**Anharmonicity**

So we can include more terms in the Taylor series expansion of the interaction (we only went out to 2nd order in displacements). These are anharmonic terms. And such terms are required to explain, say, the volume dependence of the energy levels of a solid, and to therefore get properties like the bulk modulus, etc. Turns out that these interactions between phonons are proportional to frequency? So when studying low frequency properties of material, we needn’t concern ourselves with anharmonic terms? Little confused how that’s reconciled with needing to go out to higher order to get bulk modulus.