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The Influence of the Surface Parameter Changes onto the Phonon States in Ultrathin Crystalline Films

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Highlights

- The adapted Green's functions were used to calculate phonon spectra and states in ultrathin films.
- Boundary conditions are included through the Hamiltonian of the film-structure.
- The spectral weights of phonon Green's function have been calculated.
- The localized – surface phonon states can appear for higher values of boundary parameters.
- Surface states can have a dominant role in phonon thermodynamics and transport processes.

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