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MDPI

Supplementary Materials

Structuring of $ZnTiO_3/TiO_2$ adsorbents for the removal of methylene blue, using zeolite precursor clays as natural additives

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Table S1. 2θ values of the diffraction peaks and planes assigned to the peaks

Compounds	2θ values	Planes
R-Clay	7.18°, 10.16°, 12.45°, 16.09°, 17.64°, 20.40°, 21.34°, 21.65°, 22.84°, 23.97°, 26.09°, 27.09°, 29.00°, 29.92°, 30.81°, 32.52°, 33.34°, 34.16°, 35.71°, 36.48°, 37.97°, 40.10°, 41.48°, 42.15°, 42.83°, 43.47°, 44.12°, 47.25°, 47.86°, 49.07°, 49.67°, 51.97°, 52.55°, 53.11°, 54.23°, 54.79°, 56.40°, 57.48° and 58.56°	(2 0 0), (2 2 0), (2 2 2), (4 2 0), (4 2 2), (4 4 0), (5 3 1), (6 0 0), (6 2 0), (6 2 2), (6 4 0), (6 4 2), (8 0 0), (6 4 4), (6 6 0), (8 4 0), (8 4 2), (6 6 4), (8 4 4), (10 0 0), (10 2 2), (10 4 2), (8 8 0), (10 4 4), (10 6 0), (10 6 2), (12 0 0), (10 8 0), (10 8 2), (12 4 4), (10 8 4), (12 6 4), (10 10 0), (14 2 2), (12 8 2), (14 4 2), (10 8 8), (10 10 6), and (12 10 0)
FAU zeolite	6.11°, 9.99°, 11.72°, 15.42°, 17.34°, 18.40°, 20.05°, 20.98°, 22.45°, 23.29°, 23.56°, 24.63°, 25.39°, 26.63°, 27.35°, 29.18°, 30.27°, 30.92°, 31.13°, 31.96°, 32.77°, 33.56°, 34.14°, 35.11°, 36.59°, 37.31°, 40.76°, 41.25°, 42.55°, 43.34°, 46.43°, 47.02°, 48.62°, 49.79°, 50.49°, 50.92°, 51.59°, 53.11°, 57.32°, 58.36°, 59.01° and 59.39°	(1 1 1), (2 2 0), (3 1 1), (3 3 1), (4 2 2), (5 1 1), (4 4 0), (5 3 1), (6 2 0), (5 3 3), (6 2 2), (4 4 4), (5 5 1), (6 4 2), (5 3 1), (7 3 3), (8 2 2), (1 5 7), (6 6 2), (8 4 0), (8 4 2), (6 6 4), (9 3 1), (8 4 4), (2 6 8), (10 2 2), (8 8 0), (11 3 1), (11 3 3), (8 8 4), (12 4 2), (10 8 2), (9 7 7), (13 3 3), (8 8 8), (13 5 1), (14 2 0), (11 9 3), (11 11 1), (1 9 13), (16 0 0) and (3 5 15)
Na-P1 zeolite	12.47°, 17.73°, 21.65°, 28.18°, 33.44°, 35.63°, 40.31°, 42.31°, 44.13°, 44.29°, 46.14°, 49.87°, 51.48°, 51.67°, 53.09°, 53.28°, 54.87°, 55.06°, 56.29°, 56.42°, 56.69°, 57.91°, 58.27°, 59.63°, 59.89°, 61.42°, 62.61°, 62.90°, 62.99°, 64.35°, 65.50°, 65.75°, 66.00°, 67.33°, 67.49°, 68.59° and 68.87°	(1 0 1), (2 0 0), (1 1 2), (3 0 1), (3 1 2), (0 0 4), (4 0 2), (3 3 2), (2 2 4), (4 2 2), (3 1 4), (5 1 2), (4 0 4), (4 4 0), (3 0 5), (4 3 3), (4 2 4), (6 0 0), (1 1 6), (3 2 5), (6 1 1), (2 0 6), (6 0 2), (4 1 5), (5 4 1), (6 2 2), (3 1 6), (6 1 3), (6 3 1), (4 4 4), (1 0 7), (4 3 5), (5 4 3), (6 0 4), (6 4 0), (3 3 6) and (6 3 3)
$ZnTiO_3$	23.92°, 32.79°, 35.31°, 40.45°, 48.93°, 53.44°, 56.82°, 61.79° and 63.39°	(0 1 2), (1 0 4), (1 1 0), (1 1 3), (0 2 4), (1 1 6), (0 1 8), (2 1 4) and (3 0 0)
Anatase ($TiO_{2\text{-}a}$)	25.28°, 36.95°, 37.80°, 38.58°, 48.05°, 53.89°, 55.06°, 62.12°, 62.69° and 68.76°	(1 0 1), (1 0 3), (0 0 4), (1 1 2), (2 0 0), (1 0 5), (2 1 1), (2 1 3), (2 0 4) and (1 1 6)
Rutile ($TiO_{2\text{-}r}$)	27.45°, 36.09°, 41.23°, 54.32°, 56.64° and 69.01°	(1 1 0), (1 0 1), (1 1 1), (2 1 1), (2 2 0) and (3 0 1)

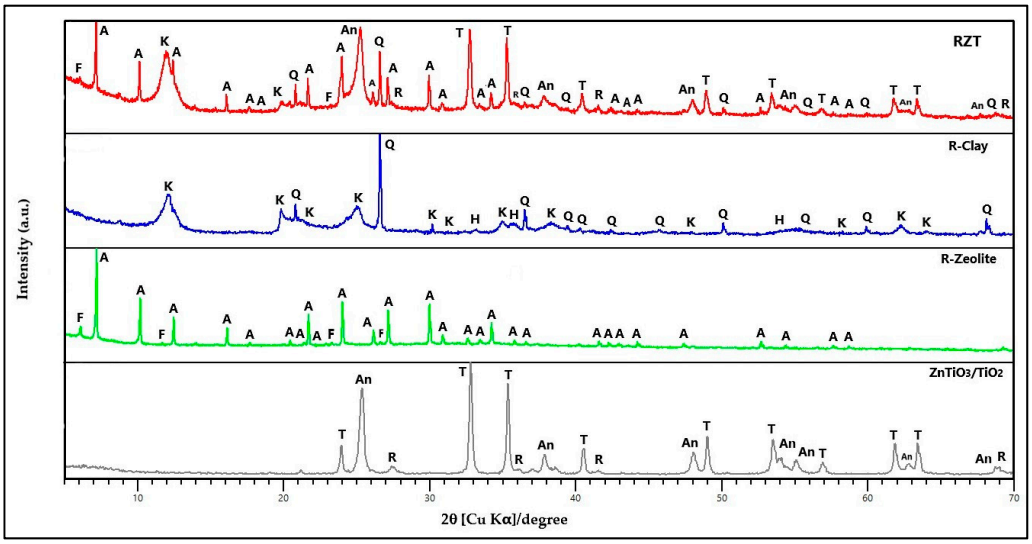


Figure S1. Comparison of the diffraction pattern of the RZT extrudate with the diffraction pattern of its individual components.

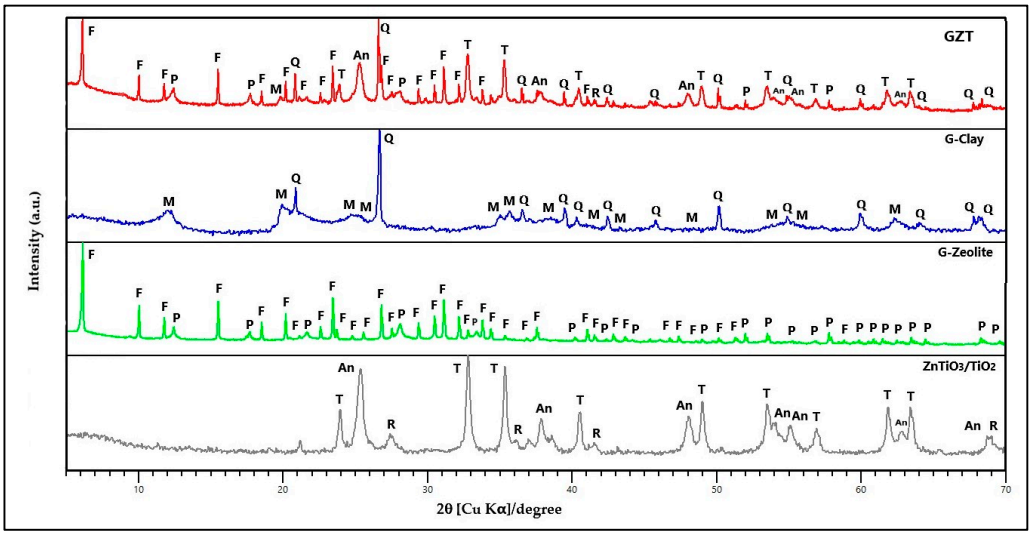


Figure S2. Comparison of the diffraction pattern of the GZT extrudate with the diffraction pattern of its individual components.