

xyaluminum-zirconium cations. Aliquots of the inorganic matrices were saturated by furfuryl alcohol followed by its interlayer polymerization. The structures were heated at 973 K in nitrogen to carbonize the polymeric precursor. Additional materials were mixed with polypropylene glycol which was then carbonized within the mineral layers. The surface properties of the nanocomposites were studied by X-ray diffraction (XRD), DTA, SEM and sorption experiments (sorption of nitrogen). The results showed that structural properties of the derived materials depend on the inorganic matrix and organic precursor. The carbon-taeniolite nanocomposites derived from polyfurfuryl alcohol as a precursor were characterized by high carbon content and a high percentage of its surface area in micropores. A broad spectrum of surface characteristics of the final products were found, depending on the history of the sample.

Key Words: Furfuryl Alcohol • Polypropylene Glycol • Taeniolite Intercalation • Taeniolite-carbon Nano-composites

Clays and Clay Minerals; April 1996 v. 44; no. 2; p. 237-243; DOI: [10.1346/CCMN.1996.0440209](https://doi.org/10.1346/CCMN.1996.0440209)

© 1996, The Clay Minerals Society

Clay Minerals Society (www.clays.org)
