

Supporting Information

How Robust is the Metallicity of Two Dimensional Gallium?

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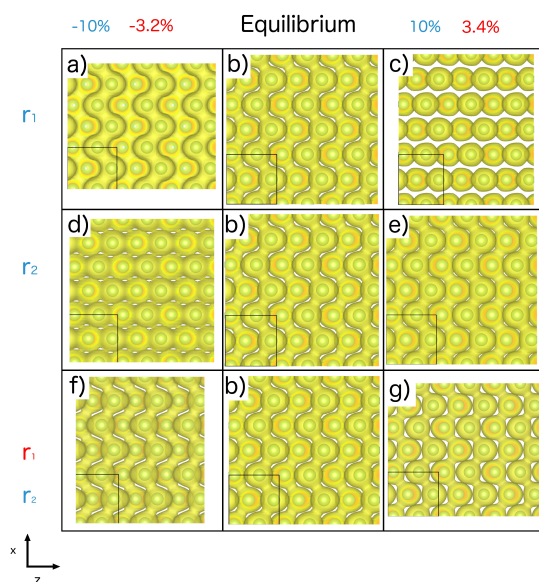
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1. Electron Localization Function

For determination of electron localization function, single point calculations were completed in VASP from single point calculations from structures of bilayer gallium with differing r_1 and r_2 parameters. Images were created in VESTA [1] using an isosurface value of 0.61.

Figure 1. Electron Localization Function for bilayer gallium with a) Decrease of r_1 by 10%, b) Equilibrium structure, c) Increase of r_1 by 10%, d) Decrease of r_2 by 10%, e) Increase of r_2 by 10%, f) Decrease of r_1 by 3.2 and r_2 by 10%, g) Increase of r_1 by 3.4% and r_2 by 10%



References

- [1] K. Momma and F. Izumi. Vesta: a three-dimensional visualization system for electronic and structural analysis. *J. Appl. Crystallogr.*, 41(3):653–658, 2008.