24th Australian Institute of Physics Congress



Contribution ID: 147 Type: Talk (preferred)

Quantum Confinement of Donor Molecule Systems in Silicon

Tuesday 13 December 2022 14:45 (15 minutes)

Applying a comprehensive 20-band $sp^3d^5s^*$ tight-binding model with self-consistent field Hartree method to calculate energies of multi-electron states, we investigate the D^- charging energies of donor molecules in silicon consisting of two phosphorus impurities in various orientations.

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Session Classification: Conference on Optoelectronic and Microelectronic Materials and Devices

Track Classification: COMMAD: COMMAD: Semiconductor materials, devices, and technologies