## **Supporting Information**

## Compositional transferability of deep potential in molten LiF-BeF<sub>2</sub> and LaF<sub>3</sub> mixtures: Prediction of density, viscosity, and local structure

Xuejiao Li\*, Tingrui Xu, Yu Gong\*

<sup>a</sup> Shanghai Institute of Applied Physics, Chinese Academy of Sciences, Shanghai 201800, China

<sup>b</sup> University of Chinese Academy of Sciences, Beijing 100049, China

## S1. RMSEs of energy and force

In **Fig. S1**, the energy and force of molten  $\text{Flibe}+\text{LaF}_3$  achieve convergence after 1,000,000 training steps, and average RMSEs of the last 5000 training steps for energy and force are 1.9 meV atoms<sup>-1</sup> and  $3.5 \times 10^{-2} \text{ eV } \text{Å}^{-1}$ , respectively.

\*Corresponding authors.

E-mails: lixuejiao@sinap.ac.cn; gongyu@sinap.ac.cn



Fig. S1 RMSEs of energy (black points) and force (orange points) for molten Flibe+LaF<sub>3</sub> in the

training stage

## S2. DPMD simulated MSDs and RDFs



Fig. S2 MSDs of molten Flibe+LaF<sub>3</sub> at different LaF<sub>3</sub> concentrations and the slopes of MSDs



Fig. S3 RDFs and their integral curves of Be-F, Li-F, La-F, F-F, Be-Be, and Li-Li for molten

Flibe+xLaF<sub>3</sub>