

I must compliment the authors on this revision: all the reviewers' points have been taken into serious consideration, relevant new data have been supplied and the authors have shown to be open to drastic reinterpretation of their data. The chosen methodology still does not allow for unequivocal identification of Fe-OM (which is hard to detect in general; the article could actually serve as a catalyst for more Fe-OM standards besides Fe oxalate to be measured by Mossbauer?). But the parallel use of chemical and spectroscopic methods for identification of Fe phases paints a much more balanced and detailed picture of Fe diagenesis than in the previous version. The level of detail on Fe extraction protocols and speciation may be a bit much for some readers, but is definitely food for thought for Fe junkies. In addition, there is more balance regarding the mechanisms of Fe flocculation and transport to the sediment surface, in particular the (initially overly dominant) role of OM in these processes.

As was the original, the revised manuscript is very well-written. Due to the length of the author's replies and the final manuscript, I have only focused on the sections that have undergone serious changes, where I have not been able to find a single typo. I would therefore support publication of this revised manuscript as is; if there are any technical corrections necessary that I missed they will undoubtedly be dealt with during the proofing stage.

One last comment, regarding p23, L10: the work of Dos Santos Afonso (Langmuir, 1992) and Poulton (GCA, 2004) adds some further insight into the reaction between Fe(III) oxides and dissolved sulfide, for instance the generation of a sulfide radical and subsequent Fe(III) reduction by that radical. But that is likely superfluous for this manuscript, and does not alter the general diagenetic framework (it may only change the reaction stoichiometries).