

## ***Interactive comment on “Perspectives of the microbial carbon pump with special references to microbial respiration and ecological efficiency” by H. Dang and N. Jiao***

**Anonymous Referee #2**

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I have now read the manuscript by Dang and Jiao twice and, unfortunately, I am still not convinced that my time was spent well in doing so. In my humble opinion, a review is ideally concentrating the relevant literature into a coherent piece and detail conclusions from a higher vantage point than would be possible when only focusing on a specific original paper. Aside from the numerous grammatical errors and awkward formulations, the key words characterizing this review manuscript are: Complete lack of focus. I simply fail to see the scientific goal that the authors attempted to address. In other words, what is the message that a potential reader could take away from reading the manuscript? The manuscript is incredibly information intense, everything from biochemistry, viruses, to jellyfish is touched at one point or another. But the grand majority

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of this information is either trivial (in the sense that it is not new), needs to be substantiated with actual data, or is completely pointless in the light of the manuscript's title. I am unable to detail every critique I would have as there would simply be too much and instead give some examples: p.5/118-22: Stating that the concept of the microbial carbon pump has attracted great attention and than citing exclusively papers from the last author is too much for my plate. Chapter 2 and its subchapters deal exclusively with energy-dependent cellular biochemical processes that can be found in any reasonable biochemistry book of today. What's the significance of all of this information here? Reviews generally do not contain many figures; that means that the few figures should actually count. The figures in this review are a list of ATP-dependent cellular processes (Fig. 1), the copy of a scheme detailing oxidation-reduction pairs (Fig. 2), and a very confuse scheme supposedly detailing some processes in estuaries with ever mentioning the microbial carbon pump proposal. Unfortunately, I have to conclude that this manuscript is pointless.

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