A comparative study on the formation of environmentally persistent free radicals (EPFRs) on hematite and goethite: Contribution of various catechol degradation byproducts

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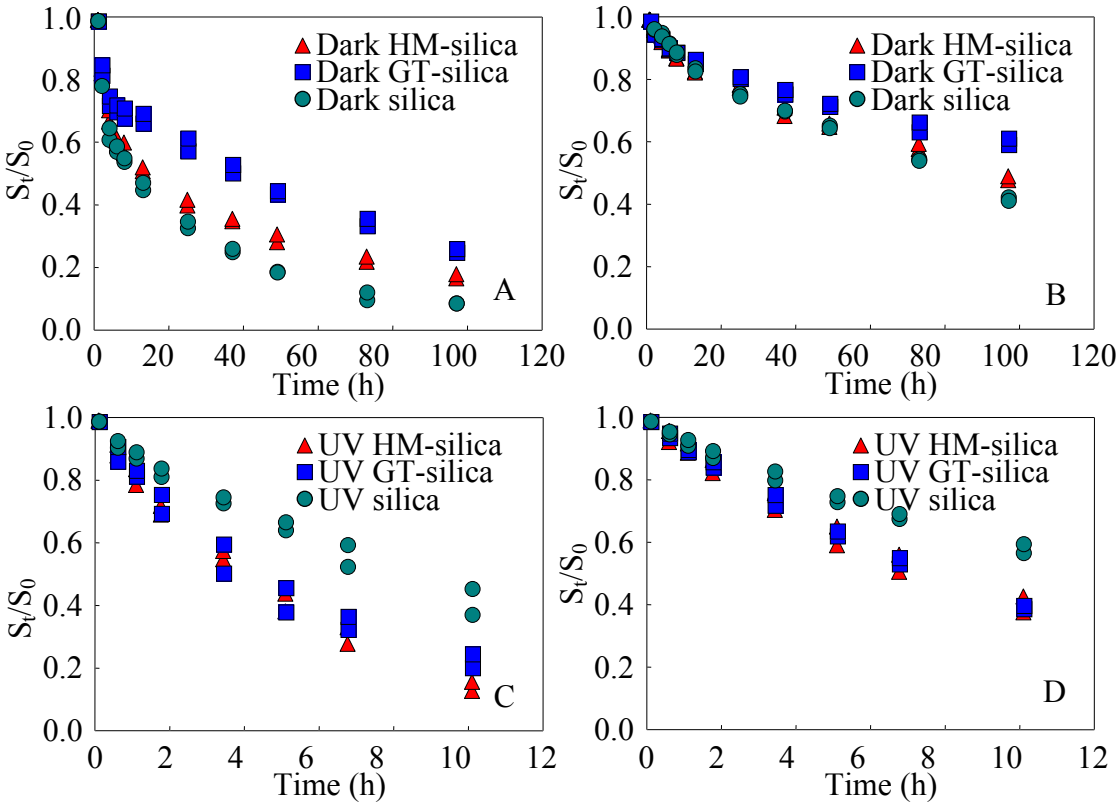

Figure S1. The degradation kinetics of catechol in the dark at solid-phase catechol concentrations of 0.12 ± 0.01 (A) and 1.42 ± 0.07 (B) μg/mg and under continuous UV irradiation at solid-phase catechol concentrations of 0.16 ± 0.01 (C) and 1.16 ± 0.04 (D) μg/mg.

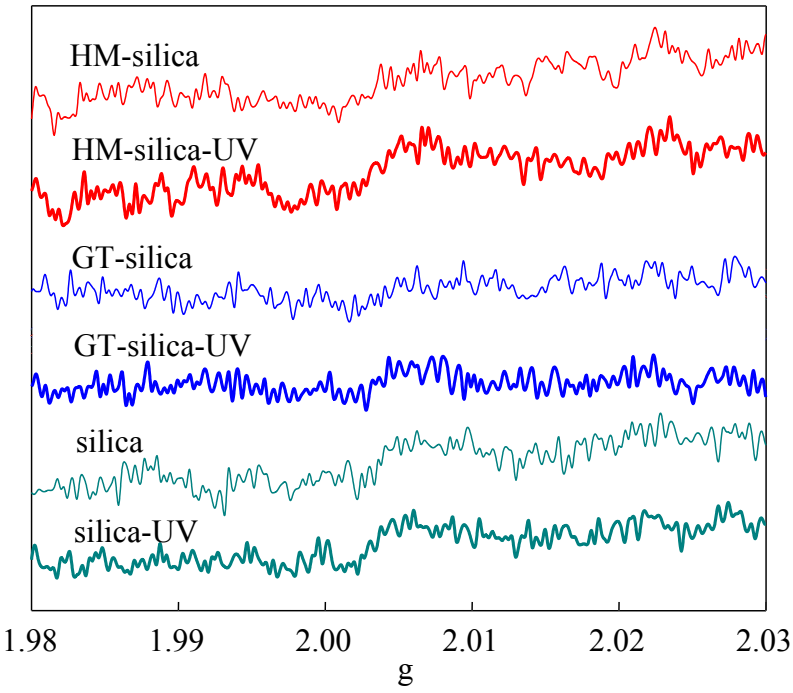

Figure S2. The EPR signal for HM-silica, GT-silica and silica systems without catechol under continuous UV irradiation for 10 h.

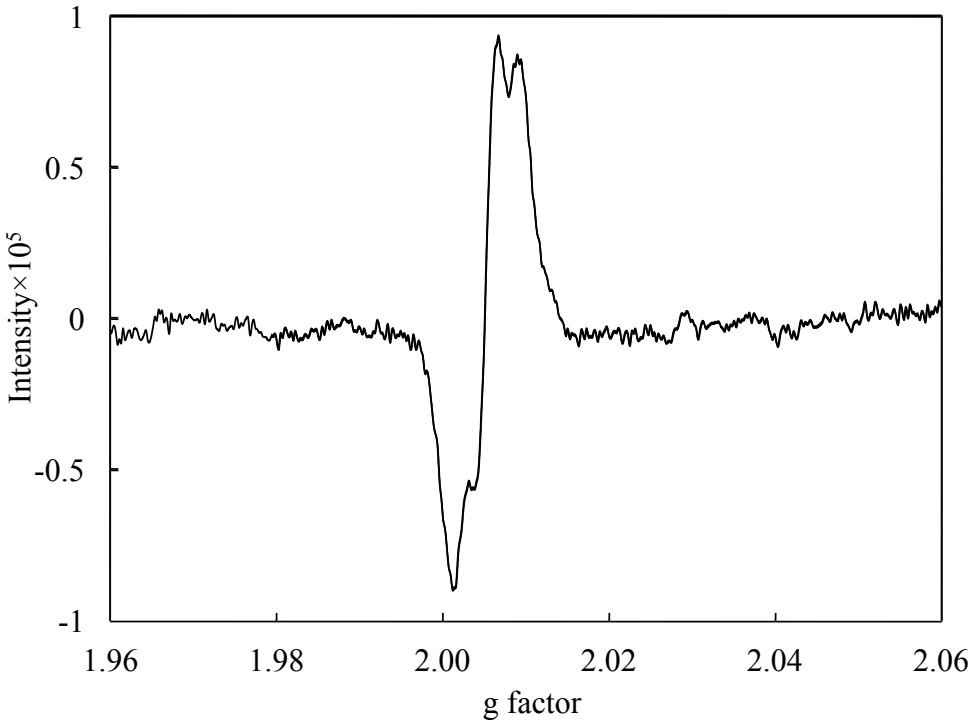

Figure S3. The EPR signal for pure catechol (50 mg) under 5 h UV-light irradiation

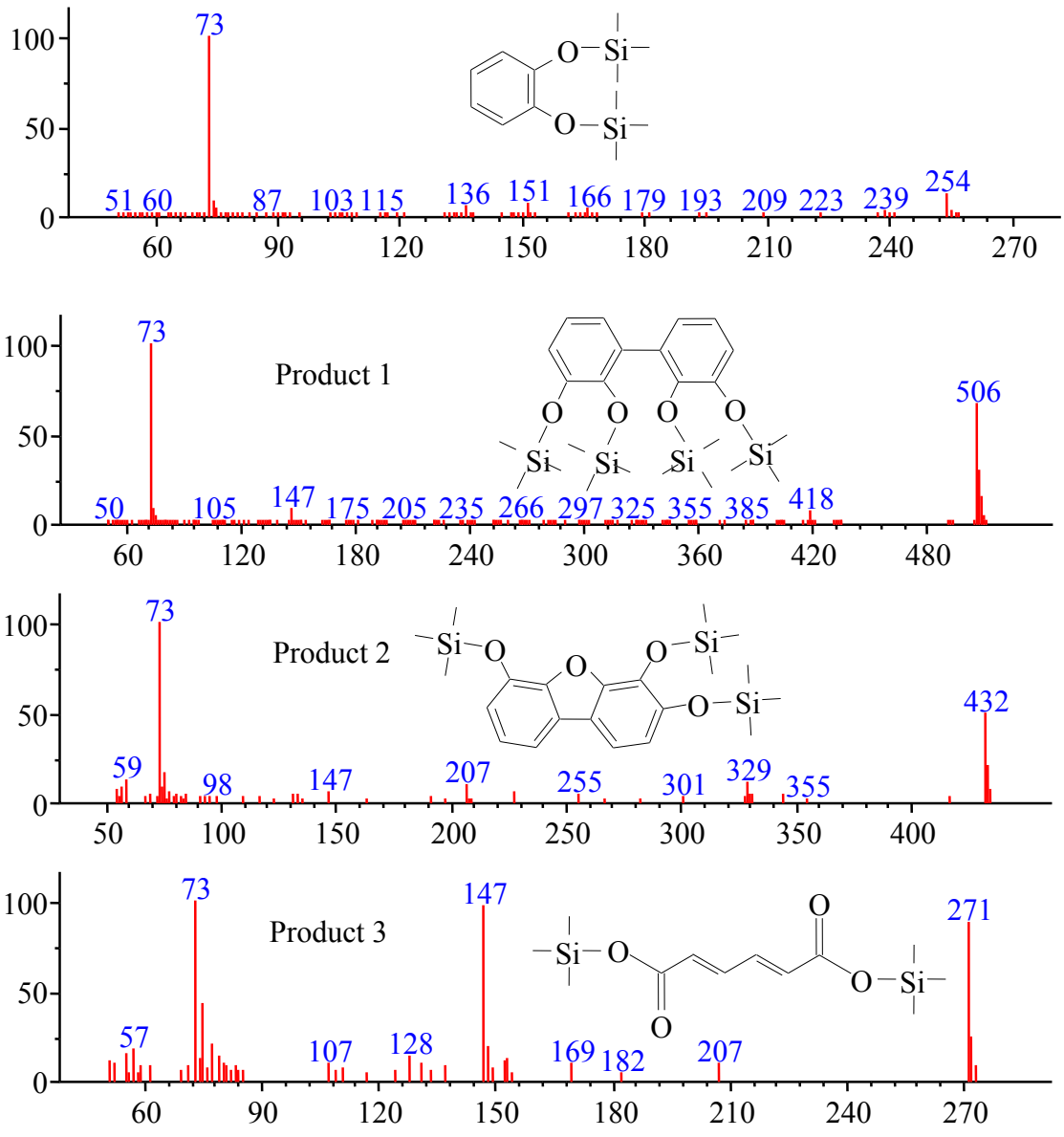

Figure S4. Major chemicals in catechol degradation systems detected by GC-MS. The silylation product of catechol was detected at 12.8 min. And two dimers also were detected at different retention times (35.2 min and 34.2 min for Product 1 and Product 2). Meanwhile, the Product 3 for catechol oxidation product (2,4-Hexadienedioic acid) also was detected at 22.0 min.