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**Atomistic modeling of graphite melting** NIKITA OREKHOV, VLADIMIR STEGAILOV, JIHT RAS — Graphite melting properties have been the subjects of debate for many years due to discrepancy in experimental data. We report here molecular dynamic simulations of graphite melting with the semiepirical bond-order potential AIREBO. As a result in the pressure range up to 14 GPa the graphite melting line was obtained and properties of liquid carbon were investigated. For the superheated graphite the melting front velocity dependencies on temperature were calculated to verify the values of melting temperatures.

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