

Clebsch-Gordan coefficients for scattering processes in Si and Ge

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Scattering matrix for two phonon processes at $k = 0$ in Si and Ge of $O(\sup{7})(\sub{h})$ symmetry is given. Also diagonalization of spin-orbit interaction Hamiltonian has been computed by means of Clebsch-Gordan coefficients. The authors have concluded that they have used group theoretical method for **diagonalization** of two-phonon using **symmetrized Kronecker** product. They also have diagonalized SO matrices. Their method can be extended to three-phonon processes as well as to other interactions like spin-spin, inter- and **intravalley** scattering. Their results are valid for all compounds with $O(\sup{7})(\sub{h})$ symmetry.