

# Carbon molecular sieves from PET for separations involving CH<sub>4</sub>, CO<sub>2</sub>, O<sub>2</sub> and N<sub>2</sub>

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Carbon molecular sieves (CMS) have been made for the first time from PET textile fibres by carbonisation and pore mouth narrowing using CVD of benzene. The diffusion of O<sub>2</sub>, N<sub>2</sub>, CO<sub>2</sub> and CH<sub>4</sub> in these materials, and also in the commercial CMS Takeda 3A, was studied. It was found that the best PET based CMS was obtained after 10 min CVD time and had adsorption capacities and rates of diffusion similar to those of the Takeda 3A..