Supplement of

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

Inga Köhler et al.

Correspondence to: Inga Köhler (inga_koehler@gmx.de)

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**Supporting information**

**Table S1: PhreeqC input data**

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**E6.1***

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**E7***

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**E8***

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**E9***

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* Saturation index = log10(fugacity)
** Ion activity product
*** Last sampling point with Fe(II)
Supplement Figure S1 At sampling point E4.1, *Lyngbya* asp. dominated cyanobacterial mats and generated (presumed) oxygen bubbles via photosynthesis. The red box on the right is an enlargement of the red section on the left.

Supplement Figure S2. CLSM images of the bio mat sample E2 from inside the piping. Shown from left to right are a superimposed image (Overlay) of Chl a (Chl a), Chl a plus PBP (Chl a plus PBP) fluorescence and laser transmission (L. Trans.). Note that the images "Overlay" and "L. Trans." are colourless because no photosynthetic organisms existed in the area where these specific samples were taken due to spring plumbing. The two middle images show some small green and red dots that are probably artefacts. These were likely created by the very high laser intensity that was necessary to create these images.