

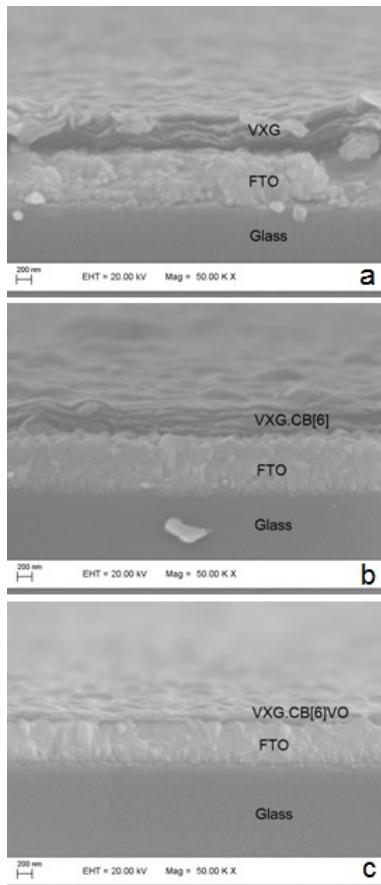
## Electronic supplementary information for : Lithium Ion Electrochemical Insertion in Vanadium Pentoxide/Cucurbit[6]uril Intercalates.

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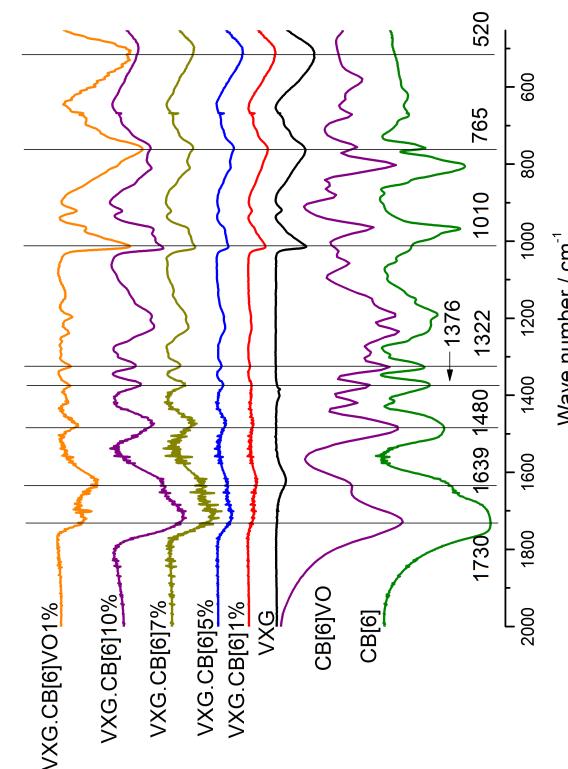
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**Fig. 1** SEM images of a) VXG and b) VXG.CB[6]1% and c) VXG.CB[6]VO1% films over FTO glass slides.

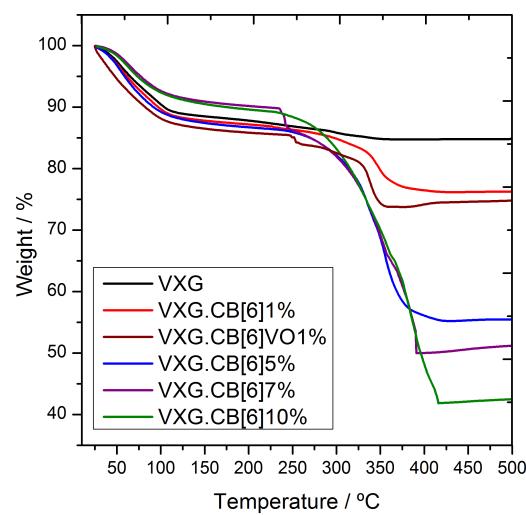
### 1 SEM images



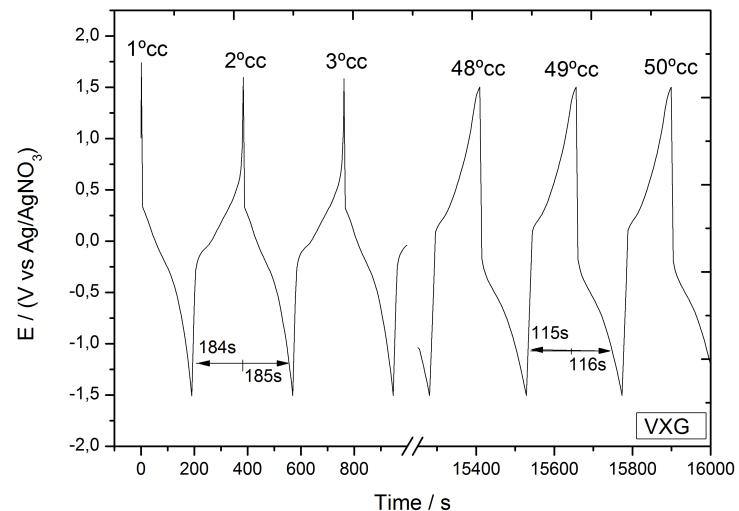
**Fig. 2** FTIR spectra of VXG, CB[6], CB[6]VO and their composites.

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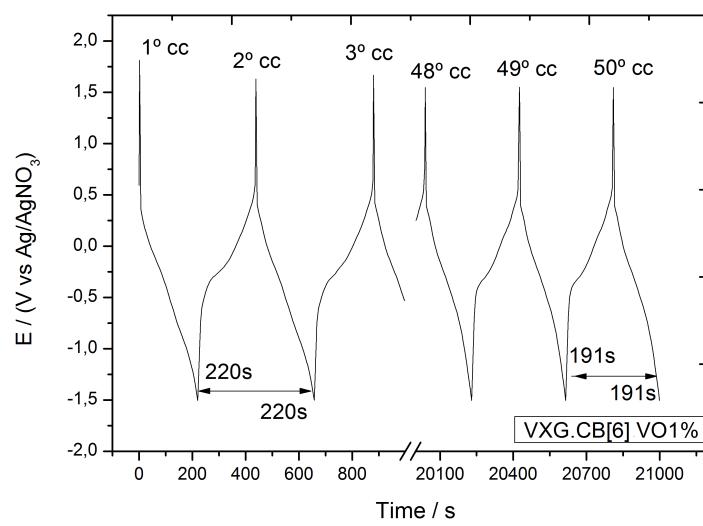
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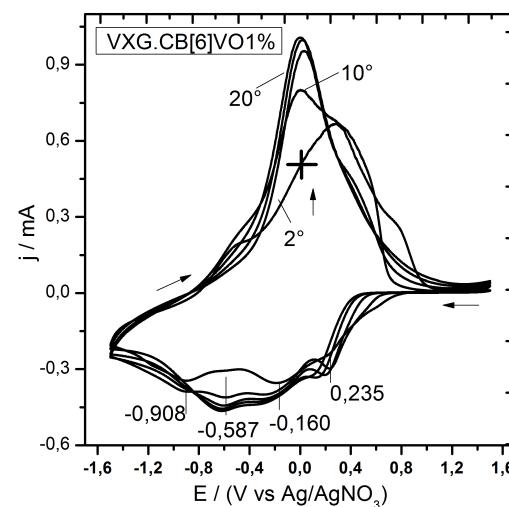
**Fig. 3** Thermogravimetric curves of VXG and its composites.



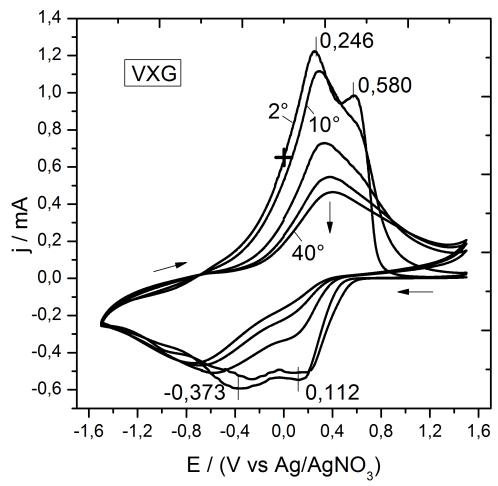
**Fig. 5** Electrochemical charge-discharge curves for VXG during 50 chronoamperometric cycles,  $j = 0.2\text{mA}$ .



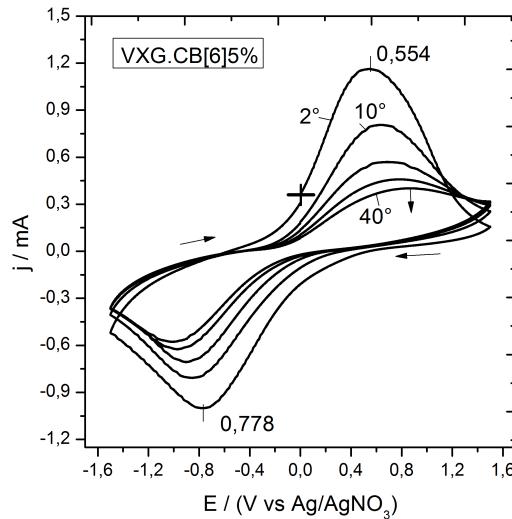
**Fig. 4** Electrochemical charge-discharge curves for VXG.CB[6]VO1% composite during 50 chronoamperometric cycles,  $j = 0.2\text{mA}$ .



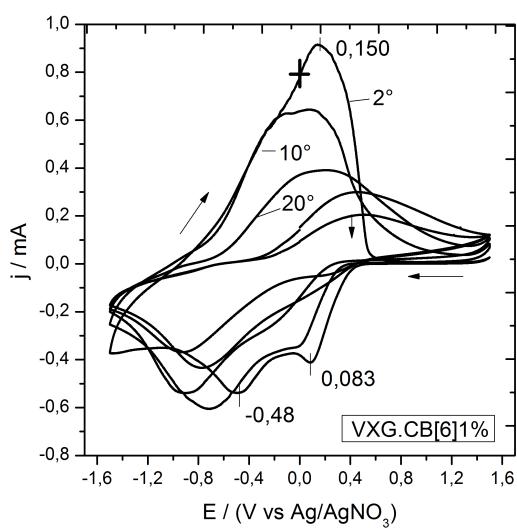
**Fig. 6** Cyclic voltammograms of VXG.CB[6]VO1% - 2, 10, 20, 30 e 40 cycles at 20mV/s ( $\text{LiClO}_4/\text{MeCN}$ ).



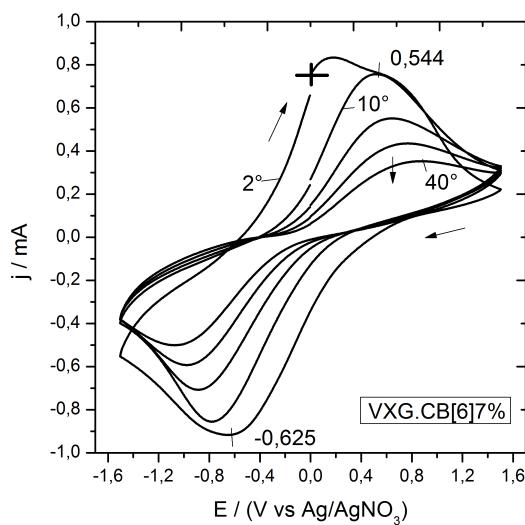
**Fig. 7** Cyclic voltammograms of VXG - 2, 10, 20, 30 e 40 cycles at 20mV/s (LiClO<sub>4</sub>/MeCN).



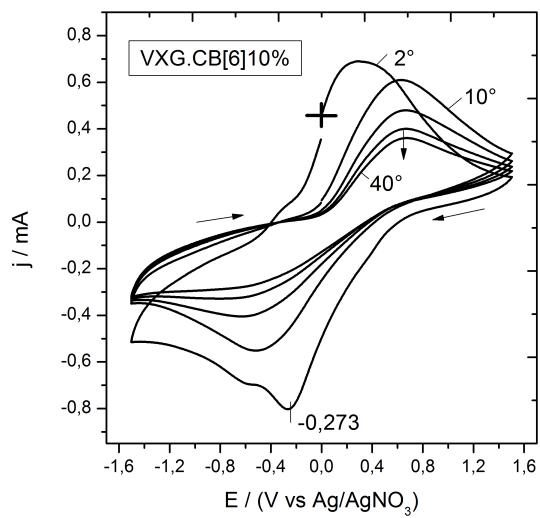
**Fig. 9** Cyclic voltammograms of VXG.CB[6]5% - 2, 10, 20, 30 e 40 cycles at 20mV/s (LiClO<sub>4</sub>/MeCN).



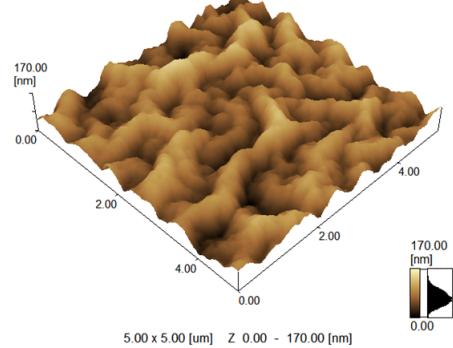
**Fig. 8** Cyclic voltammograms of VXG.CB[6]1% - 2, 10, 20, 30 e 40 cycles at 20mV/s (LiClO<sub>4</sub>/MeCN).



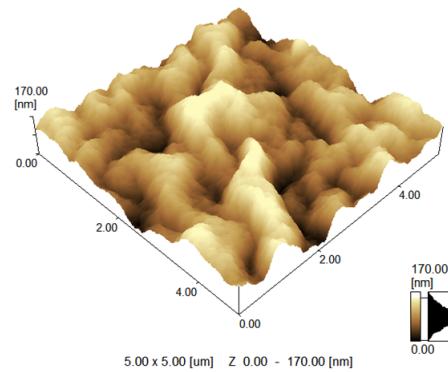
**Fig. 10** Cyclic voltammograms of VXG.CB[6]7% - 2, 10, 20, 30 e 40 cycles at 20mV/s (LiClO<sub>4</sub>/MeCN).



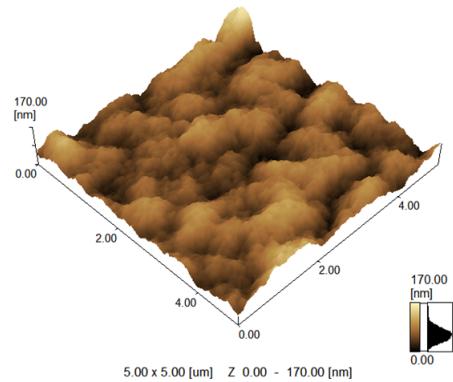
**Fig. 11** Cyclic voltammograms of VXG.CB[6]10% - 2, 10, 20, 30 e 40 cycles at 20mV/s (LiClO<sub>4</sub>/MeCN).



**Fig. 12** AFM VXG.



**Fig. 14** AFM VXG.CB[6]VO1%.



**Fig. 13** AFM VXG.CB[6]1%.