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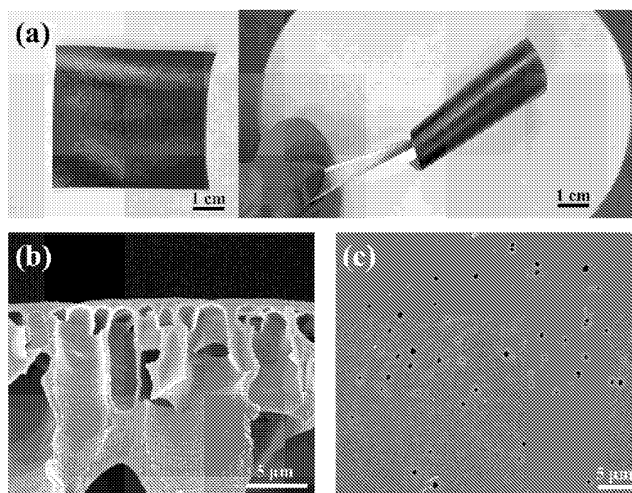


Figure 1

(57) Abstract: This disclosure concerns a method of forming a covalent organic framework (COF) membrane, comprising forming a membrane substrate by impregnating a porous polymer with a pore-forming agent in order to form an impregnated polymer, at least partially carbonising the impregnated polymer at a temperature of about 150 °C to about 500 °C in order to form the membrane substrate, and interfacially polymerising amino monomers and acyl monomers on a surface of the membrane substrate in order to form the COF membrane. The membrane substrate is characterised by a crystallinity of about 10% to about 70% relative to the porous polymer. The disclosure also concerns the COF membrane thereof, and the use of the COF membrane in catalyst recovery.

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