

ASSOCIATED CONTENT

Supporting information

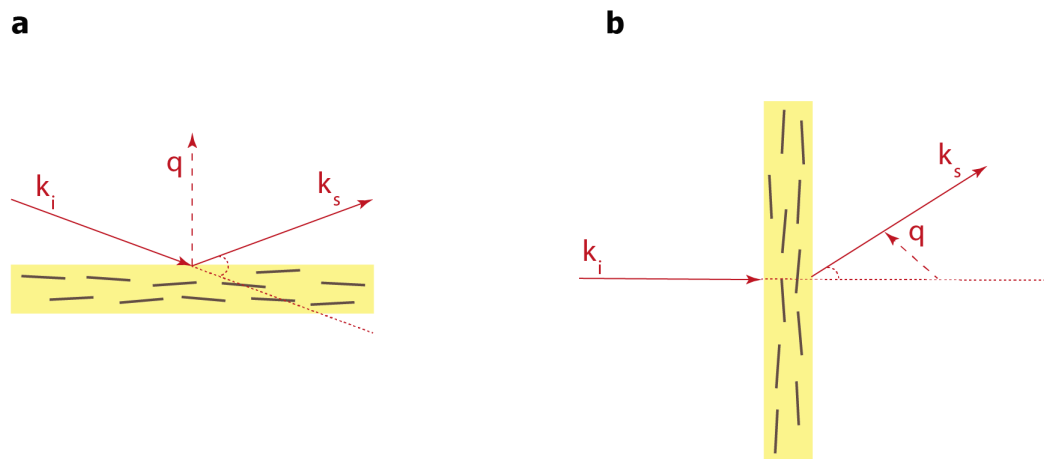


Figure S1. Schematic illustration of the scattering vector in a) reflection mode ($2\theta=5^\circ$ - 50°) and b) transmission mode ($2\theta=2.6^\circ$ - 34.6°) in the X-ray diffraction measurement.

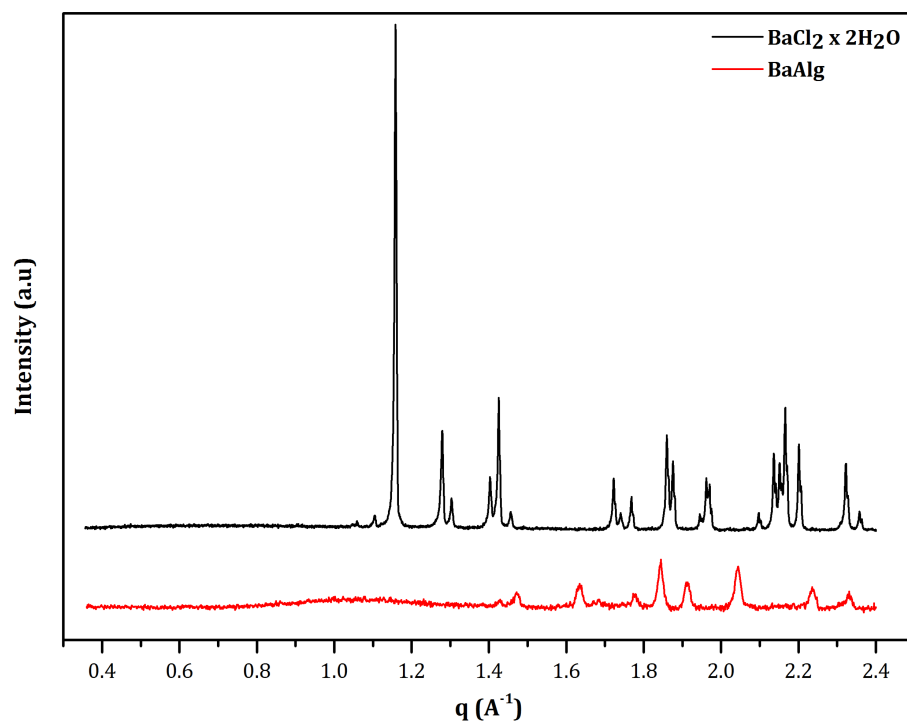


Figure S2. X-ray scattering patterns of $\text{BaCl}_2 \times 2\text{H}_2\text{O}$ (black solid line) and Ba Alg (red solid line) sample film collected in reflection mode.

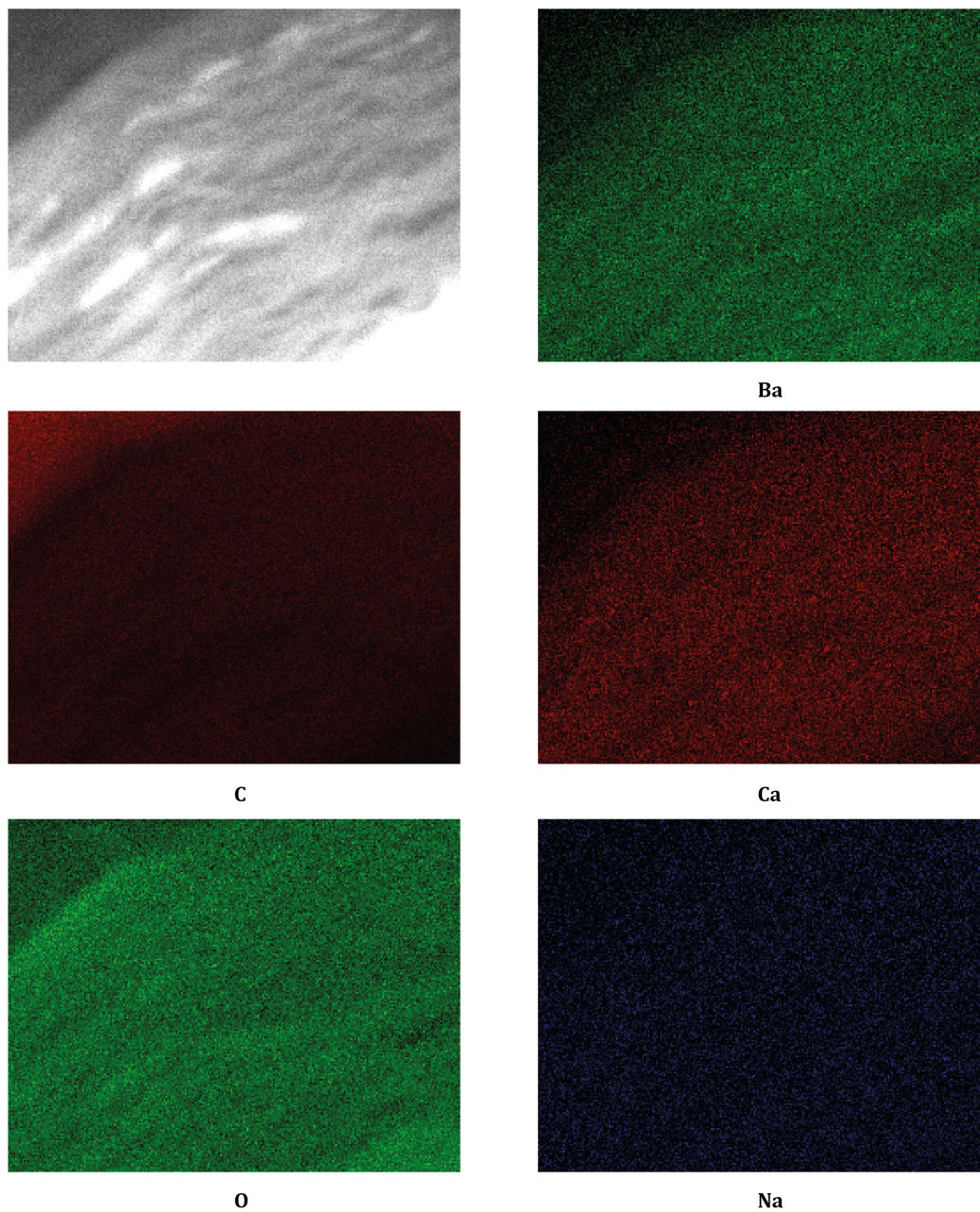


Figure S3. Electron microprobe images obtained of barium alginate/25wt% graphene sample (magnification x 10,000)