

# Characterization of LUSI mud volcano as geopolymer raw material

## Abstract

The mud of mud volcano samples were collected from an eruption site named 'LUSI' (Lumpur "mud" -Sidoarjo), East Java, Indonesia for characterization. Analysis showed that, the major constituents of mud are  $\text{SiO}_2$  and  $\text{Al}_2\text{O}_3$  which are higher than those in fly ash. The particle of mud has a flake-shaped particle and the overall particle size is dominated by particles between  $2.5\mu\text{m}$  -  $25.0\mu\text{m}$ . The results of XRD shows that mud of mud volcano have a characteristic of structurally disordered compounds, and a set of peaks corresponding to minor crystalline phases such as quartz, feldspars, and kaolinite. FTIR adsorption bands of the raw material of mud have the chemical bonding between bands 1-5.