

Supplementary Table S3 Summary of the experimental parameters and fitted kinetic constants of pNPP hydrolysis (pH = 7.0) mediated by iron oxyhydroxide nanomaterials at varying initial pNPP concentrations

Exp. No.	Catalyst	C_pNPP (mg L ⁻¹)	pH	k_{obs}^a (h ⁻¹)	R^2
1-a	Goethite	3.2	7.0	2.02×10^{-2}	0.984
1-b	Akaganeite	3.2	7.0	9.80×10^{-3}	0.984
1-c	Lepidocrocite	3.2	7.0	5.67×10^{-2}	0.975
2-a	Goethite	4.3	7.0	1.27×10^{-2}	0.979
2-b	Akaganeite	4.3	7.0	7.90×10^{-3}	0.988
2-c	Lepidocrocite	4.3	7.0	3.61×10^{-2}	0.999
3-a	Goethite	6.0	7.0	9.00×10^{-3}	0.965
3-b	Akaganeite	6.0	7.0	6.61×10^{-3}	0.967
3-c	Lepidocrocite	6.0	7.0	2.91×10^{-2}	0.945
4-a	Goethite	9.7	7.0	7.50×10^{-3}	0.982
4-b	Akaganeite	9.7	7.0	4.92×10^{-3}	0.959
4-c	Lepidocrocite	9.7	7.0	2.44×10^{-2}	0.978
5-a	Goethite	13	7.0	6.10×10^{-3}	0.995
5-b	Akaganeite	13	7.0	3.98×10^{-3}	0.921
5-c	Lepidocrocite	13	7.0	1.83×10^{-2}	0.903
6-a	Goethite	16	7.0	5.00×10^{-3}	0.942
6-b	Akaganeite	16	7.0	3.52×10^{-3}	0.943
6-c	Lepidocrocite	16	7.0	1.56×10^{-2}	0.987

^a k_{obs} = pseudo-first-order kinetic constants.

^b SA_{BET} = surface area measured using the Brunauer-Emmett-Teller (BET) method