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Effect of chemical and elastic interactions on the phase diagrams
of isostructural solids

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It is shown how the introduction of volume-dependent elastic interactions into lattice models of order-disorder transformations, in addition to the familiar constant-volume interactions (analogous
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To demonstrate the consequences of the interplay be-tween "chemical" and "elastic" energies, we compare the calculated phase diagram and thermodynamic functions of the Cu-Au systems in two ways: (i) retaining in Eq. (7) both chemical and elastic terms (the "c-G approach") or (ii) retaining just the chemical term (the "a-only" approach).

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" can be simply