Abstract

A nitrogen rich, *p*-phenylenediamine based, porous aromatic framework (NPAF) with 1790 m^2 g^{-1} BET surface area has been synthesized by using a Yamamoto coupling technique. The NPAF has shown a hydrogen uptake of 1.87 and 0.33 wt% at 77 K per 1 atm and 298 K per 80 bar, respectively. The CO_2 uptake and selectivity of the NPAF at 273 K per 1 atm is 3.64 mmol g^{-1} and 48, respectively.

Citation

DE Demirocak, MK Ram, SS Srinivasan, DY Goswami & EK Stefanakos. A novel nitrogen rich porous aromatic framework for hydrogen and carbon dioxide storage. Journal of Materials Chemistry A, 2013, 1, 13800-6.