



Heavy Metal Immobilization: Research into Alternative Low-Carbon Composites

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Message from the Guest Editor

Legislation to reduce landfill waste is leading to increased waste incineration. This, along with biomass incineration for energy, generates large amounts of various waste ashes. Due to toxic pollutants, especially heavy metals, landfilling ash is both temporary and hazardous. However, these ashes have properties suitable for use in construction composites, providing a safe, eco-friendly, and cost-effective treatment solution. They can be used to partially replace binders or fillers, or in forming geopolymers, with heavy metals being trapped within the composite structure. This Special Issue focuses on research into high-performance low-carbon composites utilizing ash from municipal solid waste, sewage sludge, and biomass incineration, while ensuring heavy metal sorption and immobilization. Such composites will include multiphase binder systems or geopolymer matrices, mineral admixtures, and nano-additives with high heavy metal sorption capacity. We welcome articles and reviews that advance techniques for immobilizing heavy metals in low-carbon composites for the construction industry.





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Message from the Editor-in-Chief

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