

Finding the lowest-energy crystal structure starting from randomly selected lattice vectors and atomic positions: first-principles evolutionary study of the Au-Pd, Cd-Pt, Al-Sc, Cu-Pd, Pd-Ti, and Ir-N binary systems

This content has been downloaded from IOPscience. Please scroll down to see the full text.

2008 J. Phys.: Condens. Matter 20 295212

(<http://iopscience.iop.org/0953-8984/20/29/295212>)

View the [table of contents for this issue](#), or go to the [journal homepage](#) for more

Download details:

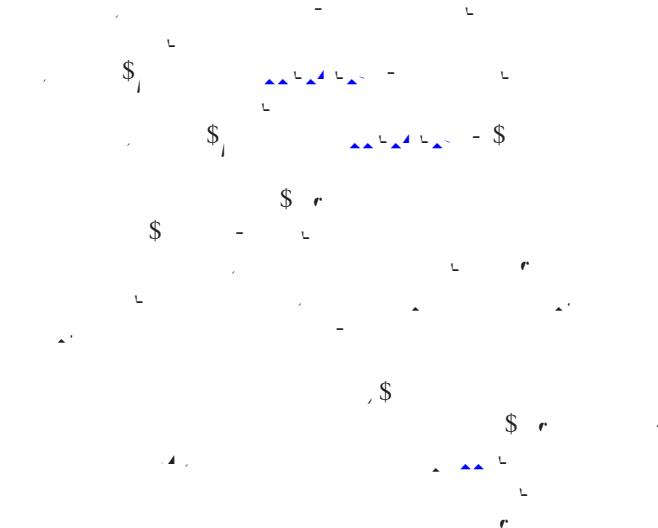
IP Address: 128.138.65.115

This content was downloaded on 14/07/2015 at 17:55

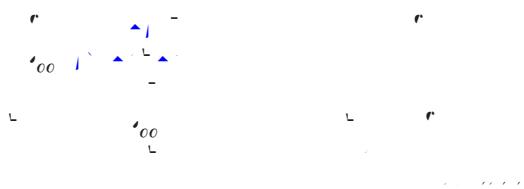
Please note that [terms and conditions apply](#).

Finding the lowest-energy crystal structure starting from randomly selected lattice vectors and atomic positions: first-principles evolutionary study of the

1. Introduction



3. Evolutionary procedure for predicting crystal structures



— — — — — **20** — — — — —

~~20~~

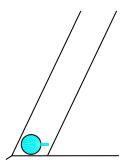
~~00~~

~~c~~

~~\$~~

$$\frac{20}{\pi} \cdot \frac{\pi}{100} = \frac{2}{5}$$





— — — — — **20** — — — — —

N_{at}

$$\frac{20}{\mathbf{a} = \left(\begin{array}{c} \gamma_1, \gamma_2 \\ \gamma_3, \gamma_4 \end{array} \right) - \left(\begin{array}{c} \gamma_{11}, \gamma_{12} \\ \gamma_{21}, \gamma_{22} \end{array} \right) \epsilon_{00}}$$

