

Title:

Analysis of Cementitious Building Materials by Synchrotron X-ray Imaging

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Abstract:

Cement manufacturing especially Portland Cement, the main component for the fabrication of concretes, is the most used building and construction material which has complex hierarchical microstructures. Quantitative characterization of cementitious materials microstructures is of paramount importance for assessing the performance and durability of the final products. To gain a deeper insight into the microstructures of building materials, synchrotron X-ray nano- and micro-tomography with an appropriate spatial resolution would help. we will report the analysis of porosity and the different components and phases of different types of cement pastes, regarding their hydration ages.