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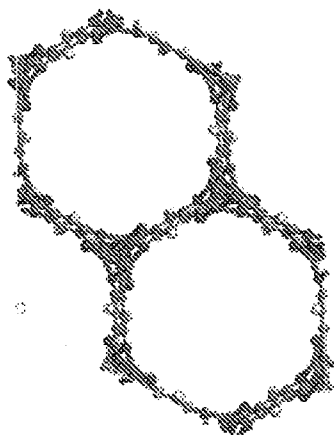


FIG. 1a

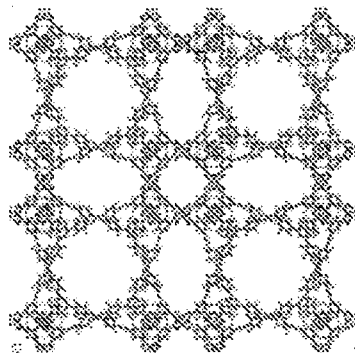


FIG. 1b

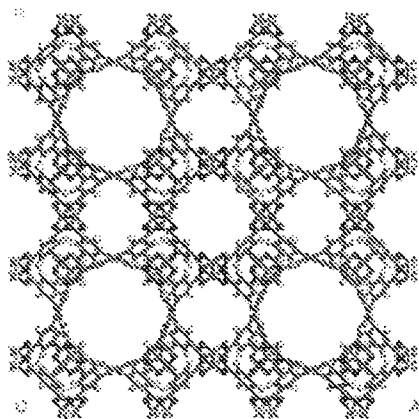


FIG. 1c

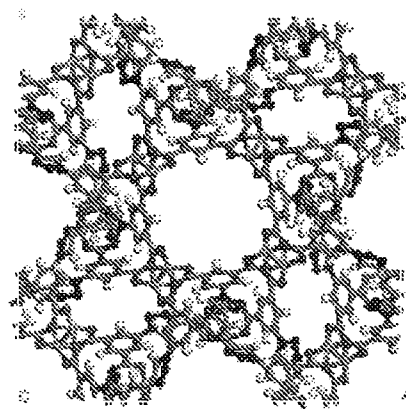
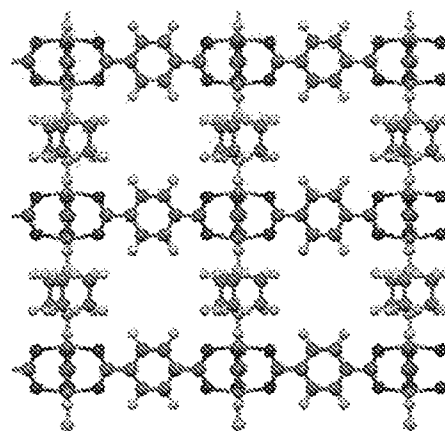
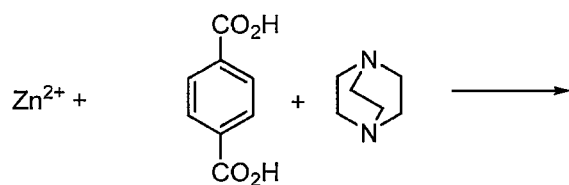


FIG. 1d

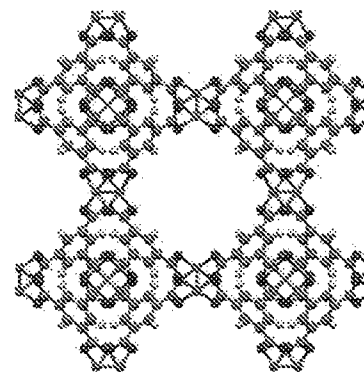
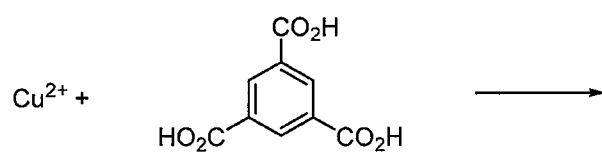
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FIG. 1e

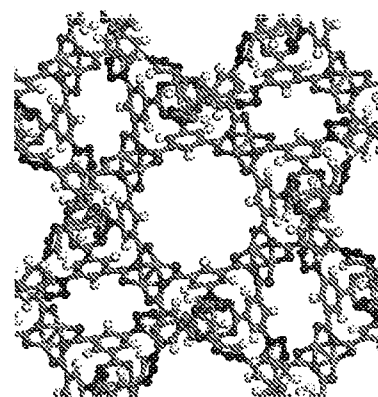
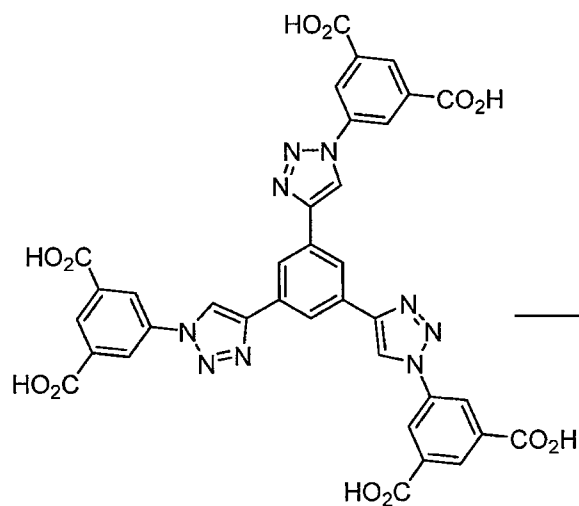


(pillared-paddlewheel framework; ZnBDCDABCO)
(BDC equals benzene dicarboxylate)
(DABCO equals 1,4-diazabicyclo[2.2.2]octane)

FIG. 1f



(paddlewheel framework; Cu-BTC)
(BTC equals benzene tricarboxylate)

FIG. 1g $\text{Cu}^{2+} +$ 

(rhf framework; NU-125)

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FIG. 1h

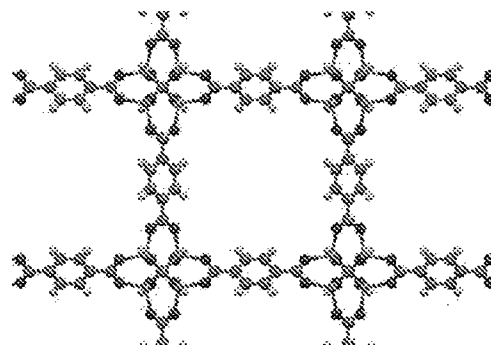
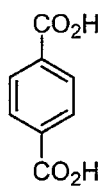
(Zn₄O framework; MOF-5)

FIG. 1i

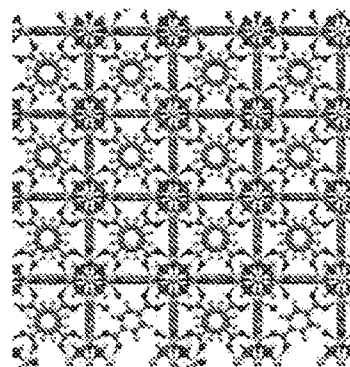
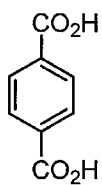
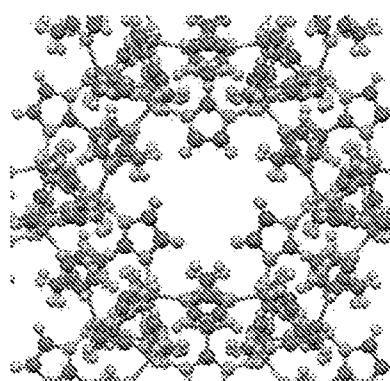
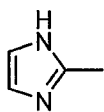
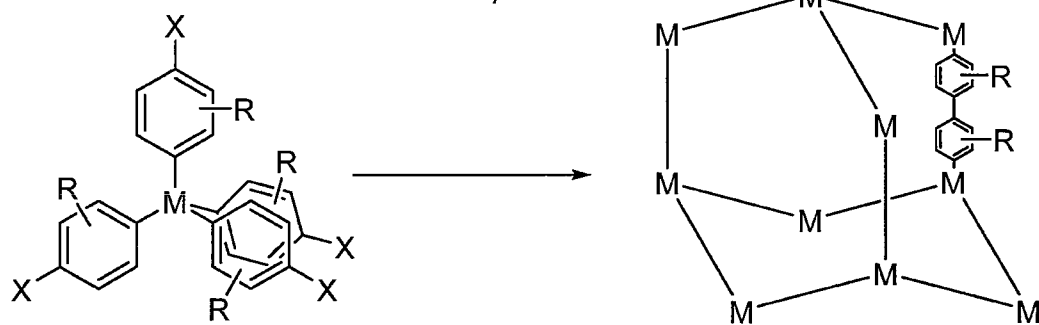
(Zr₆O₃₂ or Zr₆O₃₀ framework; UiO-66)

FIG. 1j



(heterocycle framework; ZIF-8)

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M = any tetrahedral atom including
B, N, Al, C, Si, Sn, Ge, etc
R = any generic group attached at any position

NuMatPOP1
Each M-M is attached by a biphenyl group,
as illustrated in the one example.
(tetrahedral POP framework)

FIG. 1k

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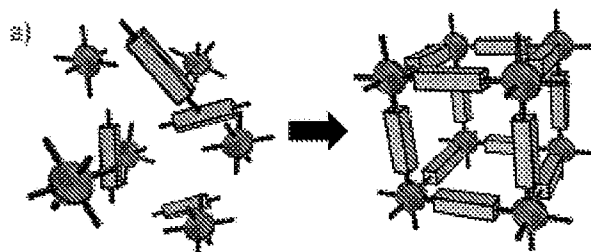


FIG. 2a

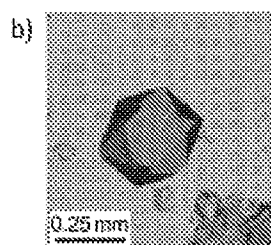


FIG. 2b

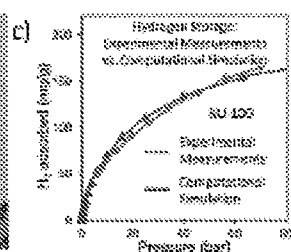


FIG. 2c

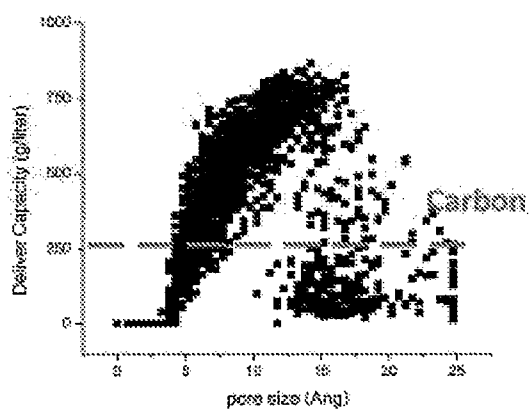


FIG. 3a

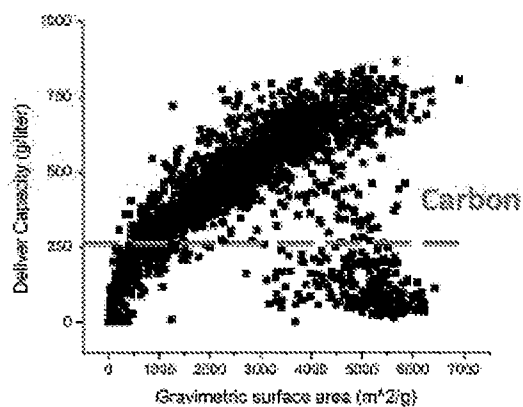


FIG. 3b

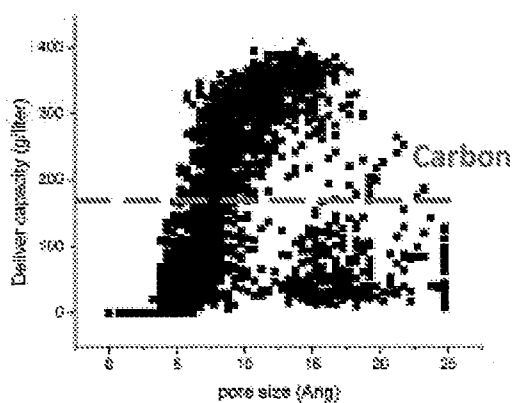


FIG. 3c

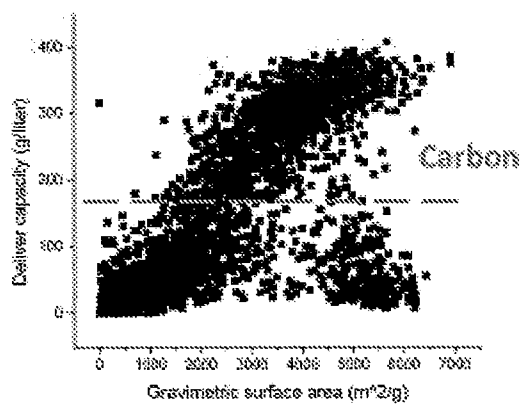


FIG. 3d

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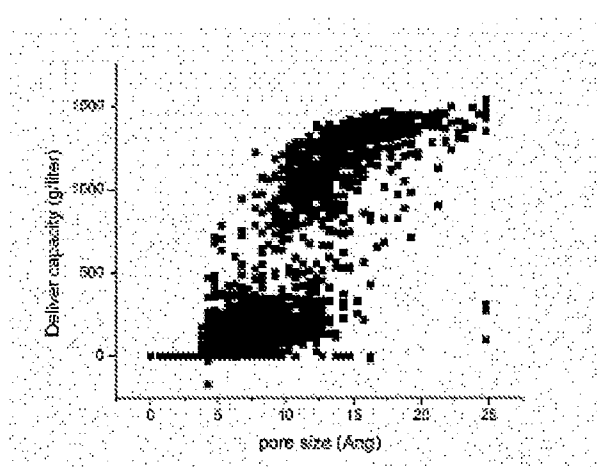


FIG. 3e

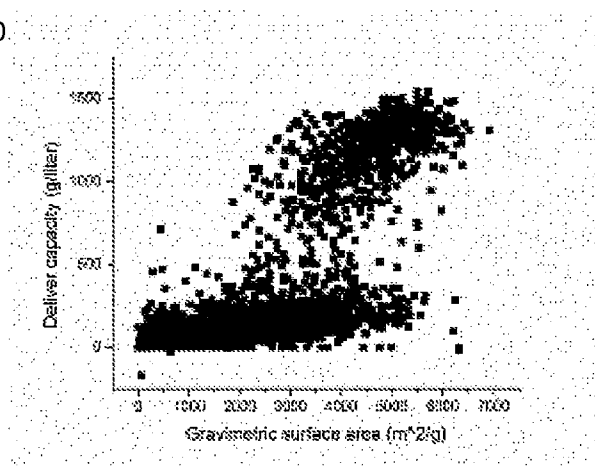


FIG. 3f

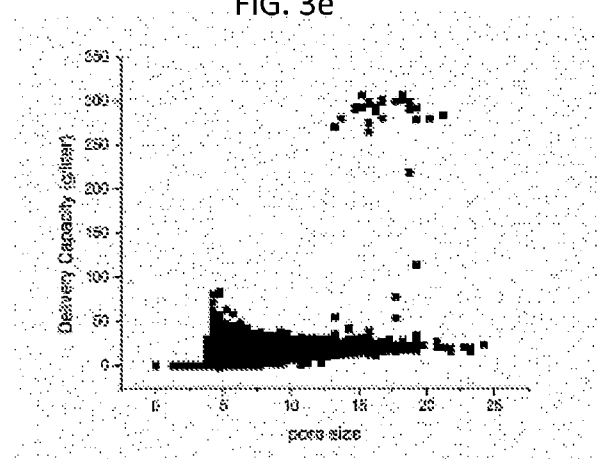


FIG. 3g

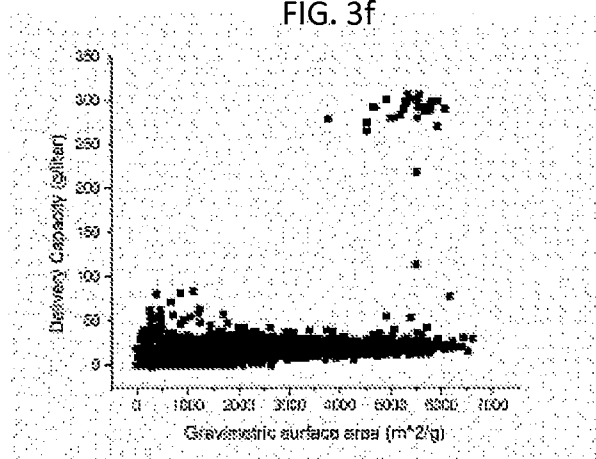


FIG. 3h

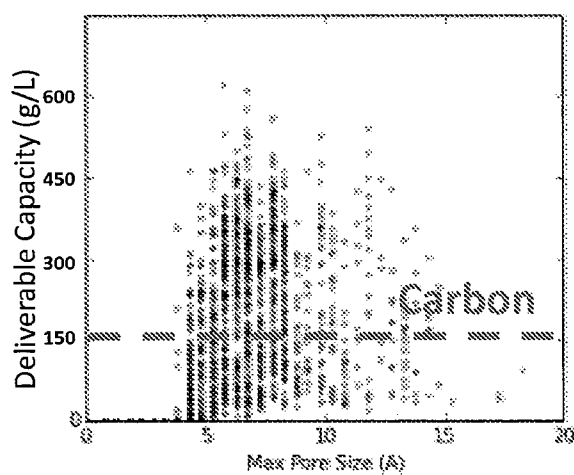


FIG. 3i

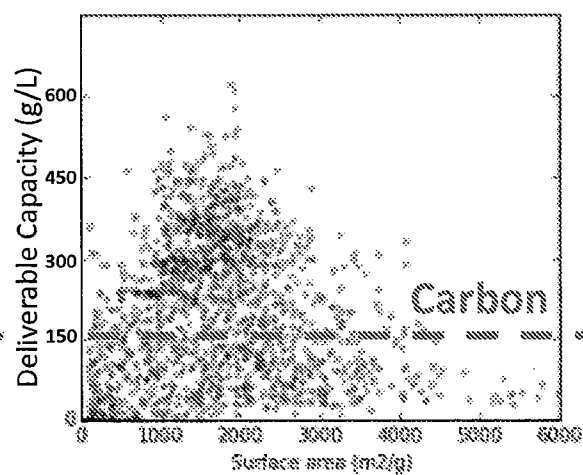


FIG. 3j

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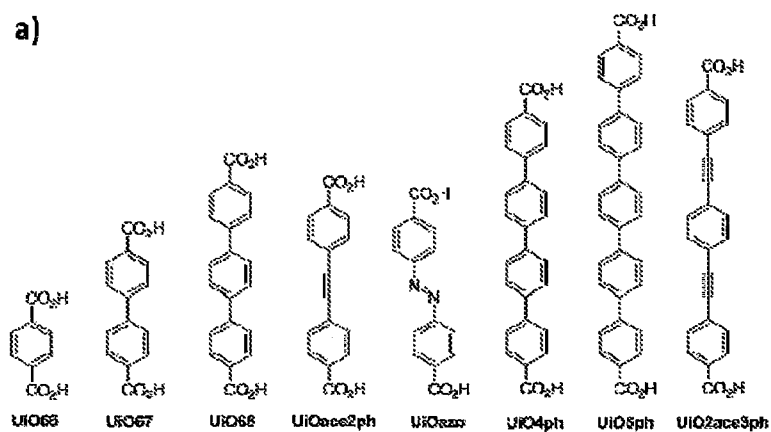


FIG. 4a

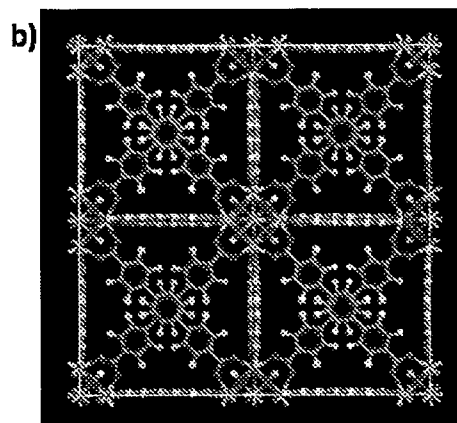


FIG. 4b

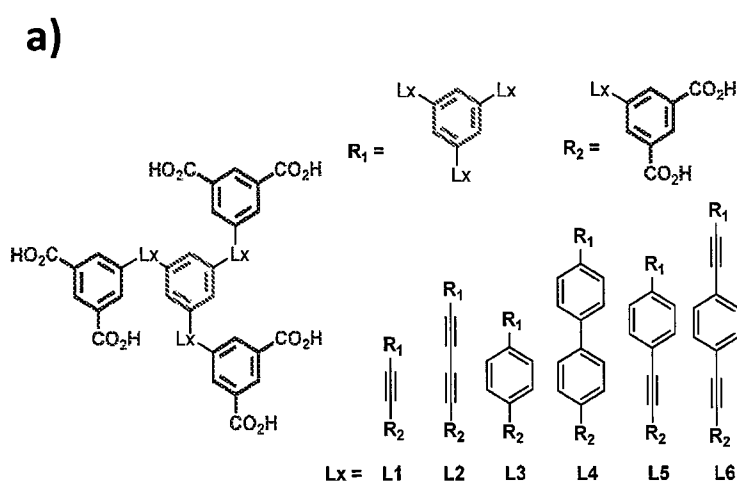


FIG. 5a

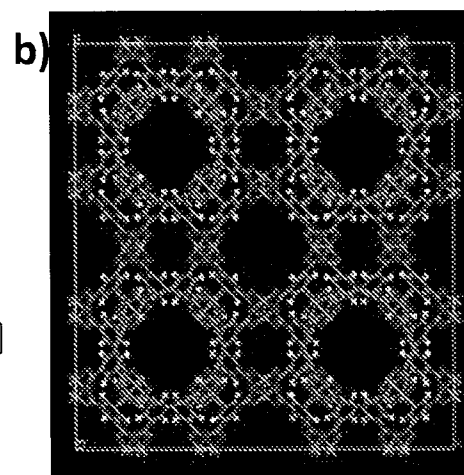


FIG. 5b

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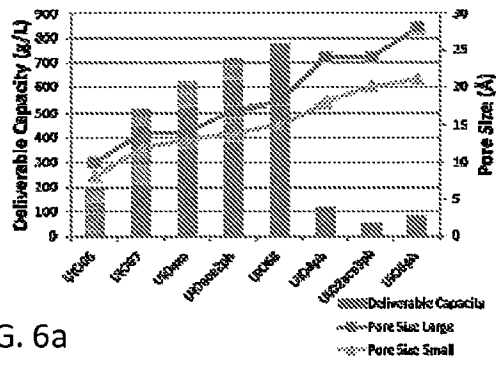


FIG. 6a

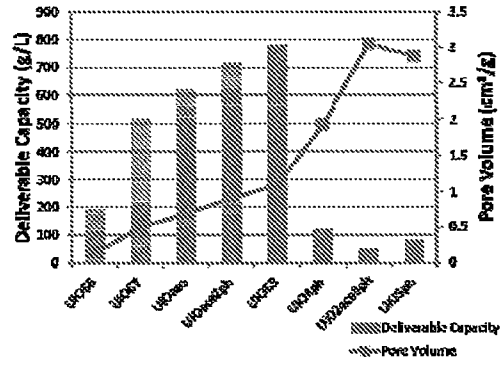


FIG. 6b

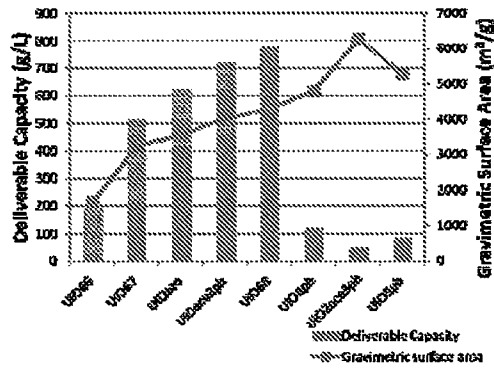


FIG. 6c

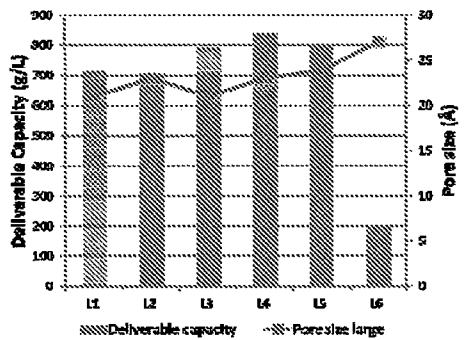


FIG. 7a

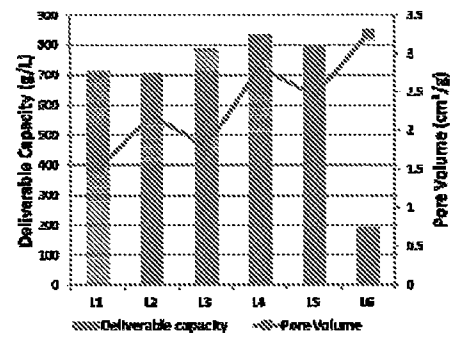


FIG. 7b

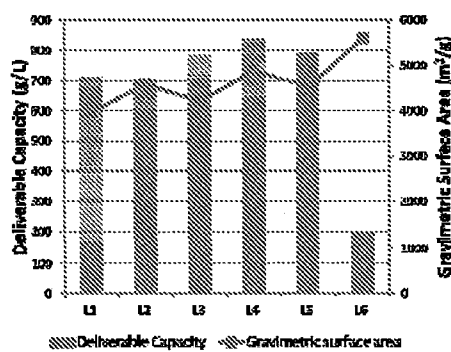


FIG. 7c

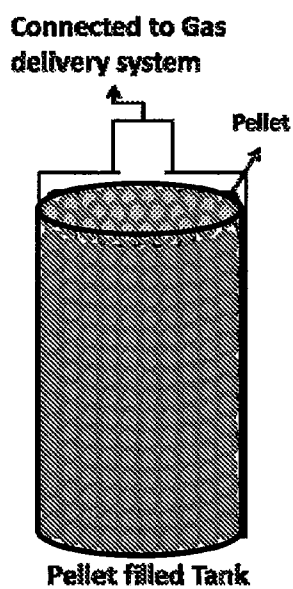


FIG. 8a

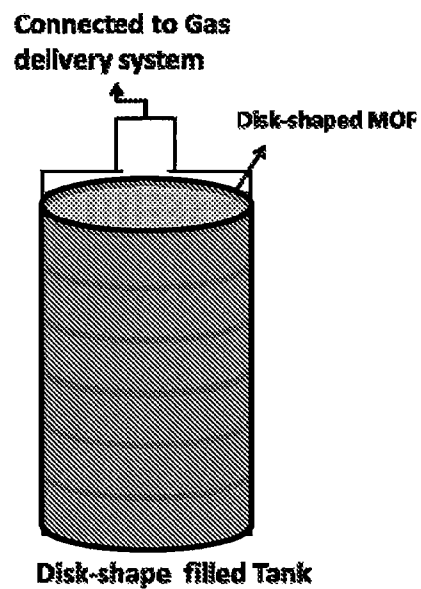


FIG. 8b

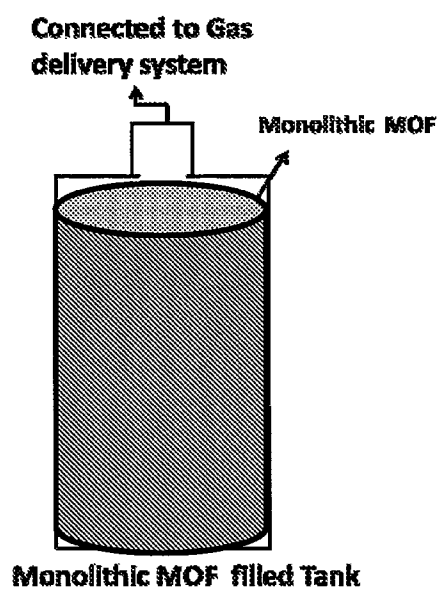


FIG. 8c

FIG. 9a

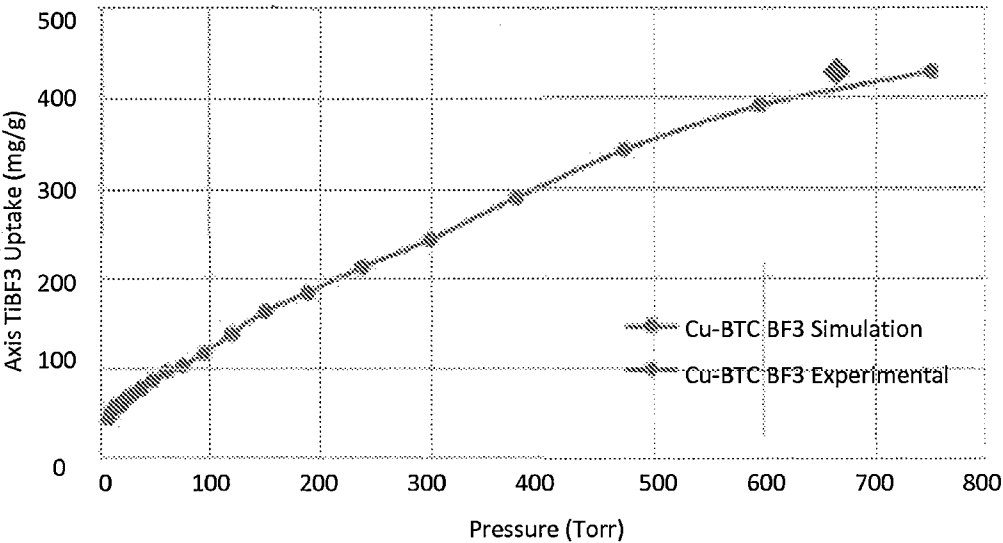


FIG. 9b

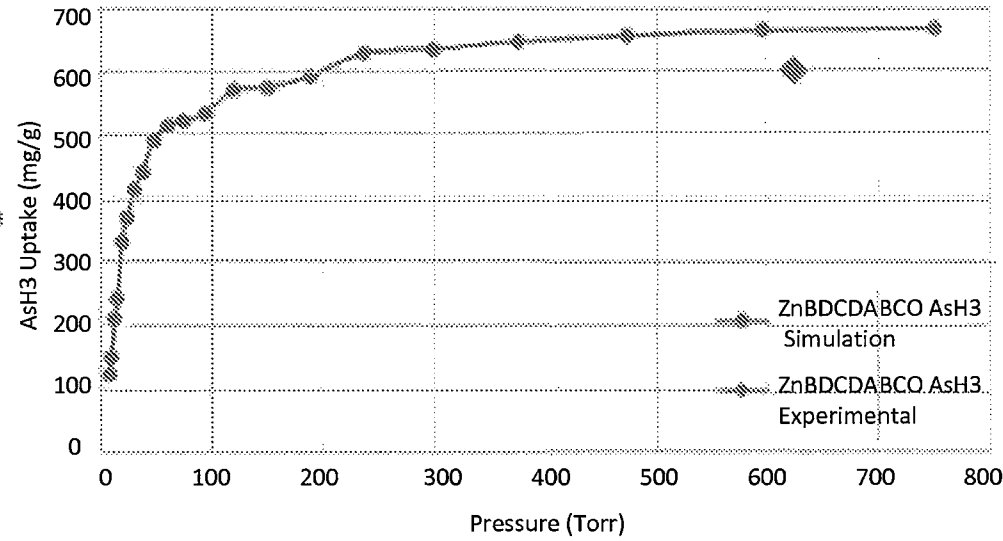


FIG. 9c

