
Surface Chemistry of Thermally Decomposed Organo-Montmorillonite Complexes

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Abstract: The hydrophilic-hydrophobic properties of four thermally decomposed organoclays, the octadecylammonium-, the dimethylaryloctadecylammonium-, and the dimethyldioctadecylammonium-bentonites and the dimethyldioctadecylammonium-hectorite, were examined through adsorption isotherms with nitrogen, water vapor, and hexane. Along with DTA and TGA results, these clay complexes appear to undergo transitions from low to higher degrees of hydrophilicity as more and more of the hydrocarbon chains are dehydrogenated at successive temperatures up to 400° C.

Clays and Clay Minerals; July 1971 v. 19; no. 3; p. 201-204; DOI: [10.1346/CCMN.1971.0190309](https://doi.org/10.1346/CCMN.1971.0190309)

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