

Review of: "Microbial methylation potential of mercury sulfide particles dictated by surface structure"

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The article is well written, and describes an important aspect of mercury methylation. This is especially important in anoxic sediments, where cinnabar and metacinnabar are dominant mercury forms. The results are well documented and based on results of meticulously designed experiments. Material and method section describe the experimental settings and analysis in detail.

The only minor issue that could have been improved is the relation to marine environment. Marine sediments are an important site for mercury methylation, therefore it would enhance the utility of the paper, if metacinnabar nanoparticles formation in coastal areas was described in the text, and possible consequences of competing inorganic chloro ligands and higher pH of seawater were included in the discussion.