Article

Removal of carbamazepine in aqueous solution by TiO_2 ceramic photo-catalyst under simulated solar light: Kinetics, effects of environmental factors and degradation pathways

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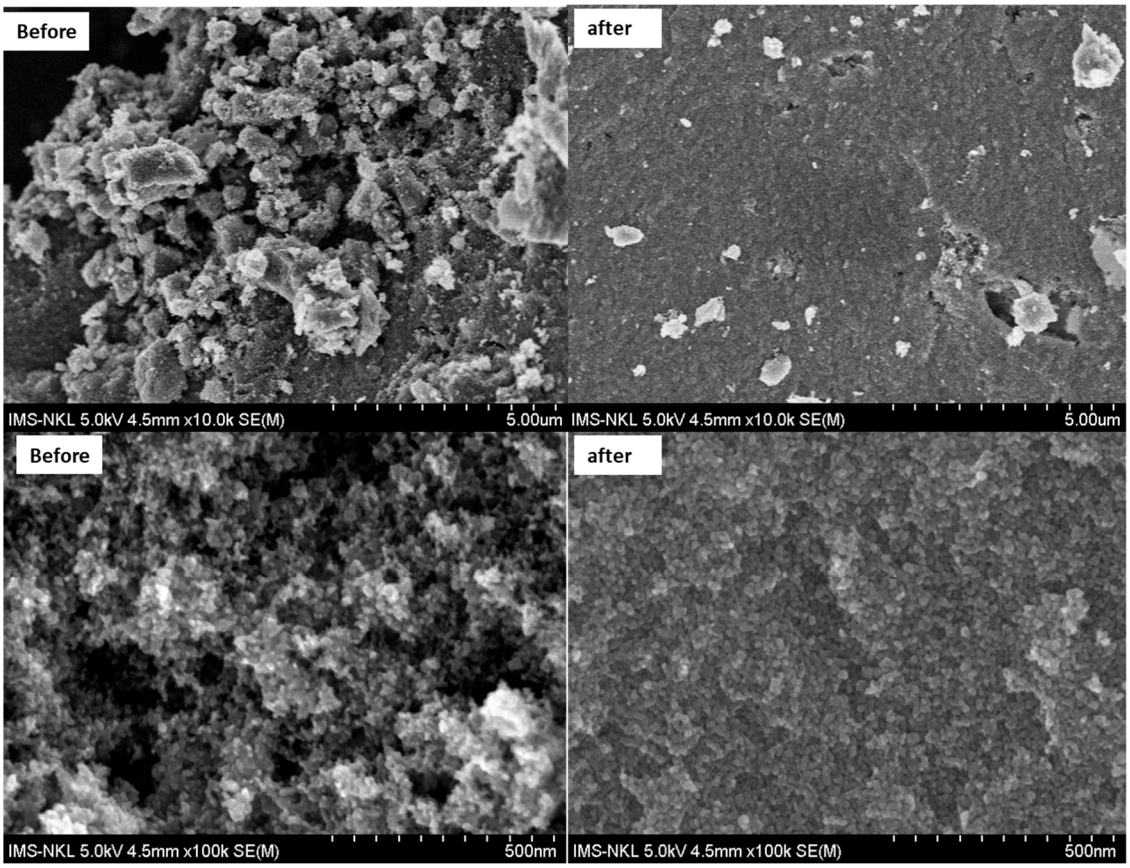

Figure S1. SEM image of PFS-01 before and after experiments

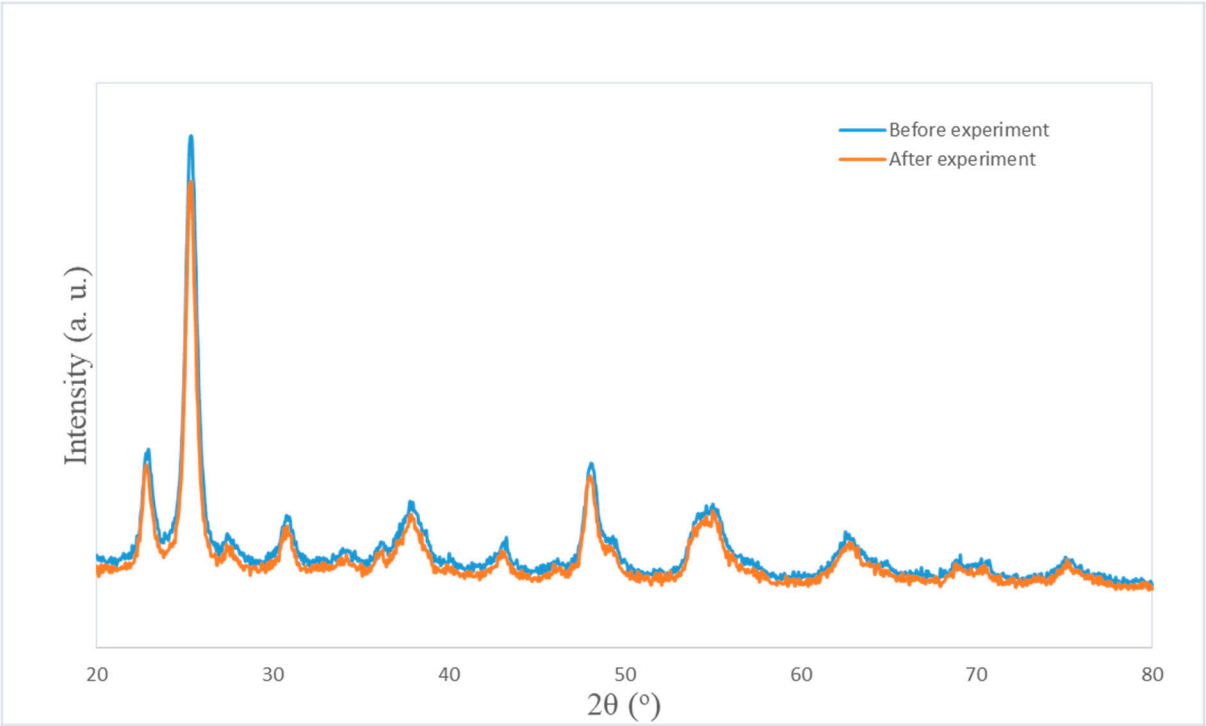

Figure S2: XRD analysis of PFS-01 before and after experiments

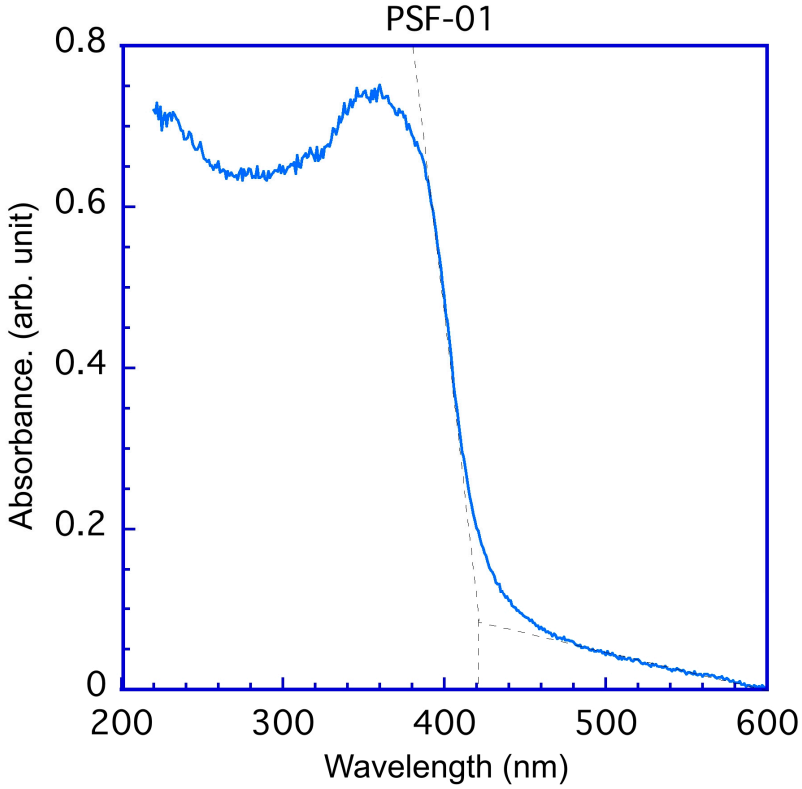

Figure S3. UV Vis spectrum of PFS-01 material

Table S1. Reaction rate constant followed pseudo-first-order kinetics

Environmental factors	**k**	**$T_{1/2}$**	**R^2**
pH 2	0.0283 ± 0.0015	24.4928	0.9543
pH 7	0.0109 ± 0.0044	63.5918	0.9771
pH 10	0.0101 ± 0.0015	68.6283	0.9891
pH 13	0.0022 ± 0.0015	315.0669	0.9973
50 mg.L^{-1} Cl^-	0.0063 ± 0.0035	110.0234	0.9917
50 mg.L^{-1} HCO_3^-	0.0023 ± 0.0005	301.3683	0.9896
50 mg.L^{-1} NO_3^-	0.0131 ± 0.0023	52.9120	0.9794
50 mg.L^{-1} CO_3^{2-}	0.0012 ± 0.0006	577.6227	0.9621
50 mg.L^{-1} HA	0.0044 ± 0.001	157.5335	0.9955
Tap water	0.0082 ± 0.0017	84.5301	0.9853
River	0.0052 ± 0.0009	133.2975	0.9911
Lake	0.0044 ± 0.0002	157.5335	0.9923
Sea	0.0079 ± 0.0004	87.7401	0.9595
(Ca + Mg) water	0.0093 ± 0.0012	74.5319	0.9843