# Effects of Chemical Remediation on Surface Chemistry of Clay Minerals and Soils. (S09-han103858-Poster)

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## Abstract:

In situ chemical oxidation process has been used for soil organic pollutant remediation. However, the addition of chemical oxidizers can adversely impact the soil matrices and properties. The better understanding these processes can provide scientific information for refining the current technique protocol and improving remediation efficiency. This paper reported the effects of in situ chemical oxidation on surface charge, surface area, distribution of surface active elements (Ai, Al, O, OH and C), cation exchange capacity and surface acidity of several common minerals and soils. The XRD, XPS, IC, DSC, AAS, ICP, wet chemistry and surface chemistry tools were used for characterization of the physicochemical and surface chemical properties of treated minerals and soils. The geochemical stability of major solid-phase components, such as carbonate, Mn oxides, amorphous and crystalline Fe oxides, clay minerals and humic substance during these chemical oxidation processes will be examined by sequential selective dissolution techniques.

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