

## ***Interactive comment on “Boron isotope fractionation during brucite deposition from artificial seawater” by J. Xiao et al.***

**Anonymous Referee #1**

Received and published: 18 April 2011

Dear Scientific Authors and Editors,

Thank you for the opportunity to review the manuscript entitled "Boron isotope fractionation during brucite deposition from artificial seawater". The article is well composed and scientifically sound. In the effort of constructive critique the following comments apply.

Generally the work contributes novel and interesting work to the field of isotope fractionation occurring during sea water / mineral processes. There are minor corrections listed below and one minor correction requested in an effort to increase the quality and understandability of the manuscript.

Page 891, line 2&4: word use, confected; change word Page 891, line 12: website

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reference should be removed and described Page 892, line 8&10: word use, encountered; change word Page 890-893: describe X-ray diffraction equipment and methods Page 895, line 3: word use, showed; correct to shown Page 896, line 4: word use, reach; correct to reaches Page 896, line 10: word removal; word is Page 897, line 12: word change; at to as Page 898, line 7: word choice; impossible to improbable

Regarding Figure 7: General concern due to limited crystallinity in sub-figures b and c. Lack of crystallinity is acceptable at crossover of speciation. Potential for amorphicity as exhibited in sample c could be misleading in case of incorporation potential.

Figure 7 and 8: Axes not labeled consistently, curve difference pattern inconsistent, not described in methods.

Figure 7 and 8 lead to general concern of inclusion of mineral, besides intended mineral constituent.

Once again, thank you for the opportunity to review and constructively contribute to the progress of this manuscript.

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Interactive comment on Clim. Past Discuss., 7, 887, 2011.

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