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标题: Measurement of chloride ion concentration in concrete structures using terahertz time domain spectroscopy (THz-TDS)
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摘要: We have employed terahertz time domain spectroscopy (THz-TDS) to investigate the chloride ion (Cl) concentration in concrete structures. Cement paste and mortar samples with different Cl- concentrations were prepared and their absorption coefficients were measured in the sub-terahertz frequency range. In both cases, the absorption coefficient increases with the increase in Cl- concentration and a good linear relationship between them is observed. Our results demonstrate that the THz-TDS could be a valuable tool to monitor and inspect the Cl- concentration in concrete structures. 
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