A’ is a covalent bond to A;

Z’ is a covalent bond to Z;

* is a covalent bond to ;

 is a point of attachment to the plurality of cyclodextrin carbon atoms;

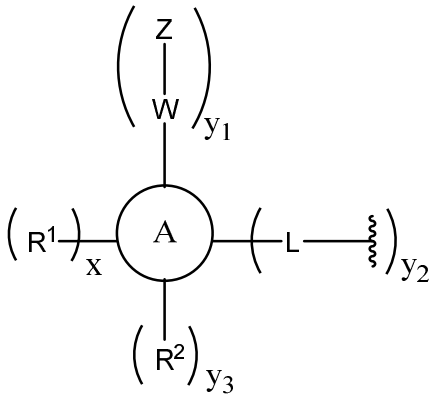
x is 0-8;

y_1 is 1-4;

y_2 is 1-4; and

y_3 is 0-4.

[0005b] In another aspect of the present disclosure, there is provided a porous polymeric material comprising a plurality of cyclodextrins crosslinked with a plurality of aryl diisocyanate crosslinkers, wherein one or more of the plurality of cyclodextrins are bound to a linker of formula (I):



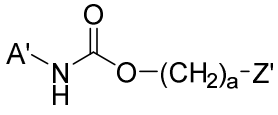
(I)

wherein

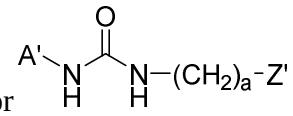
A is an aryl moiety;

each R^1 is independently H or C_1-C_6 alkyl;

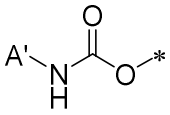
each R^2 is independently H or alkyl;

each W is independently a bond, an alkylene group, an arylene group, a heteroarylene group, -O-arylene-, -$(CH_2)_a$-arylene-, -SO_2-arylene-, -NH-arylene-, -S-arylene-, -O-heteroarylene-, -$(CH_2)_a$-heteroarylene-, -SO_2-heteroarylene-, -NH-heteroarylene-, -S-heteroarylene-, $–(–O–(CH_2)_a–)_x–$, $–(–NH–(CH_2)_a–)_x–$, $–(–S–(CH_2)_a–)_x–$, 

,

or , wherein a is 0-100 and x is 1-100, and each arylene or heteroarylene moiety can be substituted or unsubstituted;

each Z is a cationic moiety;

each L is ;

A’ is a covalent bond to A;

Z’ is a covalent bond to Z;

* is a covalent bond to ≀;

≀ is a point of attachment to the plurality of cyclodextrin carbon atoms;

x is 0-8;

y_1 is 1-4;

y_2 is 1-4; and

y_3 is 0-4.

[0005c] In a further aspect of the present disclosure, there is provided a method of purifying a fluid sample comprising one or more pollutants, the method comprising contacting the fluid sample with any of the porous polymeric materials disclosed herein, whereby at least 50 wt. % of the total amount of the one or more pollutants in the fluid sample is adsorbed by the porous polymeric material.

[0006] In some examples, the present disclosure provides a porous polymeric material comprising a plurality of cyclodextrins crosslinked with a plurality of crosslinks comprising formula (I):