

Table S1. Individual determination coefficients and E indexes of the model parametric identification versus experimental data reported by Okibe et al. [23] and Tanaka et al. [35].

Variable	S-1		S-2		S-3	
	R ²	E	R ²	E	R ²	E
Fe(II)	0.999	0.999	0.992	0.992	0.985	0.984
As(III)	0.994	0.994	0.999	0.987	0.997	0.995
Fe(III)	0.984	0.984	0.897	0.897	0.985	0.984
As(V)	0.962	0.961	0.868	0.851	0.788	0.766

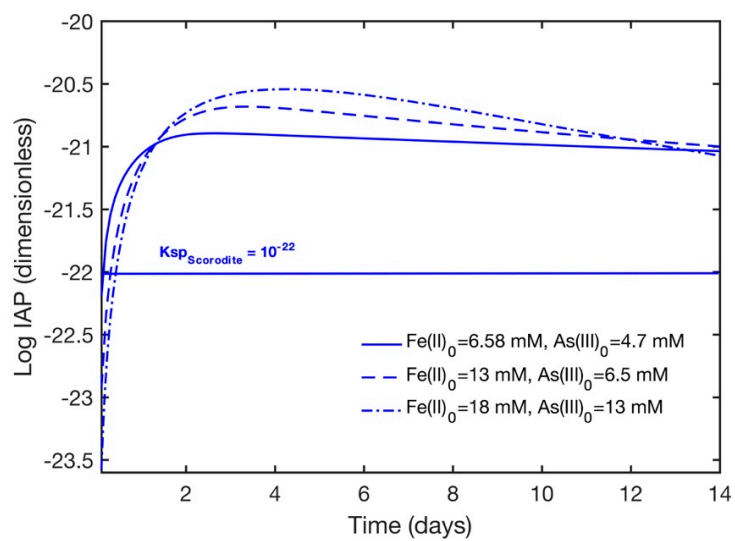


Fig. S1 Log IAP for the experiments S1, S-2 and S-3.

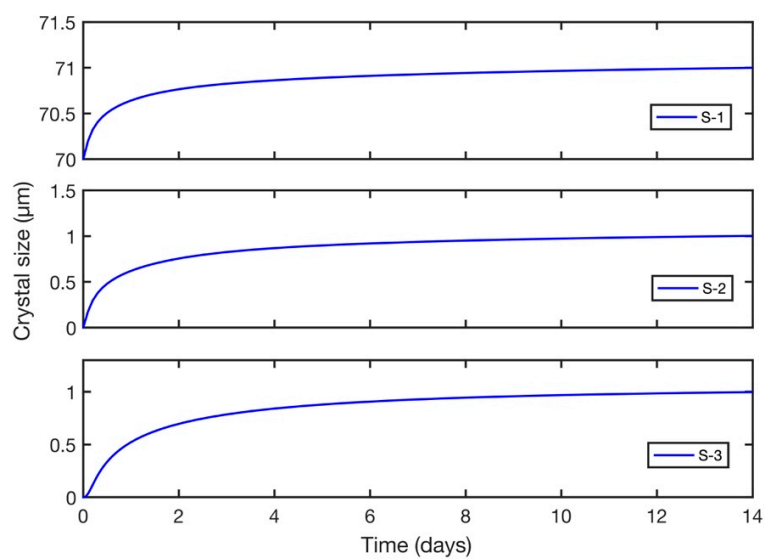


Fig. S2 Crystal size prediction for the experiments S1, S-2 and S-3.

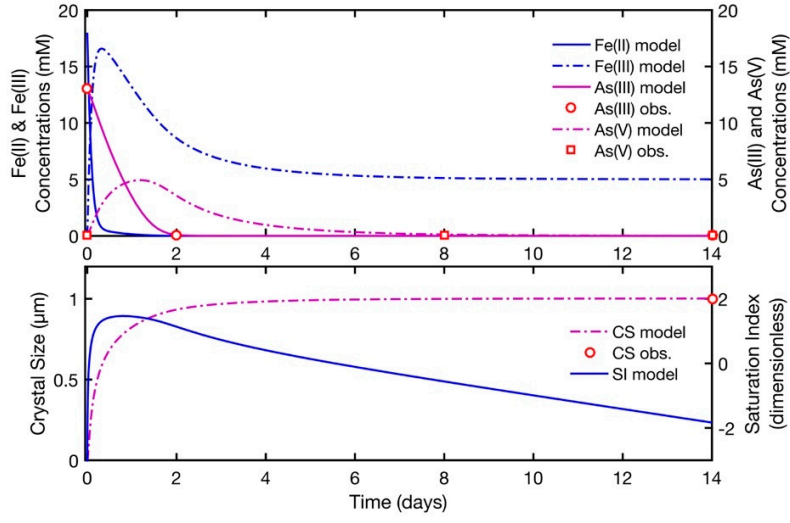


Fig. S3 Simulation and experimental points for the experiment S-4.

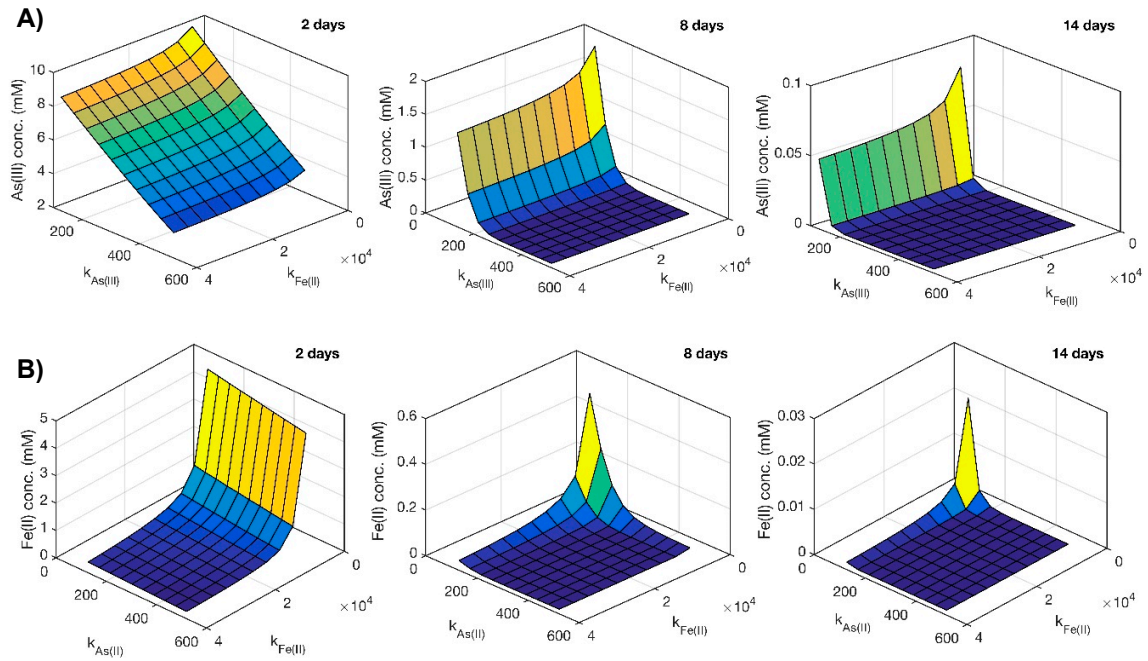


Fig. S4 Effect of the oxidation rate constants, $k_{Fe(II)}$ and $k_{As(III)}$ ($\text{mM d}^{-1} \text{g}_{\text{biomass}}^{-1}$) on the As(III) and Fe(II) oxidation.