

Using NORM containing construction materials as an immobilization matrix for waste

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Abstract

The current presentation deals with scenarios for the development of novel and more effective immobilisation matrices based on NORM (Naturally Occurring Radioactive Materials) containing construction materials for the safe encapsulation of various types of wastes. NORM containing by-products such as slags, fly-ashes from several industrial sectors and phosphogypsum form the basis of the newly constructed construction materials that are considered for encapsulation. In particular, results regarding the immobilization potential of construction materials, such as alkali activated materials, for naturally occurring and artificial radionuclides will be discussed. The immobilisation properties and the investigation of the leaching behaviour of radionuclides from the construction materials are discussed considering the Euratom water directive. The authors would like to acknowledge networking support by the COST Action TU1301 (www.norm4building.org).