ZTP Thermal & Power

Principle of Concrete Spectrometer

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The purpose of this research is to extract spectral reflectance characteristics of concretes through basic experiment on concrete specimens and site experiment on actual concrete structures using a field

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Laser-induced breakdown spectroscopy to investigate the chemical

In this work, an overview of LIBS investigations on concrete is given based on exemplary laboratory and on-site applications. Keywords: concrete, laser induced breakdown spectroscopy, damage

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General concretes show similar pattern with correlation more than 80%, while super high strength concrete shows very different aspect from general concretes. The GER-3700 spectrometer and the

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1. Introduction Laser-Induced Breakdown Spectroscopy (LIBS) is a powerful, yet still underutilized, analytical technique with growing relevance for the characterization of cementitious materials. In

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The purpose of this research is to extract spectral reflectance characteristics of concretes through basic experiment on concrete specimens using a field portable spectrometer and a VNIR hyper spectral

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Determination of Concrete Properties Using

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Carrying out Spectroscopy on Cement-Based Materials

One technique commonly used for this application is spectroscopy, which covers a broad church of methodologies. This article will provide an overview of

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FOREWORD

The GER-3700 spectrometer and the VNIR camera were applied to extracting spectral characteristics of the actual concrete structures such as a bridge slab and pier in road construction site.

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Reflectance spectroscopy as a tool to assess the strength of high

This pioneering study shows that reflectance spectroscopy can be used as a promising and powerful tool to assess the concrete's strength and strength in both point (spectral local inspection and point data

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Cement analysis by wavelength dispersive XRF spectrometry

1. Cement manufacturing process Cement is one of the most essential materials in modern construction. In this article, the term "cement" means Portland cement, which is typically a grayish powder to be

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Fourier-transform infrared (FTIR) spectroscopy is a fast and simple technique for functional group identification. This work provides a review and

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In the context of cement and concrete, these spectroscopic methods are used to analyze

thecompositionandhydrationprocessesofcementitiousmaterials,crucialforassessing their quality

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Equivalent circuit model for AC electrochemical impedance spectroscopy

An equivalent circuit model for AC electrochemical impedance spectroscopy (EIS) of concrete has been proposed, which contains parameters RCCP, the resistance of the continuously

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How Does a Spectrometer Work? Principles Explained

How Does a Spectrometer Work? Principles Explained An optical spectrometer, like the Ossila USB spectrometer, is the most common type. They take light, separate it by wavelength and create a

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Laser Induced Breakdown Spectroscopy

Laser-induced breakdown spectroscopy has been employed for the investigation of the sulfur content of concrete. Sulfur compounds are a natural but

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The use of reflectance spectroscopy across the visible near- and short-infrared spectral region (400 to 2500 nm) was suggested as a tool to assess the status of concrete in situ.

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