Electronic Supplementary Material (ESI) for Nanoscale.
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Electronic Supporting Information for

Interstratified heterostructures of metal hydroxide nanoclusters and MoS_2 monolayers with improved electrode performance

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Fig. S1. Energy dispersive spectrometry (EDS)–elemental maps of (a) **CrMS1** and (b) **CrMS2**.

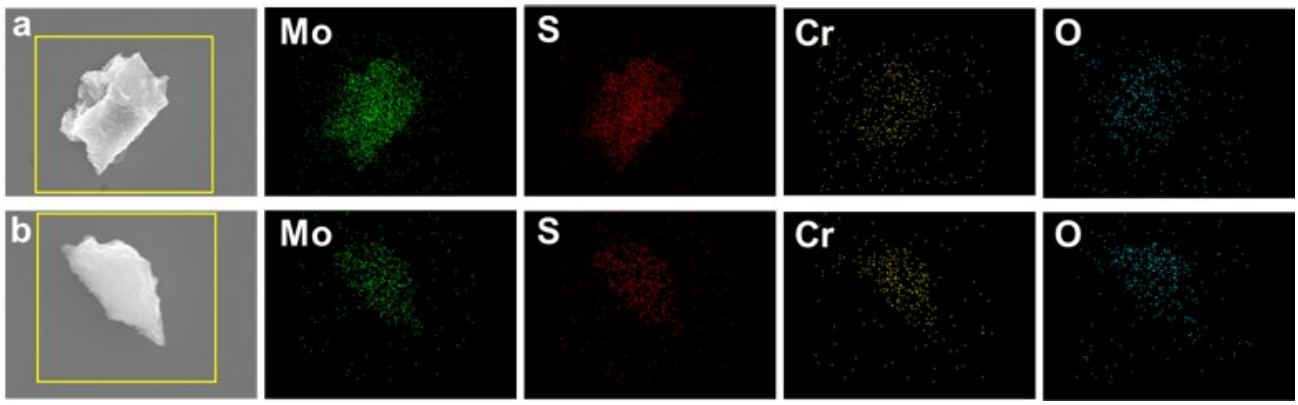

Fig. S2. O 1s X-ray photoelectron spectra for **CrMS** nanohybrids.

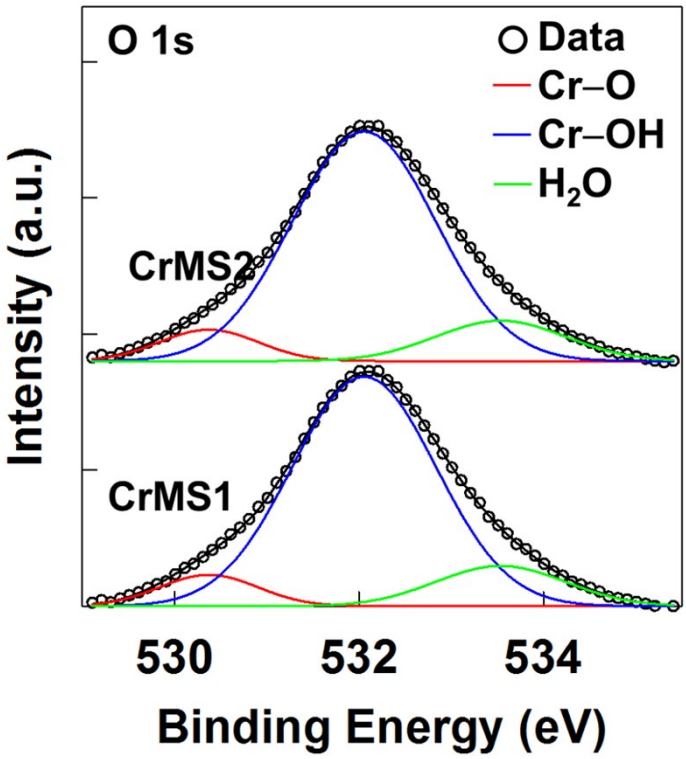

Fig. S3. Structural models for pillared chromium hydroxide nanoclusters.

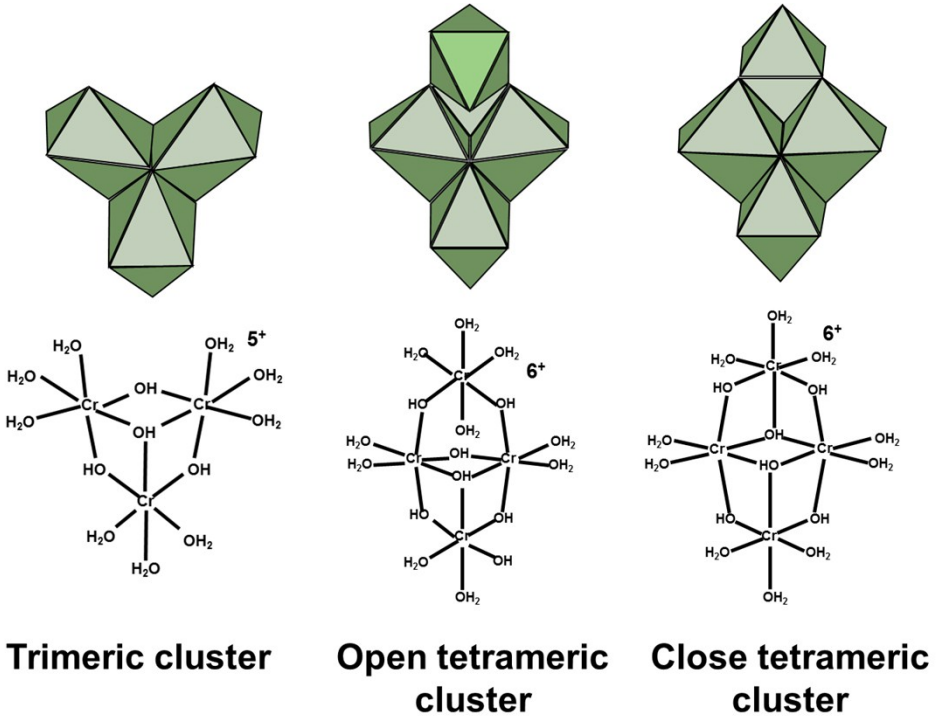

Fig. S4. Fourier transformed (left) and Fourier-filtered (right) spectra of Cr K-edge extended X-ray absorption fine structure (EXAFS) data for **CrMS2** with (a) trimeric, (b) open tetrameric, and (c) closed tetrameric structure models. Among the present models, the open tetrameric model gives the best fits to the experimental data, as highlighted in the red box.

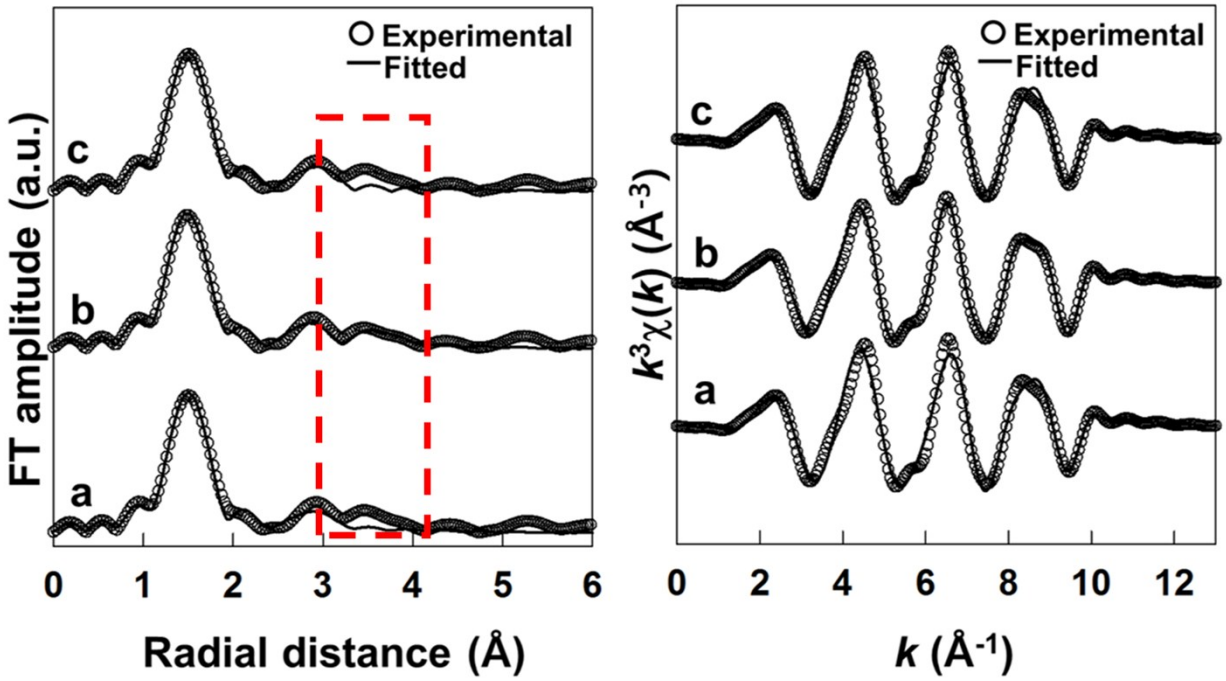

Fig. S5. Differential capacity vs. voltage (dQ/dV) curves for (a) bulk MoS_2, (b) **CrMS1**, and (c) **CrMS2**.

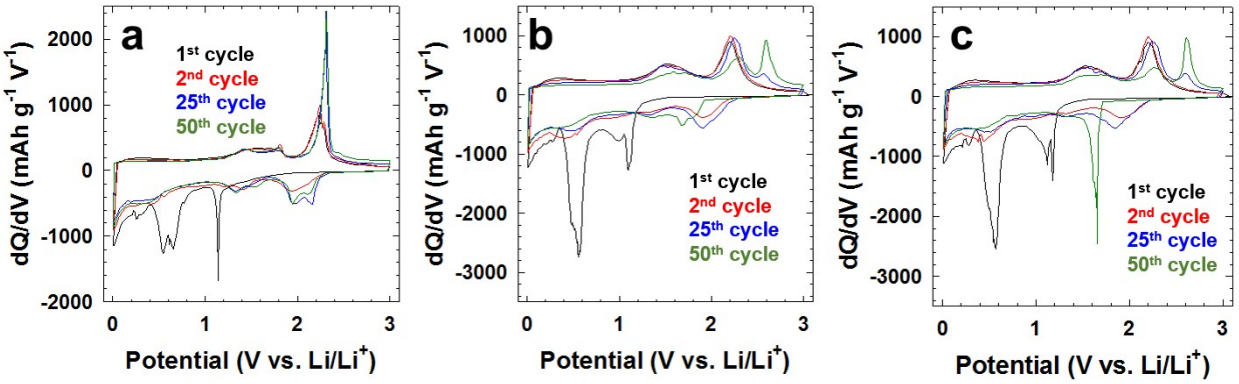

Table S1. Relative concentration of oxygen species for **CrMS** nanohybrids.

Materials	Cr–O	Cr–OH	H_2O
CrMS1	8.8 %	82.9 %	8.3 %
CrMS2	7.5 %	79.9 %	12.6 %

Table S2. Parameters obtained by fitting analyses for Nyquist plots on the basis of the Voigt-type equivalent circuit.

Materials	R_s (Ω)	R_{ct} (Ω)
Bulk MoS_2	24.73	157.0
CrMS1	20.08	143.4
CrMS2	24.67	136.2