

Supplementary Materials

Immobilization of TiO₂ Nanoparticles in Cement for Improved Photocatalytic Reactivity and Treatment of Organic Pollutants

Hannah M. McIntyre and Megan L. Hart *

Department of Civil and Mechanical Engineering, School of Computing and Engineering, University of Missouri-Kansas City, 5110 Rockhill Rd, 352 Flarsheim Hall, Kansas City, MO 64110, USA; hmmg2d@umsystem.edu

* Correspondence: hartme@umsystem.edu

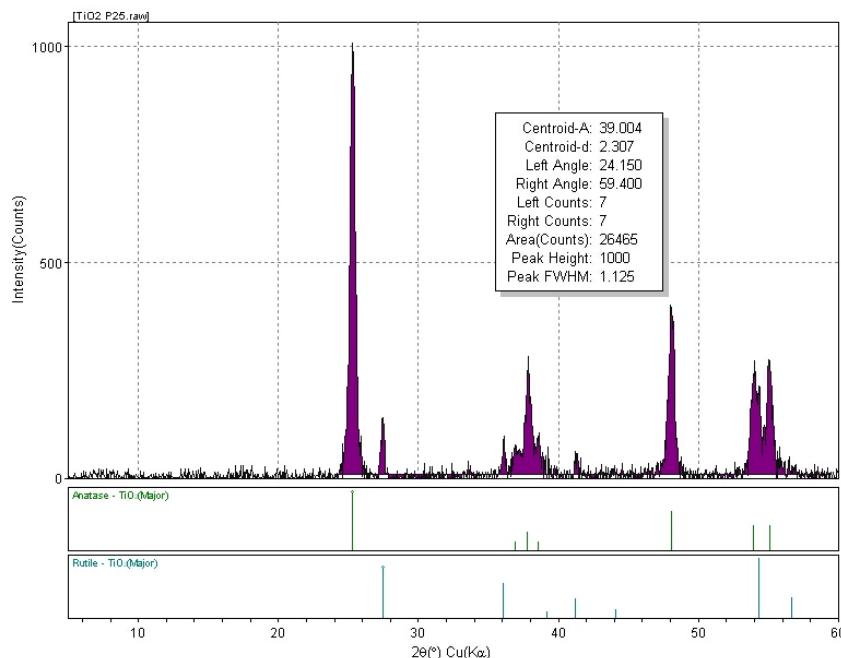


Figure S1. Crystalline Area of TiO₂.

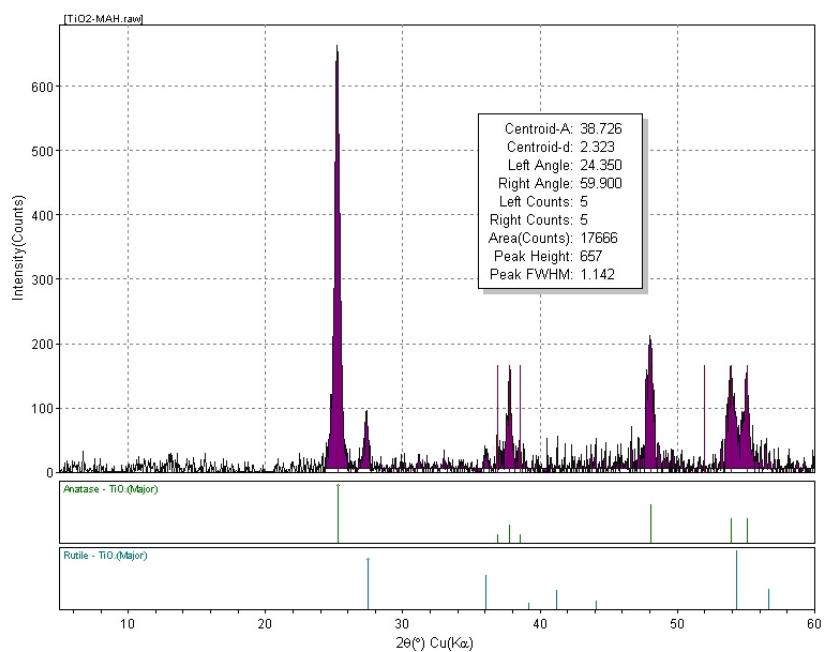


Figure S2. Crystalline Area of Ti-MAH.

Table S1. Rutile Miller Index.

#	d (Å)	(h k l)	2-Theta	p
1	3.248	(1 1 0)	27.438	4
2	2.488	(1 0 1)	36.076	8
3	2.297	(2 0 0)	39.194	4
4	2.187	(1 1 1)	41.237	8
5	2.054	(2 1 0)	44.047	8
6	1.687	(2 1 1)	54.321	16
7	1.624	(2 2 0)	56.631	4

Table S2. Anatase Miller Index.

#	d (Å)	(h k l)	2-Theta	p
1	3.517	(1 0 1)	25.303	8
2	2.431	(1 0 3)	36.948	8
3	2.378	(0 0 4)	37.793	2
4	2.333	(1 1 2)	38.565	8
5	1.893	(2 0 0)	48.033	4
6	1.759	(2 0 2)	51.957	8
7	1.700	(1 0 5)	53.885	8
8	1.667	(2 1 1)	55.057	16

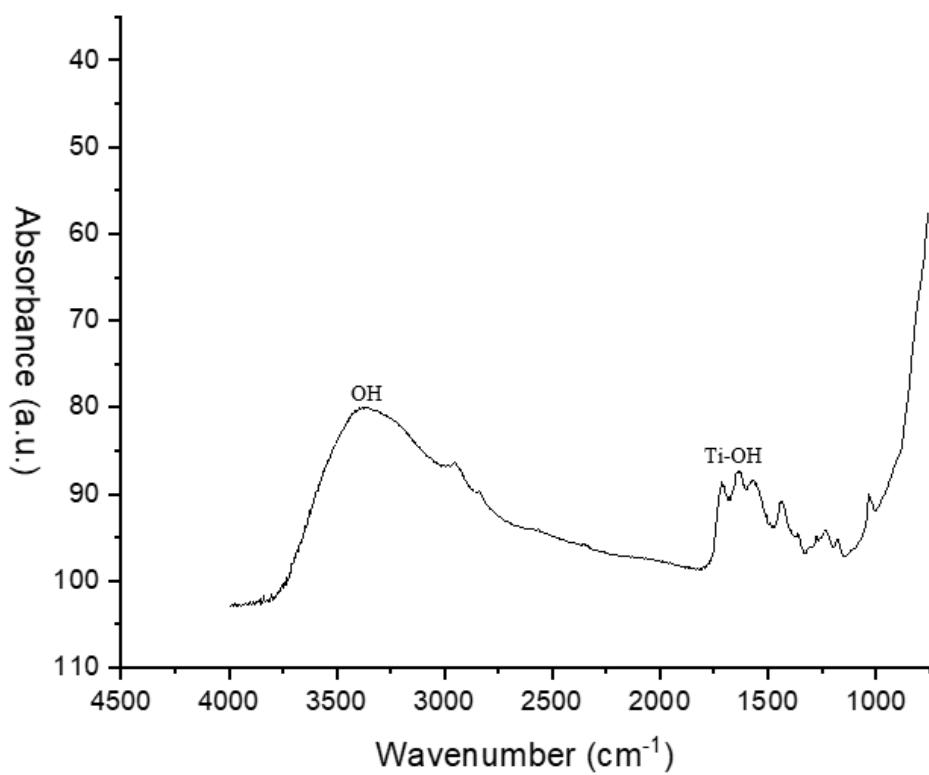


Figure S3. FT-IR Spectrum of TiO_2 .

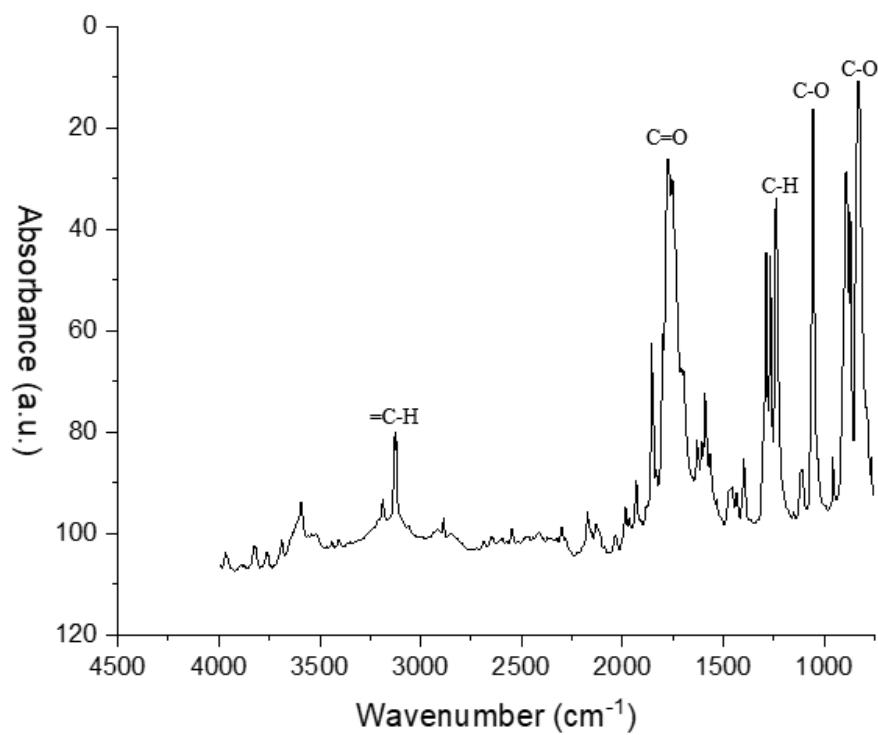


Figure S4. FT-IR Spectrum of Maleic Anhydride.

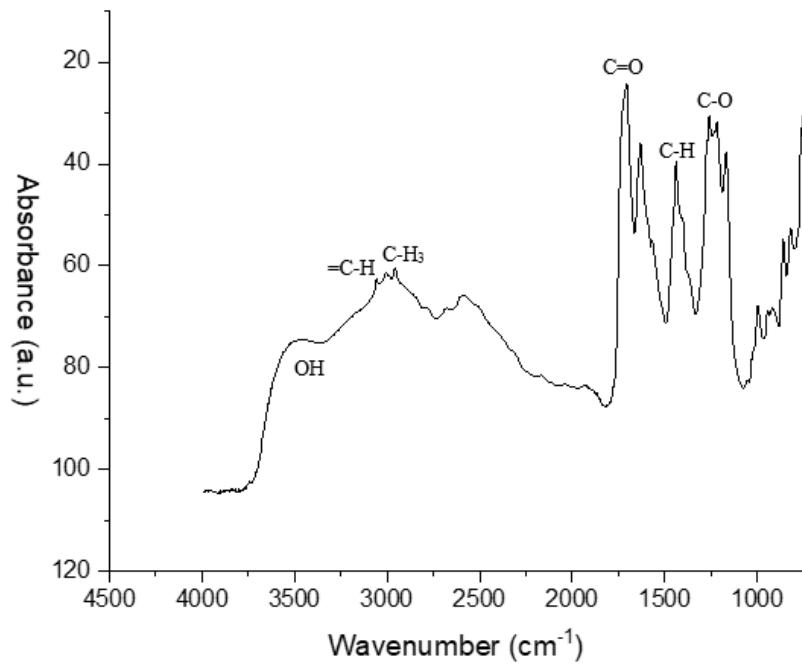


Figure S5. FT-IR Spectrum of Ti-MAH.

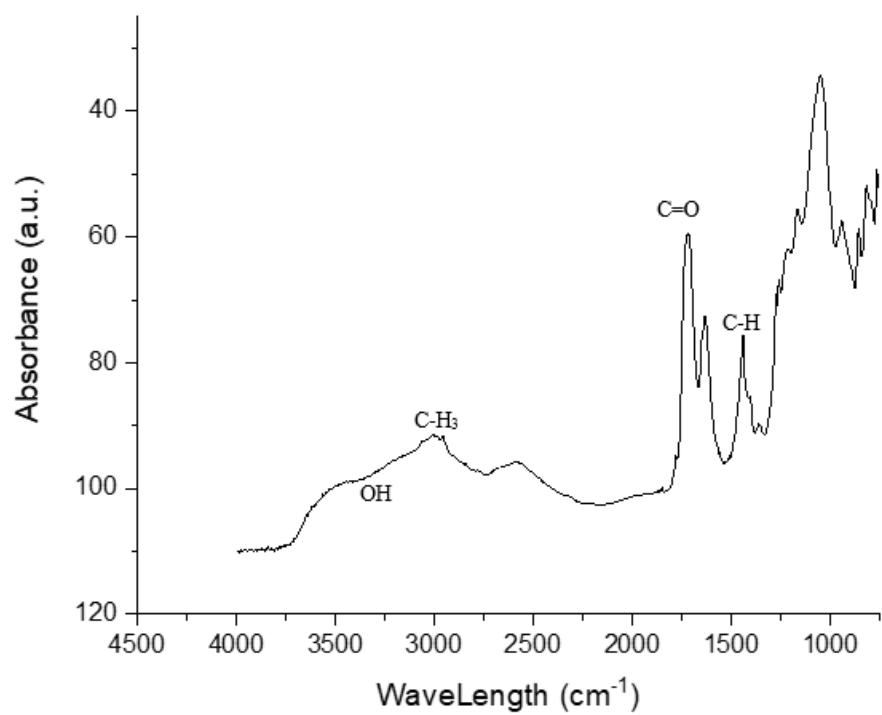


Figure S6. FT-IR Spectrum of Ti-MAH-Si.