curve defined by $P = 0$. The essential differences between the method of Rice and McQueen and ours, are (a) that they used the Mie–Grüneisen equation (18) without considering the volume dependence of the potential energy while we took it into consideration as it is given by Eq. (3). (b) Furthermore these authors used the Dugdale–McDonald[10] relation to describe the volume dependence of Grüneisen's ratio, introducing additional hypotheses, while we are using the explicit expression given by (14). (c) It should be taken into account that the Mie–Grüneisen equation cannot be used in a large range of volume ratios, but only for $1 \geq V_H/V_0 \geq 0.8$, as it was shown in the Sec. II. In fact, only the assumptions required to develop the fourth-order anharmonic equation of state were used, and this equation has been applied only in its range of validity. Huang[11] studied silver by a method simi-lar to the one of McQueen, using Slater's expression[12] for $\gamma(V)$, giving only a single point of comparison, and this is in agreement with our results.

Unfortunately, there are no elements of comparison for materials such as sodium and periclase which have physical properties very different from the other considered solids and which would have allowed us to formulate a more general conclusion. However, we hope to extend this work to other solids having cubic crystal structure in order to generalize the applicability of the fourth-order anharmonic theory.

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