine SWCNT (Ti counter electrode)	0.624	0.543	2.86