

Rare earth metal ion recovery from secondary waste via electrospun functionalized polysulfone nanofiber

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Rare earth element (REEs) yttrium Y(III) was selectively recovered from secondary waste using a developed polysulfone nanofiber immobilized with 3-hydrazinobenzoic acid. The prepared adsorbent was characterized and evaluated through adsorption experiments. Results show that the nanofiber is a feasible alternative for Y(III) ion recovery as it exhibits comparable performance with conventional liquid-liquid extraction. This study was supported by NRF funded by The Ministry of Science and ICT (2017R1A2B2002109 and 2020R1A2C1003560), Ministry of Education (2020R1A6A1A03038817), and by KETEP funded by the Ministry of Trade, Industry & Energy (MOTIE No. 20194010201750).