

## Comment on bg-2021-68

Anonymous Referee #2

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Referee comment on "How are oxygen budgets influenced by dissolved iron and growth of oxygenic phototrophs in an iron-rich spring system? Initial results from the Espan Spring in Fürth, Germany" by Inga Köhler et al., Biogeosciences Discuss., <https://doi.org/10.5194/bg-2021-68-RC2>, 2021

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This is an interesting work, particularly for its novelty as a pilot study and the first of its kind in the study region. The presentation of results, discussion, and conclusion are generally well-supported and presented, and I would recommend this study for publication pending minor revisions. Some specific edits are outlined below:

Lines 36 - 38: This sentence seems a bit long, and can be divided into two separate sentences.

Lines 42-43: This passage should be referenced.

Figure 1: It may be more clear to overlay the sampling sites on the traced graphical map, rather than the satellite image.

Line 80: This should more correctly read "Overview of", rather than "Overview on"

Line 82: I assume this should read "image E shows" rather than "image is shows"

Line 87: Spelling error; "assess", rather than "asses"

Line 99: A geological description of the Buntsandstein Formation would be useful here.

Line 125: The acronym "pe" should be defined here or elsewhere.

Lines 131-132: Minor grammar corrections here. "...at first small pond..." should be corrected to "...at the first small pond...", and "...from algal mat..." should be "...from an algal mat...".

Line 143: The word "bulb" here should not be pluralized as "bulbs".

Lines 146 - 150: This sentence is too long, and can be split into two.

Lines 150 - 151: This sentence appears to be a fragment and needs to be corrected.

Line 164: "Per mille" should be written as "per mil".

Line 197: The passage "Oxygen values rise from..." should be corrected to "Oxygen values range from..."

Line 259: "Neither" should be replaced with "Either" to avoid a double-negative.

Line 292: Minor grammar edit; "Steep increase" should be corrected to "A steep increase".

Line 326: Minor grammar edit. "...until equilibrium establishes" should be corrected to "until equilibrium is established".

Line 385: What are some examples of these "associated perturbations"?

Line 413: Minor grammar edit. "Analyses" should be corrected to "analysis".

Line 417: Minor grammar edit. "cannot hardly be detected any longer" should be corrected to "can hardly be detected" or "can no longer be detected".

Lines 421 - 424: This sentence is too long, and can be split up into two sentences.