

The study of the dynamic properties of liquid lithium

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ABSTRACT



A paper about inelastic X-ray scattering of liquid lithium has been published. In this thesis, we have performed the MD simulations of liquid lithium and calculated the spectrum of inelastic X-ray scattering to compare with the experimental results. Then we can understand how good the model we simulate is. Secondly, the instantaneous normal mode analysis has been used to study liquid gallium, and the results show the existence of the instantaneous resonant modes, which are low frequencies, in liquid gallium. We use the same analysis to study liquid lithium for searching the low frequency instantaneous resonant modes, and we don't find instantaneous resonant modes in liquid lithium.