Baláž M.

Department of Mechanochemistry, Institute of Geotechnics Slovak Academy of Sciences, Košice, Slovakia; email: balazm@saske.sk

MECHANOCHEMISTRY: SUSTAINABLE TOOL FOR THE TREATMENT OF RAW MATERIALS AND WASTE

Mechanochemistry utilizing tools of ball milling can be efficiently used for the treatment of various raw materials in a sustainable manner. The sustainability of mechanochemistry comes from its solvent-free and waste-free character. During the presentation, the possibility to treat eggshell waste[1], tetrahedrite concentrate[2] and copper smelter slag[3] using mechanochemistry will be shown.

Mechanochemistry is also a great environmental tool for recycling waste into functional materials. The studies devoted to this topic have been recently summarized and are expected to be published in the form of book in near future[1]. Within the presentation, examples of mechanochemical treatment of various waste types (e.g. electronic waste, metallic waste, fly ash, polymer- and silicium-based waste, sludge, biomass, shells and fibrous waste) will be demonstrated.

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