

Supplementary Data File

Table 1: Comparison between pseudo-first-order and second-order kinetics applied on different operational parameters

Sr. No.	Studies	Conditions	Pseudo-First-Order Kinetics		Second-Order-Kinetics	
			K (min ⁻¹)	R ²	K (min ⁻¹)	R ²
1.	Pristine BFO	0.5 gL ⁻¹ Catalyst Dose	0.0015	0.9025	0.0001	0.9005
	Pristine CeO	0.5 gL ⁻¹ Catalyst Dose	0.0166	0.9769	0.0038	0.9122
2.	Composites	2% CeO @ BFO	0.0035	0.9746	0.0003	0.9469
		5% CeO @ BFO	0.0068	0.9532	0.0008	0.8621
		8% CeO @ BFO	0.0060	0.9829	0.0007	0.9386
		10% CeO @ BFO	0.0036	0.9698	0.0003	0.9505
3.	Dose	0.25 gL ⁻¹	0.0064	0.9841	0.0006	0.9409
		0.5 gL ⁻¹	0.0067	0.9595	0.0008	0.8855
		0.75 gL ⁻¹	0.0067	0.9422	0.0009	0.8824
		1 gL ⁻¹	0.0092	0.9658	0.0019	0.8937
4.	pH	3	0.0089	0.9887	0.0011	0.9142
		5	0.0020	0.8657	0.0001	0.9060
		7	0.0024	0.9725	0.0002	0.9874
		9	0.0016	0.9389	9E-05	0.9549