

Brewster's Angle as a Diagnostic Tool for Soil Reclamation

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Abstract: *This study investigates the variation in Brewster's angle of contaminated and reclaimed soil samples with varying moisture content using the waveguide cell method. Ten samples of each soil type were analysed over a moisture content range from 0% to 30%. Results consistently indicate a positive correlation between moisture content and Brewster's angle in both soil types. However, contaminated soils showed a steeper increase and higher maximum Brewster's angle values compared to reclaimed soils. The study provides insight into the dielectric behaviour of soils, aiding remote sensing, microwave soil characterization, and environmental monitoring.*

Keywords: Brewster's angle, contaminated soil, reclaimed soil, waveguide cell, microwave characterization, moisture content, dielectric properties

