

## Research on character properties of fly ash modified with silane

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### Abstract

*The fly ash (FA) from Pha Lai power plant was modified by Vinyltrimetoxysilan (VTMS) in order to enhance the dispersibility and reduce the agglomeration. FA was treated with nitric acid before the modification with VTMS. The structure of fly ash particles before and after the modification was characterized by several sophisticated techniques including Fourier transform infrared spectrum (FT-IR), thermogravimetric analysis (TGA) and field emission scanning electron microscopy (FE-SEM). The obtained results show that the VTMS was grafted successfully onto the surface of FA, which significantly changes the surface properties of FA. It was also found that the thermal stability of modified FA (MFA) is much higher than that of the FA treated only with nitric acid.*

**Keywords:** Fly ash, modification, vinyltrimethoxysilane.