
[PO-B2]Poster Session 2

Symposium B

2018年10月31日(水) 17:45 ~ 20:00 Poster Hall

**[P2-15]Production and Process of Cascade Development in Irradiated
Pure α -Zr from Molecular Dynamics Simulations**

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The formation and development of cascade in pure α -Zr crystals at sample temperatures $T=300\text{K}$ and $T=500\text{K}$, energy of 2, 6 and 10 keV and initially driving directions and of primary knock atoms (PKA) are investigated by molecular dynamics. The simulation results show that when crystals temperature is $T=300\text{K}$ and 500K and initial direction of motion for PKA is the cascades volume is greater than for the initial direction at same all other parameters. The largest size of cascade is found after 0.4 ps, which regardless of crystal temperature, energy and initial direction of primary knock-on atom (PKA). The formation of crowdions is caused by channeling during cascade development.