

## Supporting information

for

### Enhanced photodegradation of diphenhydramine in aqueous solution containing natural sands

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DS sand



SS sand

Fig. S1. The sand samples DS and SS

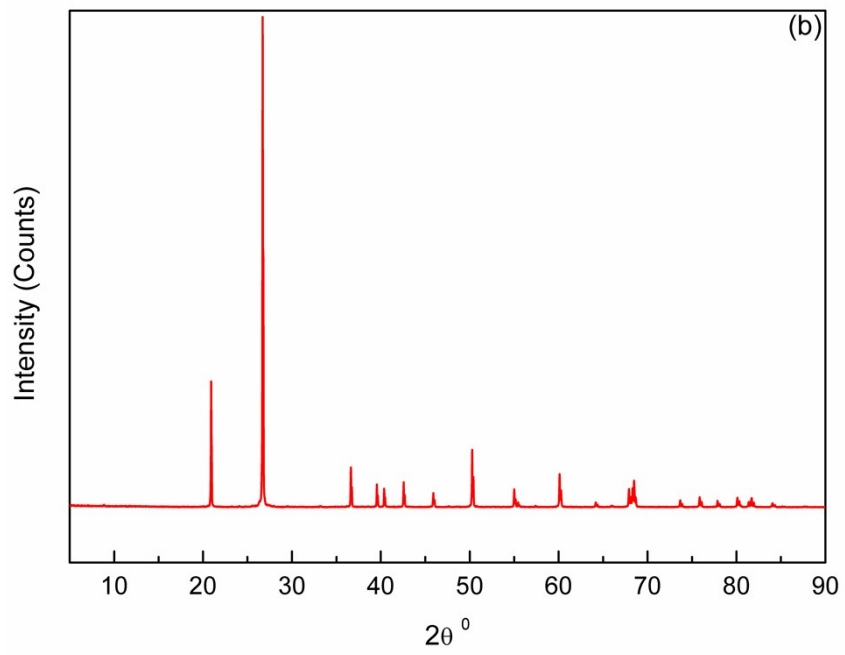
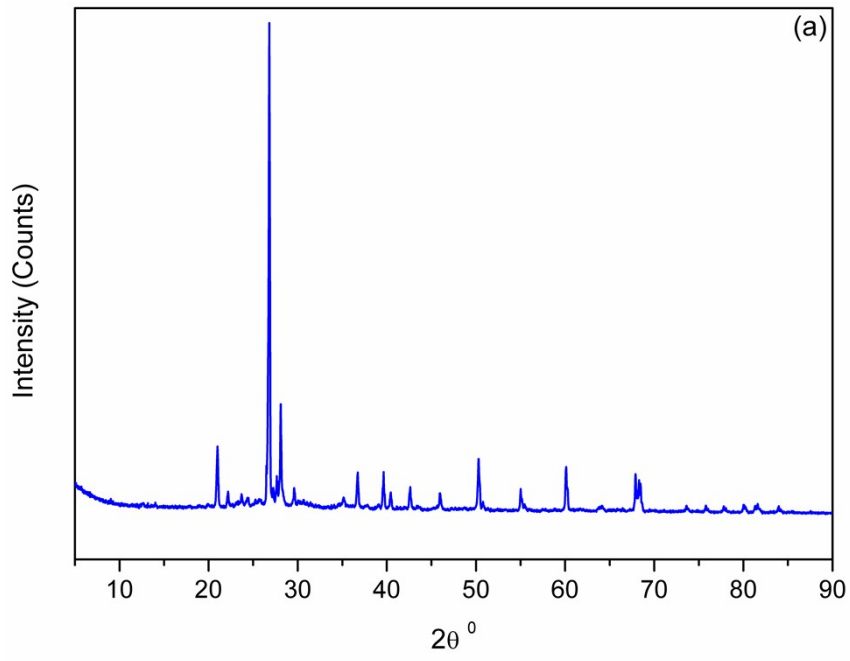


Fig. S2. The XRD patterns of the natural sand DS (a) and SS (b).

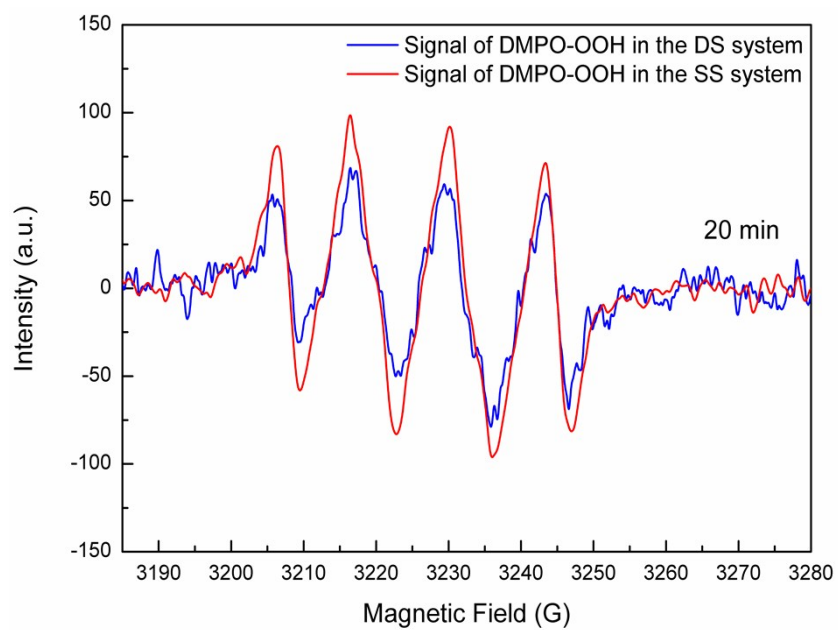


Fig. S3. The comparison of the signal of DMPO-  $O_2^{\cdot-}$  adducts in the DS and SS systems

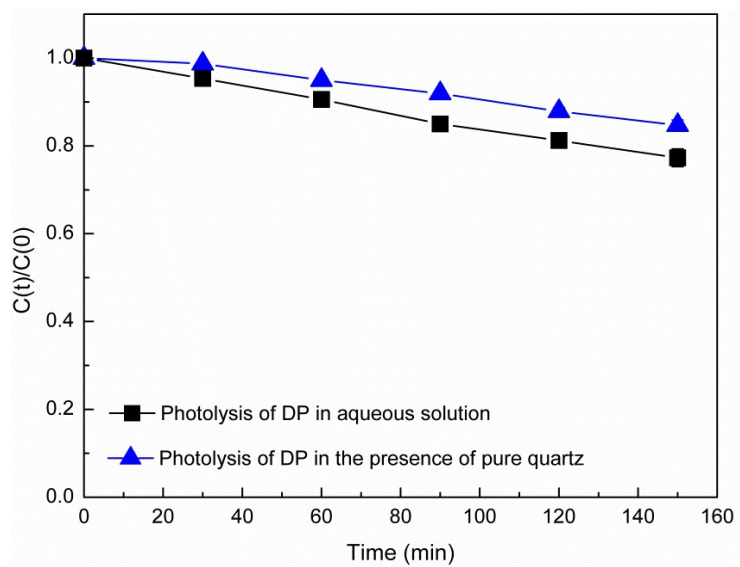


Fig. S4. The photolysis of DP in aqueous solution and in the presence of pure  $\text{SiO}_2$