

SUPPORTING INFORMATION:

Synthesis and charge storage properties of templated LaMnO₃-SiO₂ composite materials

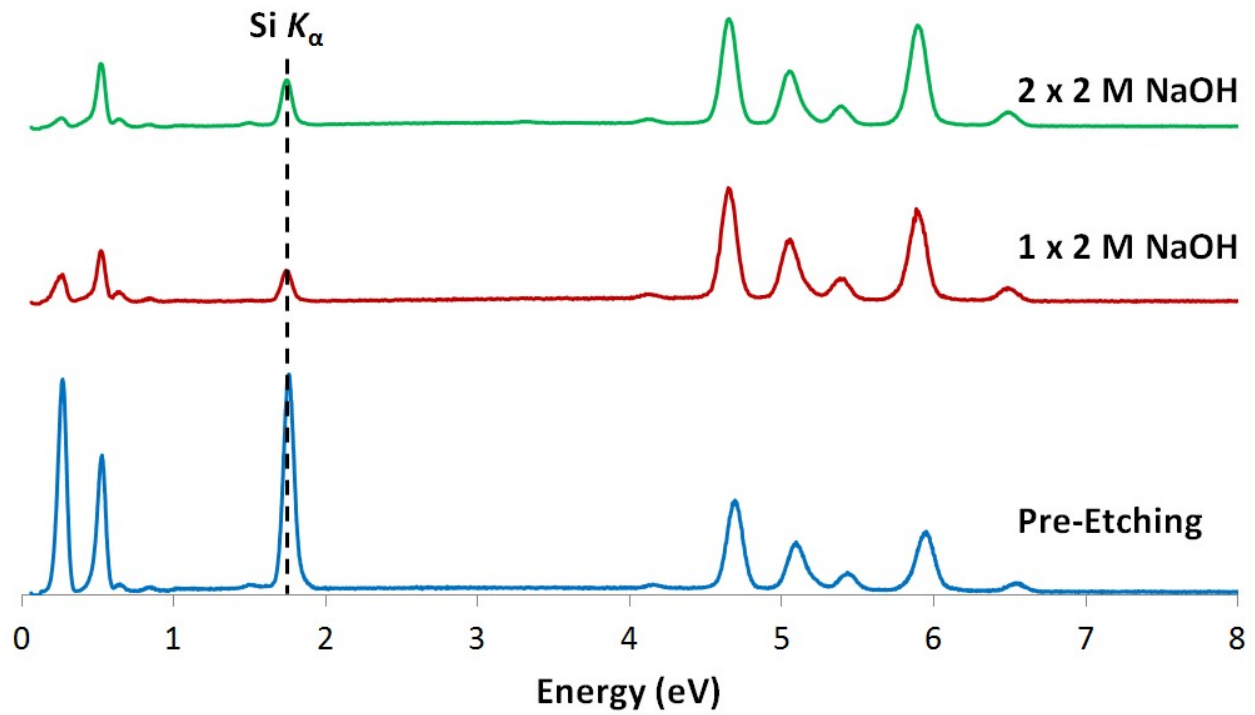
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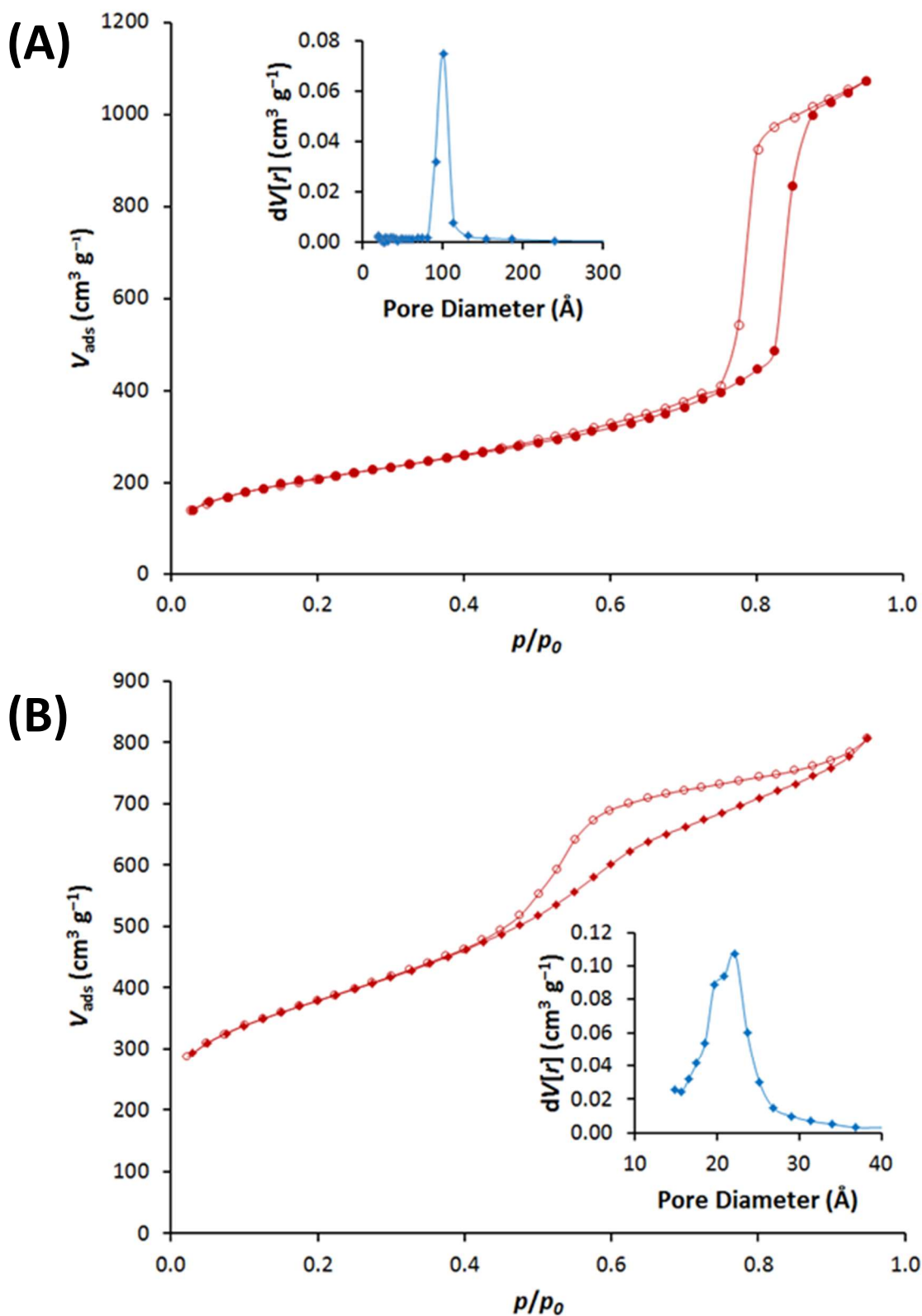
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Unetched Mass	200 mg
1 x 2 M NaOH Etching	158 mg
2 x 2 M NaOH Etching	148 mg
3 x 2 M NaOH Etching	152 mg
Expected Post-etch Mass	117 mg

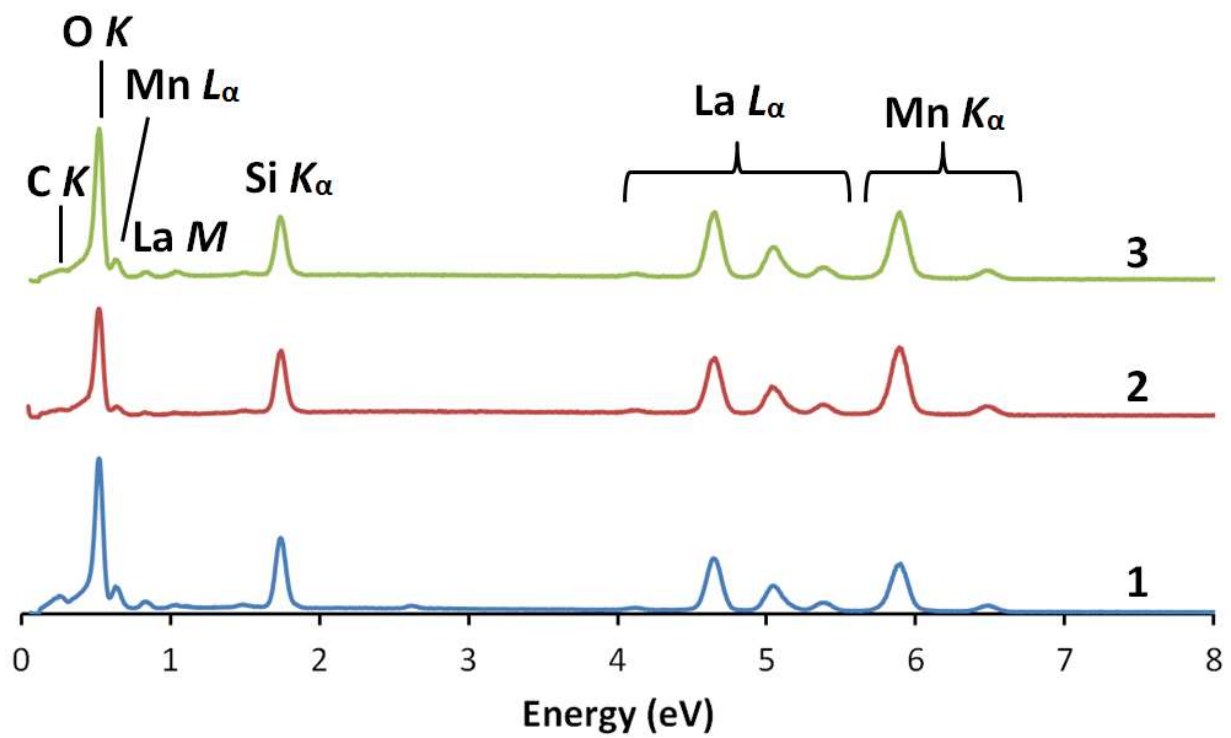
S1. Table of masses from a typical etching experiment. A 200 mg sample of annealed composite was stirred in a 2 M solution of NaOH in a 1:1 mixture of water and ethanol at reflux overnight, and then washed with copious water and ethanol before drying at 120 °C. Two more 200 mg samples of the same composite were etched under the same conditions, but instead of drying the sample, the sample was redispersed in fresh NaOH solution and refluxed overnight again. For one of these samples, this process was performed a third time. The masses displayed in the table are all after the samples had been dried at 120 °C. The expected mass was calculated based on the initial silica mass (500) and the fraction of the annealed composite being used for each trial (*ca.* 16 %).



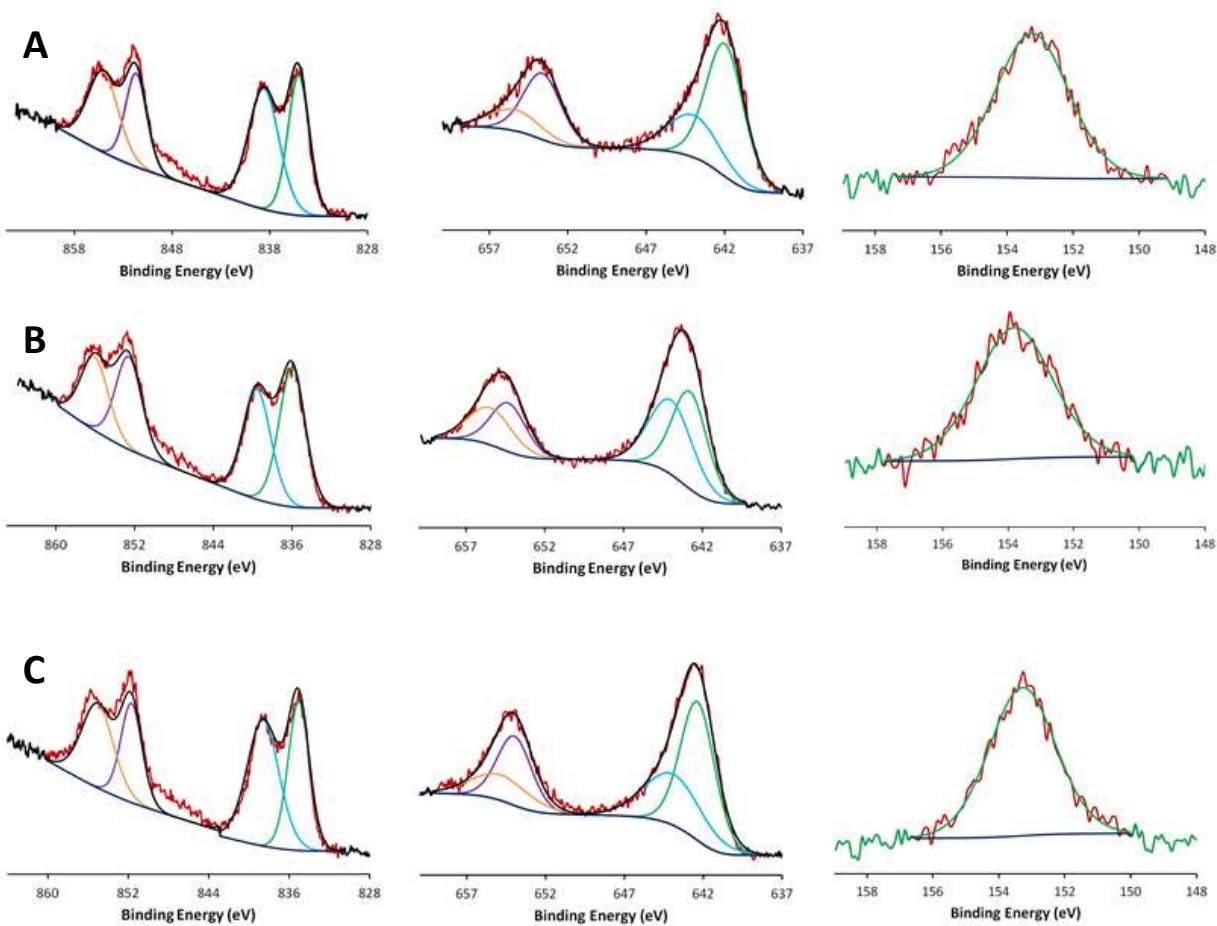
S2. EDX spectra of pre-etched, singly-etched, and doubly-etched composites. While there is a significant reduction in the intensity of the Si peak from the pre-etched to the etched samples, there is no such reduction from the first etch to the second.



S3. Representative N₂ sorption isotherms of SC-SBA-15 (A) and CMK-3 (B) with corresponding BJH pore size distribution plots (insets). The measured BET surface areas of these two materials were 731 m² g⁻¹ (SC-SBA-15) and 1279 m² g⁻¹ (CMK-3).



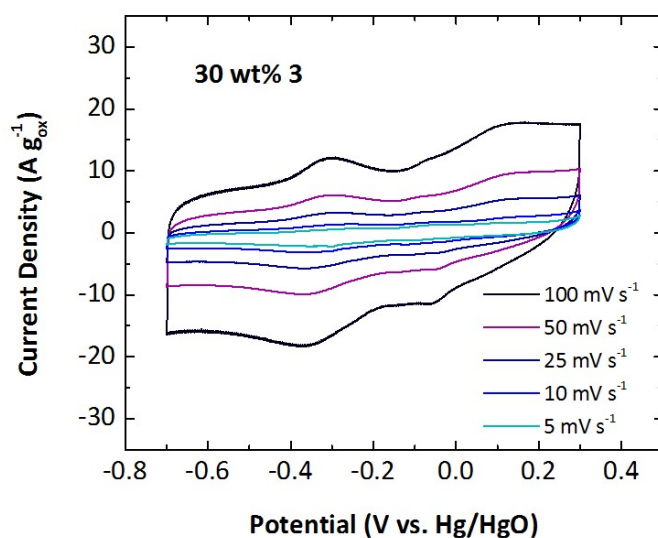
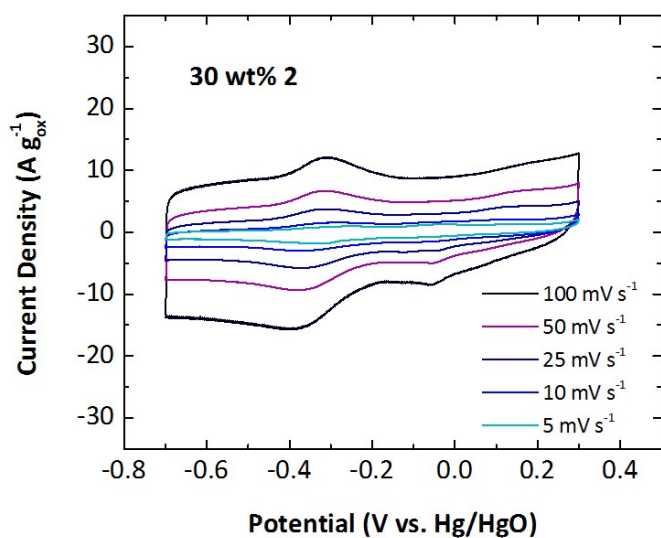
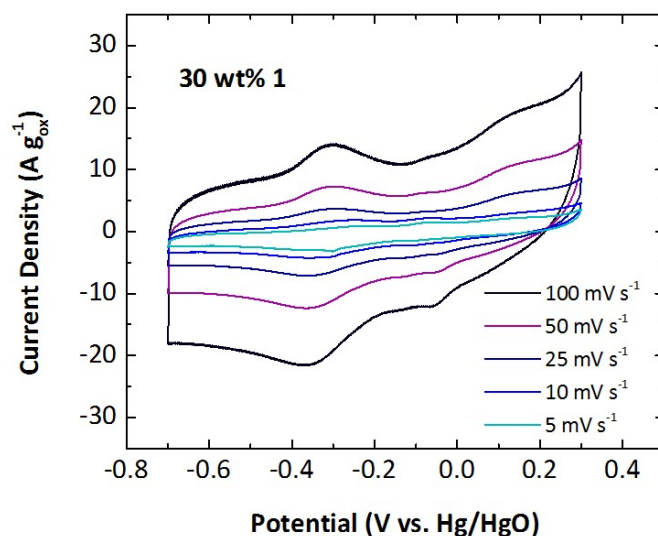
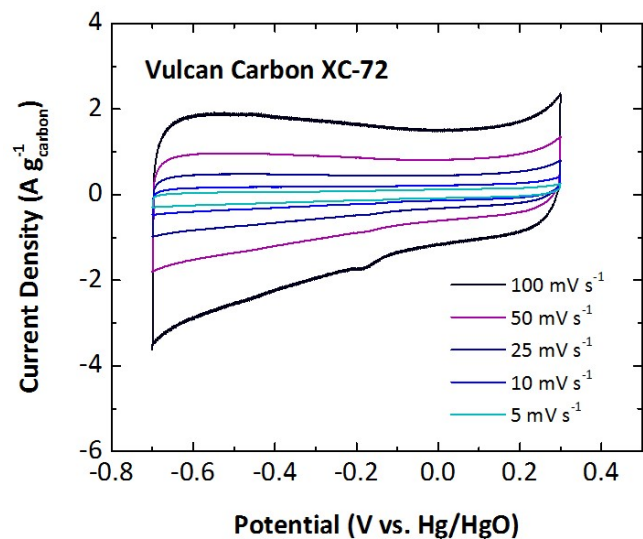
S4. EDX spectra of the three $\text{LaMnO}_3\text{-SiO}_2$ composites (**1**, **2**, **3**). The carbon signal is from the graphite tape used to secure the samples to the SEM sample holder.



S5. XPS spectra showing the La 3d (left), Mn 2p (center), and Si 2s (right) peaks from composites **1** (A), **2** (B), and **3** (C).

Composite	La:Mn Ratio	Mn ^{III} :Mn ^{IV} Ratio
1	1.35	2.25
2	0.817	1.05
3	0.702	1.61

S6. Ratios of La to Mn and Mn^{III} to Mn^{IV} as determined by XPS.



S7. Cyclic voltammograms of Vulcan carbon and each of the $\text{LaMnO}_3\text{-SiO}_2$ composite materials at each of the scan rates studied.