Corresponding Author

Benjamin Beeler

North Carolina State University

2500 Stinson Dr, Raleigh, NC 27607

Office: 919.515.3737; Cell: 270.589.1757

bwbeeler@ncsu.edu

Greetings,

On behalf of my co-authors and myself, I am hereby submitting our manuscript, entitled ``An ab initio molecular dynamics study of varied compositions of the LiF-NaF-KF molten salt”, for publication in the *Journal of Nuclear Materials*.

This article provides the most in-depth investigation of the nuclear-relevant molten salt FLiNaK, probing composition and temperature spaces in the ternary system where neither experimental nor computational data currently exist. This work can inform thermodynamic models which extrapolate into compositional regimes where there is currently a lack of data. This is critical as the compositions of salts may change as a function of time under operation due to corrosion, radiolysis, or other factors. Additionally, off-eutectic salts have not been thoroughly explored, but may exhibit superior thermophysical properties. This work shows potential areas for salt compositional tailoring, even in a well-known salt system such as FLiNaK.

We feel this work greatly adds to the scientific community and should initiate a further utilization of computational methods to explore molten salts where no experimental data exist.

Sincerely,

Benjamin Beeler