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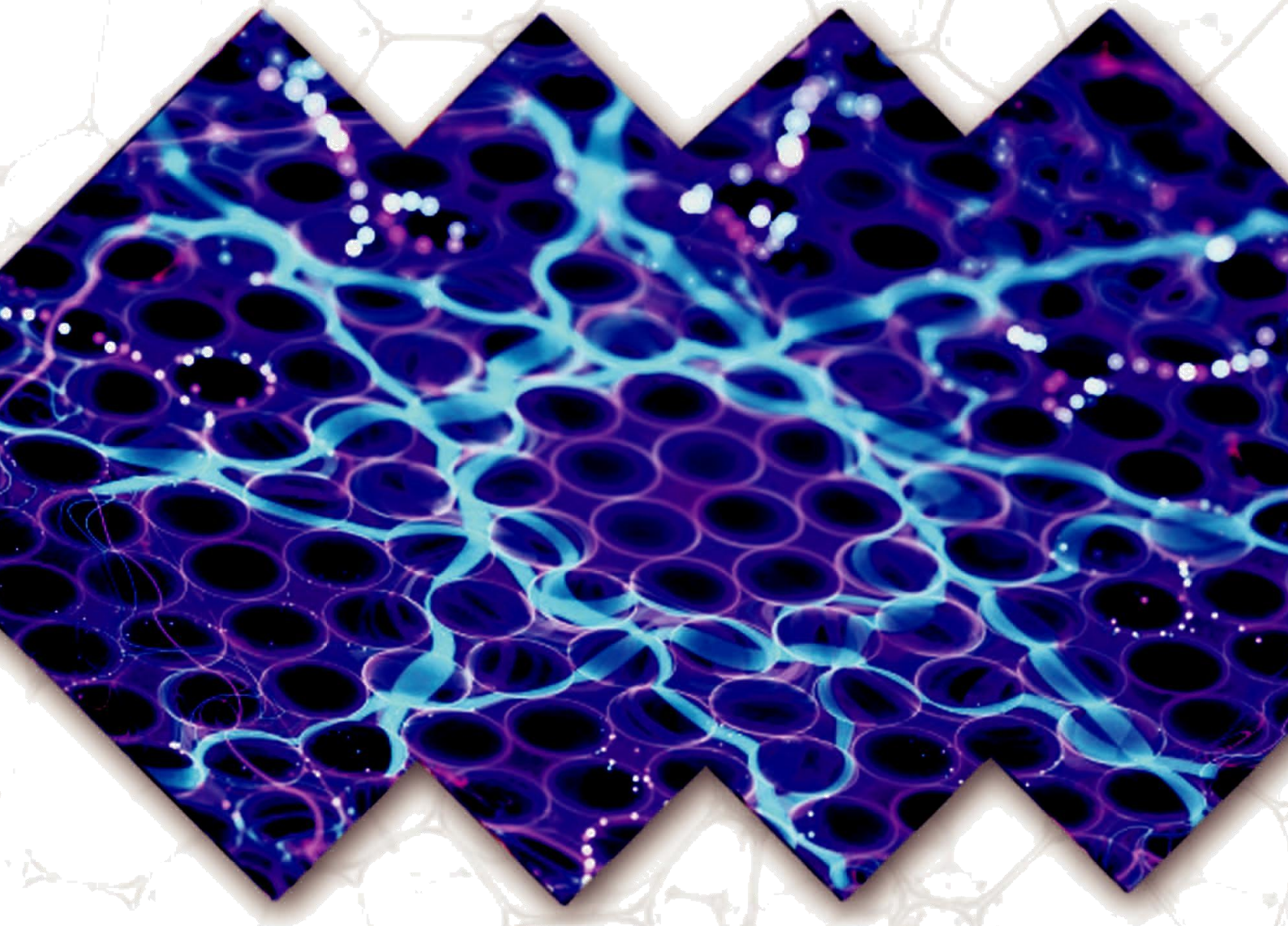

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Effect of temperature on thermal conductivity of Silicon Germanium square nanowire using Nonequilibrium molecular dynamics simulation

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Abstract

Silicon germanium nanowire has varieties of applications in nanoelectronics and optoelectronics due to technological advances. Nowadays, Computational Material Science is evolving because computer simulation is a tool to get insight about the properties of materials at atomic or molecular level which is used to predict and/or verify experiments. This is considered as a bridge between theory and experiment. In this paper, silicon germanium square nanowire having simulation length of 97.74 A^0 is simulated by Nonequilibrium molecular dynamics simulation. Empirical interatomic potential used is Stillinger Weber potential. For canonical ensemble, effect of temperatures on thermal conductivity of silicon germanium square nanowire is studied

Keywords: Thermal conductivity; Nonequilibrium molecular dynamics simulation; Silicon Germanium square nanowire; Stillinger Weber Potential

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