

GEOSEMINAR

Frictional and Dynamic Properties of a Soil Engineered with a Controlled Organic Phase

by

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Abstract

Organic coated clay minerals (organoclays) are promising materials in many geotechnical engineering applications, such as geosynthetic clay liners, drilling mud, pipe jacking, dewatering, etc. However many of the physical and chemical properties of organoclay are still not well known to date. Electrokinetic studies of clay minerals have gained increasing attention in recent decades. Electrophoretic potential, or zeta potential, is an important tool for the study of clay minerals, such as kaolinite and montmorillonite. This presentation will, on the basis of reviewing the published results of the interactions of surfactant on solid surfaces, cover the local potential distribution modeling, experimental methods of zeta potential measurement, and preliminary experimental results.

Biography

Ba-Te earned his B.S. from the Department of Hydraulic Engineering of Tsinghua University in 2002 and his M.Phil degree from the Department of Civil Engineering of Hong Kong University of Science and Technology in 2005. Currently he is pursuing his Ph.D. degree under the instruction of Dr. Susan E. Burns.