

Supplementary Table S4 Summary of the experimental parameters and fitted kinetic constants of pNPP hydrolysis (pH = 8.0) 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	8.0	1.00×10^{-2}	0.961
1-b	Akaganeite	3.2	8.0	5.90×10^{-3}	0.990
1-c	Lepidocrocite	3.2	8.0	3.57×10^{-2}	0.955
2-a	Goethite	4.3	8.0	5.50×10^{-3}	0.985
2-b	Akaganeite	4.3	8.0	3.72×10^{-3}	0.993
2-c	Lepidocrocite	4.3	8.0	1.60×10^{-2}	0.979
3-a	Goethite	6.0	8.0	4.84×10^{-3}	0.946
3-b	Akaganeite	6.0	8.0	3.60×10^{-3}	0.979
3-c	Lepidocrocite	6.0	8.0	1.35×10^{-2}	0.987
4-a	Goethite	9.7	8.0	2.54×10^{-3}	0.926
4-b	Akaganeite	9.7	8.0	1.77×10^{-3}	0.896
4-c	Lepidocrocite	9.7	8.0	8.70×10^{-3}	0.963
5-a	Goethite	13	8.0	2.00×10^{-3}	0.959
5-b	Akaganeite	13	8.0	1.37×10^{-3}	0.935
5-c	Lepidocrocite	13	8.0	7.20×10^{-3}	0.906
6-a	Goethite	16	8.0	1.60×10^{-3}	0.983
6-b	Akaganeite	16	8.0	1.12×10^{-3}	0.986
6-c	Lepidocrocite	16	8.0	5.80×10^{-3}	0.951

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

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