

## Intercalation of anthranilate ion into zinc-aluminium-layered double hydroxide

Mazidah Mamat, author

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### Abstrak

Nanocomposites of zinc-aluminium-anthranilate (ZAAN) have been synthesized at different concentrations of anthranilic acid by co-precipitation method. These materials have been examined in detail by powder X-ray powder diffraction (PXRD) which showed the expansion of the basal spacing from 0.89 to ca. 1.33 nm and the shifting of the 003 peak towards the lower  $2\theta$  angle. This indicates that the anthranilate anion was successfully intercalated into the interlayer gallery. However, FTIR analysis showed nitrate anion was also co-intercalated in the interlayer. The resulting nanocomposites show Type IV adsorption-desorption isotherms indicated the mesoporous structure of the material. BET surface area was found to be slightly different compared to zinc-aluminium-nitrate-layered double hydroxide (ZANO) after the intercalation process took place. Both ZANO and ZAAN have similar surface morphology, namely a flaky-like structure, but they are of different sizes.