

**Z-contrast imaging and *ab initio* study on “*d*” superstructure in sedimentary dolomite**

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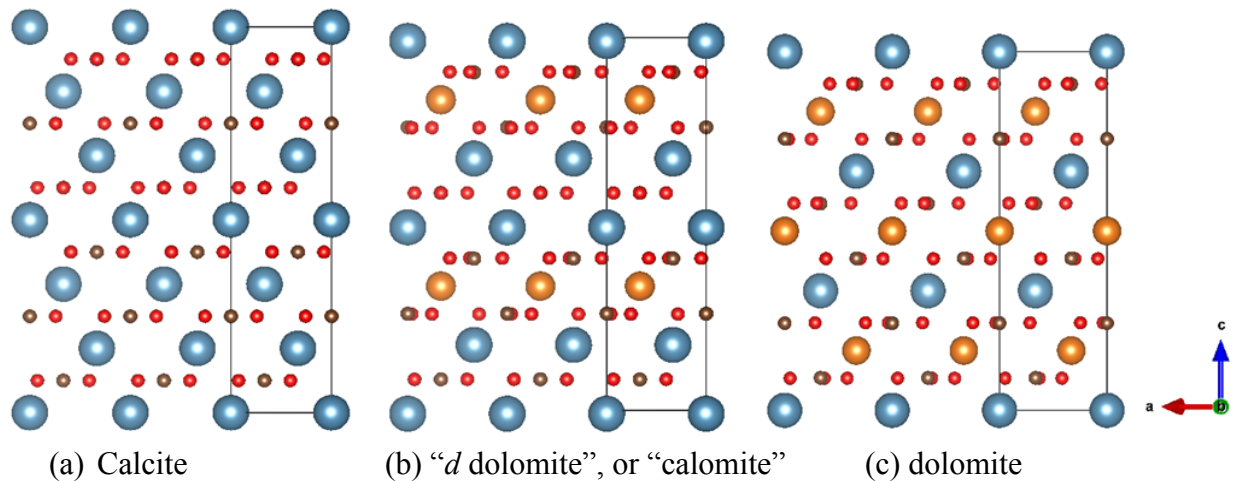


Figure S1. Calculated structures of calcite (a), *d* superstructure (or, “*d* dolomite”) (b), and dolomite (c) projected along their *b*-axes. Blue spheres are Ca atoms; Golden spheres are Mg atoms; Small red spheres are oxygen atoms; and Small brown spheres are C atoms. Interstratified calcite/dolomite intermediate phase is labeled as “*d* dolomite” or “calomite.”

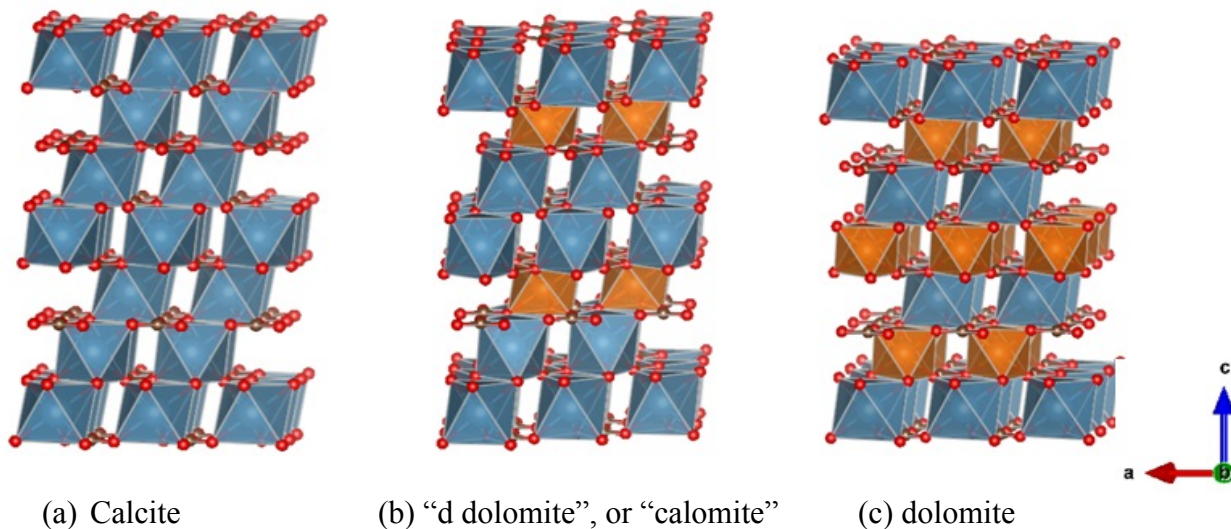


Fig S2. Polyhedral models for the calculated calcite, *d* superstructure (or, “*d* dolomite”), and dolomite structures projected along their *b*-axes.