

Synthesis and characterization of lawsone-intercalated Zn-Al-layered double hydroxide.

ABSTRACT

A drug-inorganic nanostructured material involving pharmaceutically active compound lawsone intercalated Zn-Al layered double hydroxides (Law-LDHs) with Zn/Al = 4 has been assembled by co-precipitation and ion exchange methods. Powder X-ray diffraction (XRD) and Fourier transform infrared spectra (FTIR) analysis indicate a successful intercalation of lawsone between the layers of layered double hydroxides. It suggests that layered double hydroxides may have application as the basis of a drug delivery system.

Keyword: Lawsone; Intercalation; Zn-Al-Layered double hydroxide.