

High-temperature and solid-state NMR Investigation of the Structural Evolution and the Special Phase Transition in LiF-NaF-BeF₂ Mixed Salts

Jianchao Sun^{a,b}, Hailong Huang^a, Ling Han^a, Xiaobin Fu^{a*}, Hongtao Liu^{a*}, Yuan
Qian^{a*}

*a, National Key Laboratory of Thorium Energy, Shanghai Institute of Applied
Physics, Chinese Academy of Science, Shanghai, 201800, China.*

b, University of Chinese Academy of Sciences; Beijing, 100049, China.

fuxiaobin@sinap.ac.cn;

liuhongtao@sinap.ac.cn;

qianyuan@sinap.ac.cn;

Figure S1. XRD patterns of FLiNaBe with 50% concentration of BeF₂ and a 5:1 ratio of LiF to NaF.

Figure S2. XRD patterns of FLiNaBe with 50 mol% BeF₂ at different NaF:LiF ratio of 2:1 and 1:1.

Figure S3. ¹⁹F, ⁷Li and ²³Na high-temperature NMR spectra of LiF-NaF-BeF₂ molten salts with 50% concentration of BeF₂ and a 5:1 ratio of LiF to NaF.

Figure S4. DSC curves of FLiNaBe with 50 mol% BeF₂ at different NaF:LiF ratio of 5:1 and 1:1.

Figure S5. Raman spectroscopy of LiF-NaF-BeF₂ with 50 mol% BeF₂ at different NaF:LiF ratios.

Figure S1. XRD patterns of FLiNaBe with 50% concentration of BeF₂ and a 5:1 ratio of LiF to NaF.

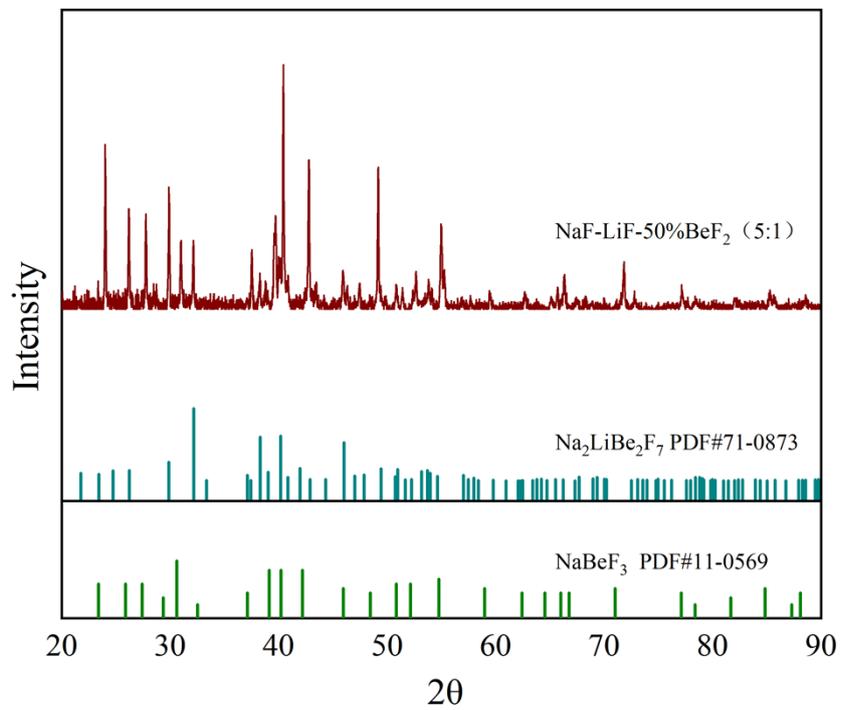


Figure S2. XRD patterns of FLiNaBe with with 50 mol% BeF₂ at different NaF:LiF ratio of 2:1 and 1:1.

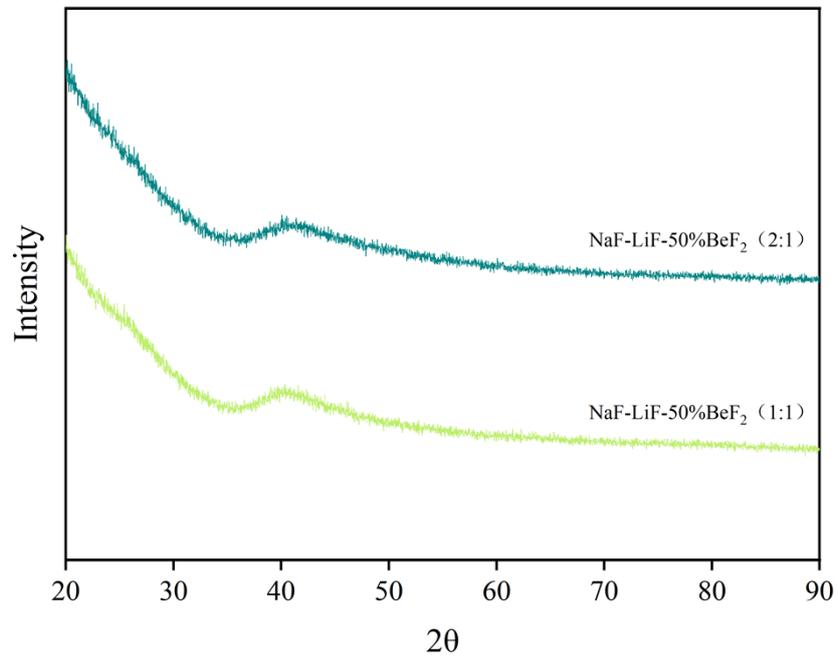


Figure S3. ^{19}F , ^7Li and ^{23}Na high-temperature NMR spectra of LiF-NaF- BeF_2 molten salts with 50% concentration of BeF_2 and a 5:1 ratio of LiF to NaF.

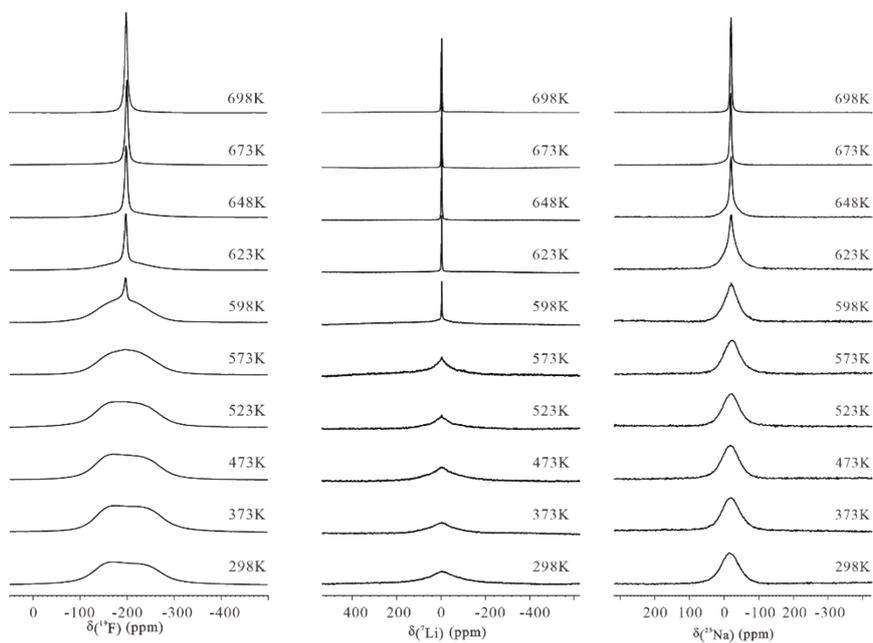


Figure S4. DSC curves of FLiNaBe with 50 mol% BeF₂ at different NaF:LiF ratio of 5:1 and 1:1.

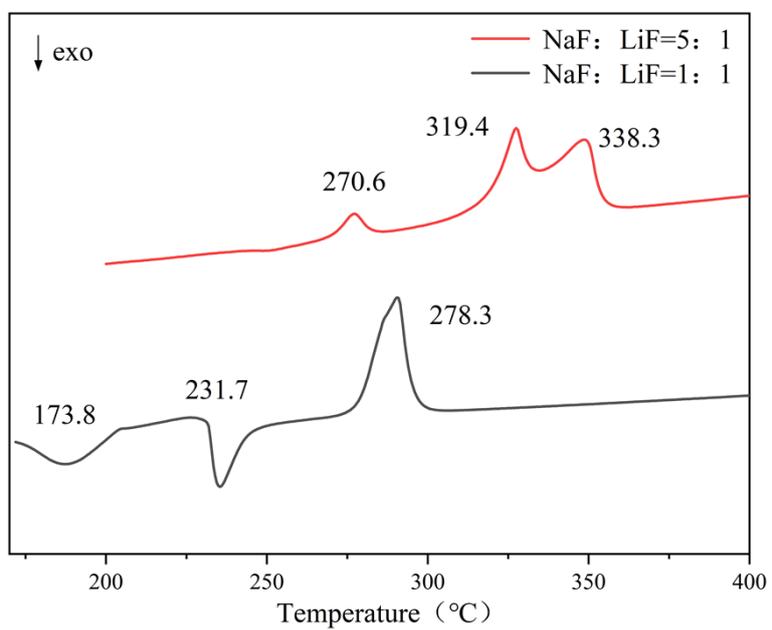


Figure S5. Raman spectroscopy of LiF-NaF-BeF₂ with 50 mol% BeF₂ at different NaF:LiF ratios.

