

***Interactive comment on “Diagenetic changes in  
*Concholepas concholepas* shells (Gastropoda,  
Muricidae) in the hyper-arid conditions of Northern  
Chile – implications for  
palaeoenvironmental reconstructions” by  
N. Guzman et al.***

**N. Guzman et al.**

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Both comments made on our manuscript point out that diagenesis of carbonate biominerals obeys to quite complex processes which need further in-depth studies. Both referees appreciate the fact that our study realized on modern and fossil shells of a coastal gastropod, which dealt with several approaches, clearly demonstrates that this question is actually much more complex than usually considered. Combined micro- and nanostructural studies with (both organic and mineral) geochemical analyses indicate

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that palaeo-environmental reconstructions deduced from geochemical proxies may not be correct until a better understanding of the diagenetic changes is not reached. We are grateful to the referees who agreed to share our concern regarding the increasing number of palaeo-climatical and palaeo-ecological reconstructions which are based on geochemical analyses without sufficient consideration on the possible diagenetic processes that may have altered the original signals.

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Interactive comment on Biogeosciences Discuss., 5, 501, 2008.

**BGD**

5, S2494–S2495, 2008

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