

Supplementary Information

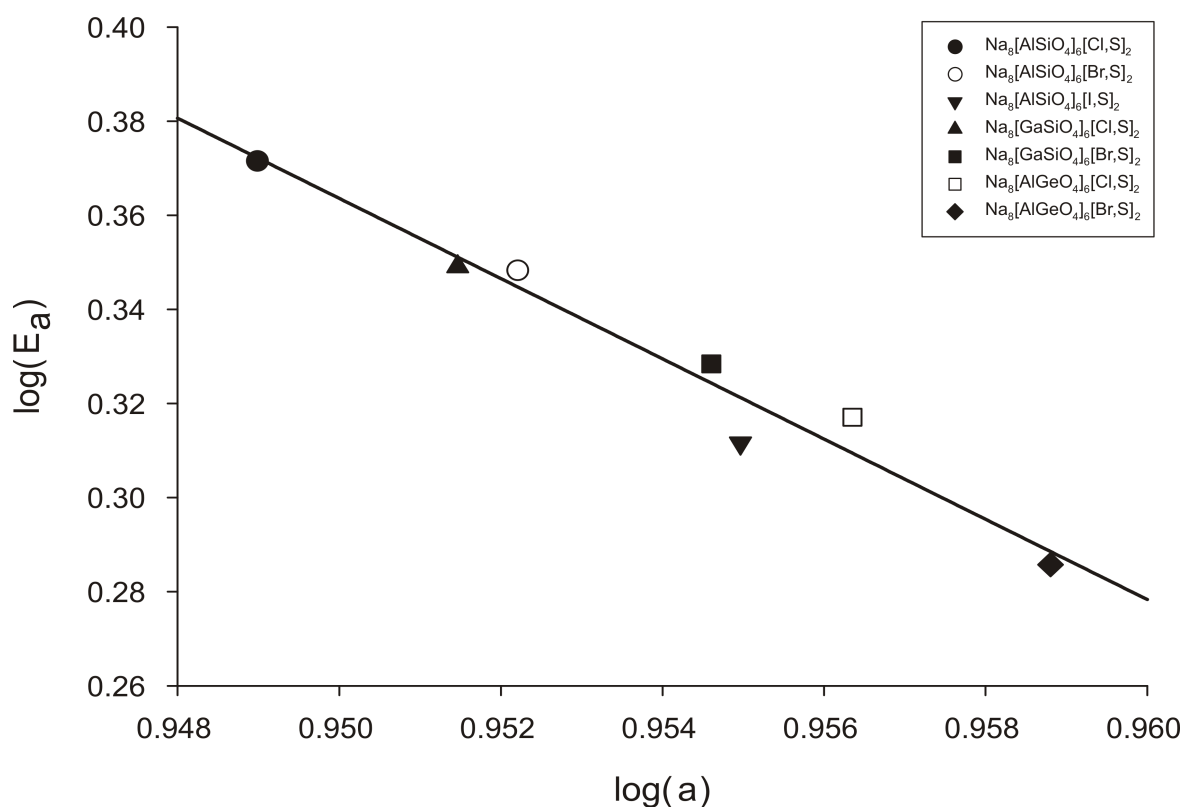


Figure S1. Plot of $\log(E_a)$ versus $\log(a)$ for sodium sodalites . The relationship between E_a and a determined from this plot is:

$$E_a = 2.89 \times 10^8 a^{-2.23}$$

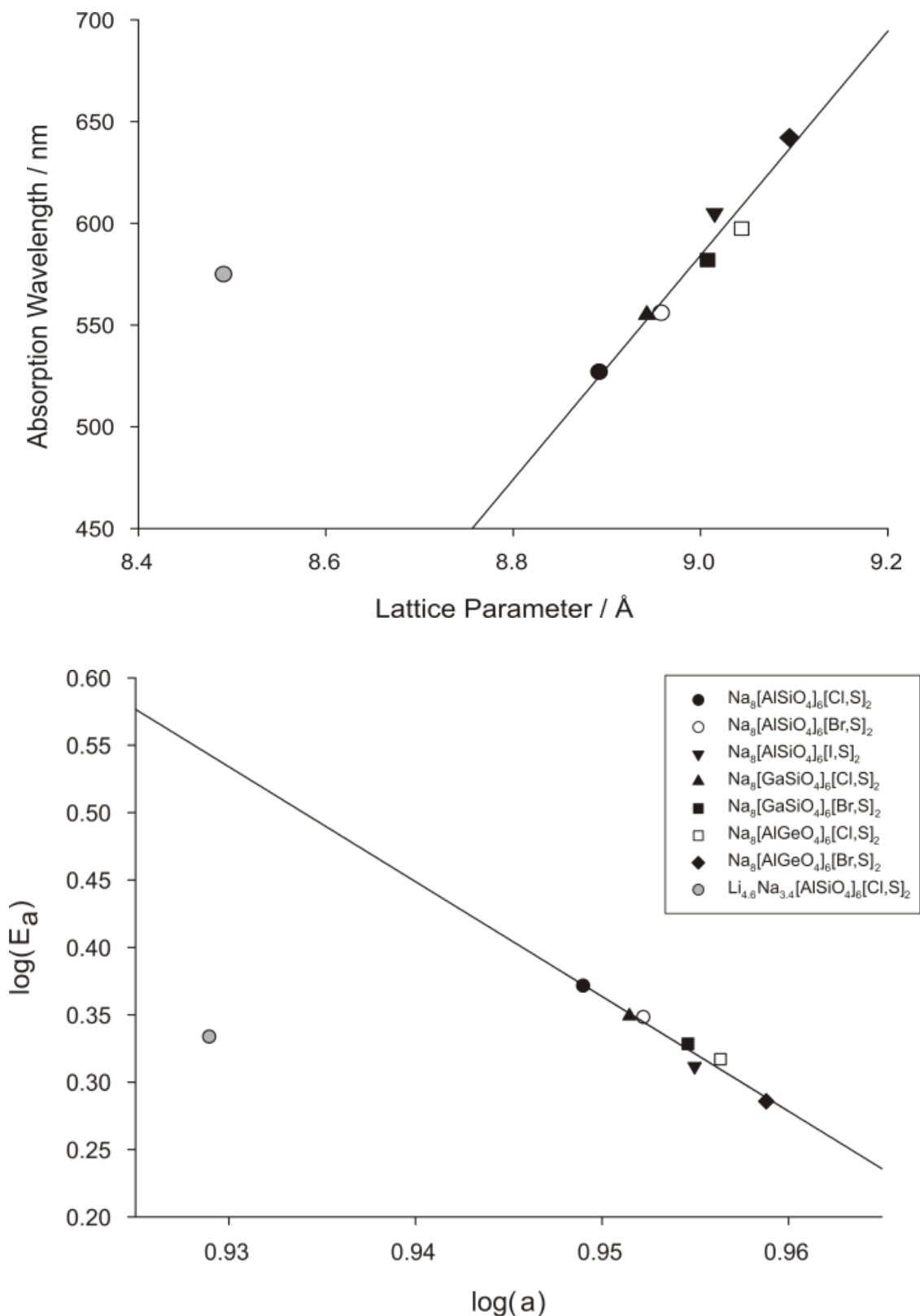


Figure S2. Top: Absorption wavelength versus lattice parameter, including lithium substituted synthetic hackmanite. Bottom: $\log(E_a)$ versus $\log(a)$ including lithium substituted synthetic hackmanite. Regression lines fit only the sodium sodalites.

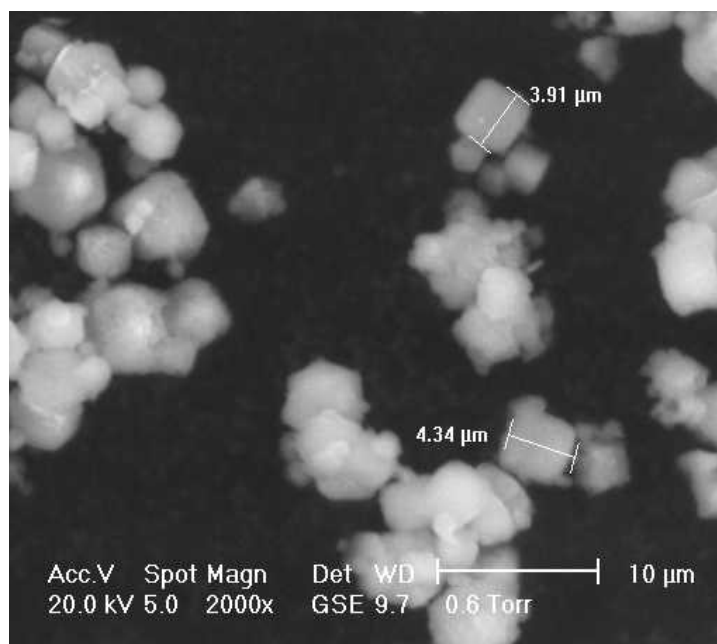


Figure S3. Micrograph of synthetic hackmanite,
 $\text{Na}_8[\text{AlSiO}_4]_6[\text{Cl}, \text{SO}_m, \text{S}_n, \square]_2$