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(71) Applicants: NATIONAL UNIVERSITY OF SINGAPORE [SG/SG]; 21 Lower Kent Ridge Road, Singapore 119077 (SG). SHANGHAI JIAO TONG UNIVERSITY [CN/CN]; 800 Dongchuan Road, Shanghai 200240 (CN).

(72) Inventors: WANG, Chi-Hwa; c/o National University of Singapore, Faculty of Engineering / Department of Chemical and Biomolecular, Engineering, 21 Lower Kent Ridge Road, Singapore 119077 (SG). PRABHAKAR, Arun Kumar; c/o National University of Singapore, NUS Environmental Research Institute, 21 Lower Kent Ridge Road, Singapore 119077 (SG). CADIAM MOHAN, Babu; c/o National University of Singapore, Faculty of Engineering / Department of Chemical and Biomolecular, Engineering, 21 Lower Kent Ridge Road, Singapore 119077 (SG). YAO, Zhiyi; c/o National University of Singapore, Faculty of Engineering / Department of Chemical and Biomolecular, Engineering, 21 Lower Kent Ridge Road, Singapore 119077 (SG).

(74) Agent: SPRUSON & FERGUSON (ASIA) PTE LTD; P.O. Box 1531, Robinson Road Post Office, Singapore 903031 (SG).

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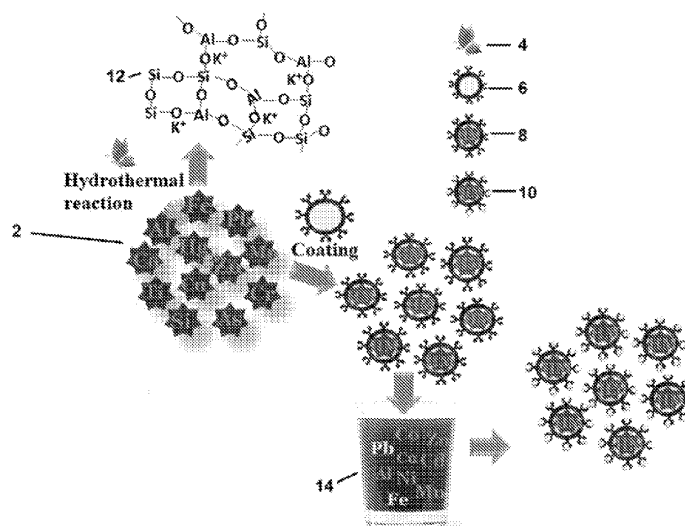


Fig. 1

(57) Abstract: Disclosed is a method of treating an ash composition comprising mixing said ash composition, an acid catalyst, a solvent and optionally an organosilane to form a mixture wherein the acid catalyst is an organic acid such as methanesulfonic acid or acetic acid. Disclosed are also a method of forming a treated ash composition comprising geopolymers, a method of forming a treated ash composition comprising a plurality of core-shell particles, a method of preparing geopolymers from an ash composition and a method of preparing core-shell particles from an ash composition.

[Continued on next page]

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