

Effective Recovery of Neodymium (III) from Phosphogypsum Waste Using Phosphorous-Doped Mesoporous Carbon

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Phosphorous-doped mesoporous carbon (P-MC) was prepared as an adsorbent for rare earth elements (REE). The adsorbent was characterized and evaluated for the recovery of Nd (III). Adsorption results fitted well with the Langmuir isotherm model and the pseudo-second-order kinetics model. The P-MC adsorbent was found selective to Nd (III), durable and recyclable. 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).

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