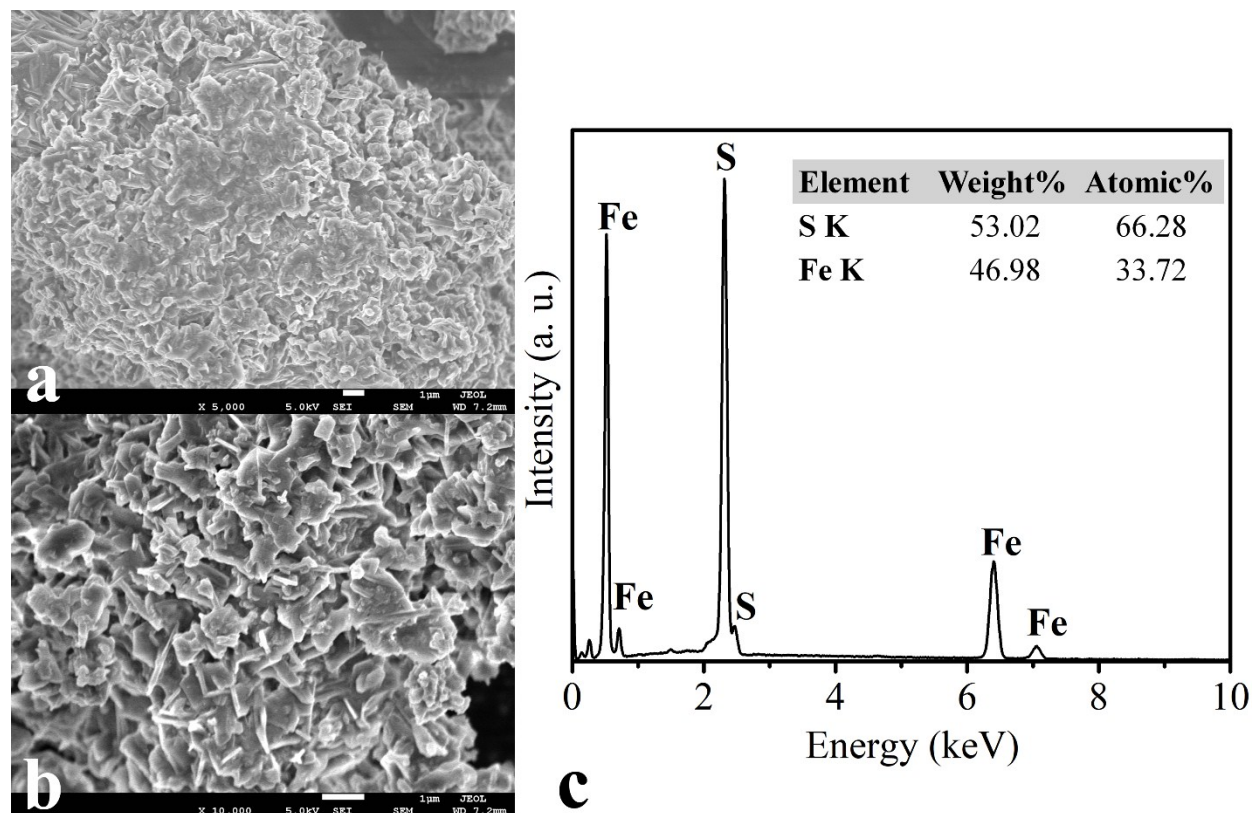


### Supplementary Information



**Figure S1:** The scanning electron microscopy (SEM) images taken on a JEOL 7600F FESEM are seen on the left where (a) 5000x and (b) 10000x magnification show the particles to be randomly shaped with no specific morphology with particle size around 1-2 µm. (c) The electron dispersive X-Ray spectroscopy (EDX) yielded the plot showing the atomic ratio of S and Fe to be 1:2. This is in accordance with the expected stoichiometry from the formula for the compound -  $\text{Li}_2\text{Fe}(\text{SO}_4)_2$ .