Supplementary Material (ESI) for Journal of Materials Chemistry

Metal Organic Gels (MOGs): A New Class of Sorbents for CO_2 Separation Applications

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Materials and Methods

All Chemicals used in the synthesis of Metal Organic gels (MOG's) were obtained from commercial sources and are used without further purification.

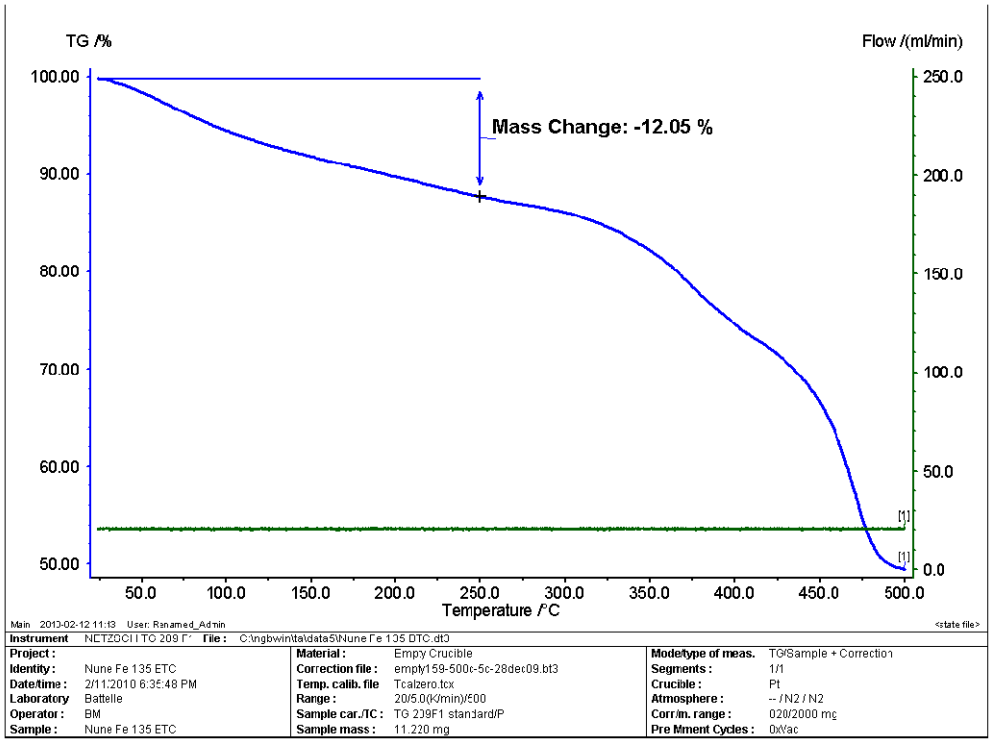
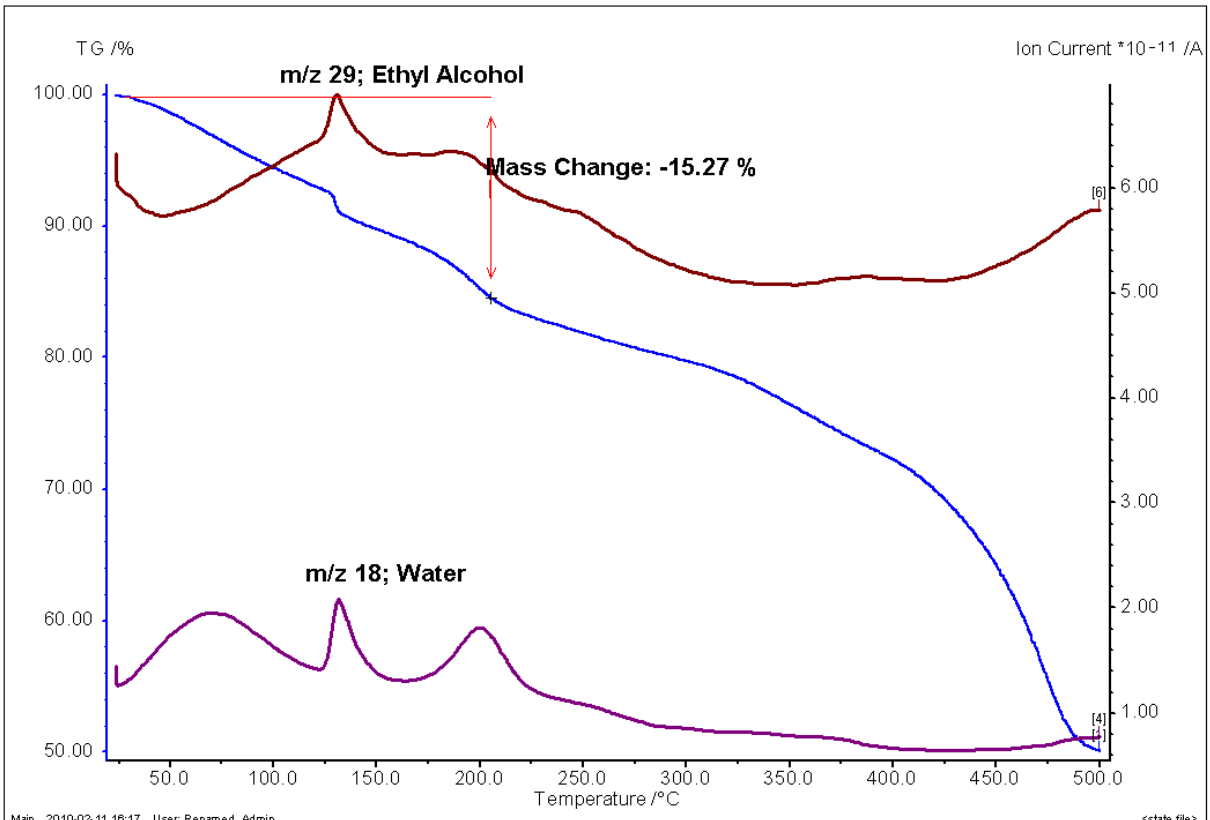
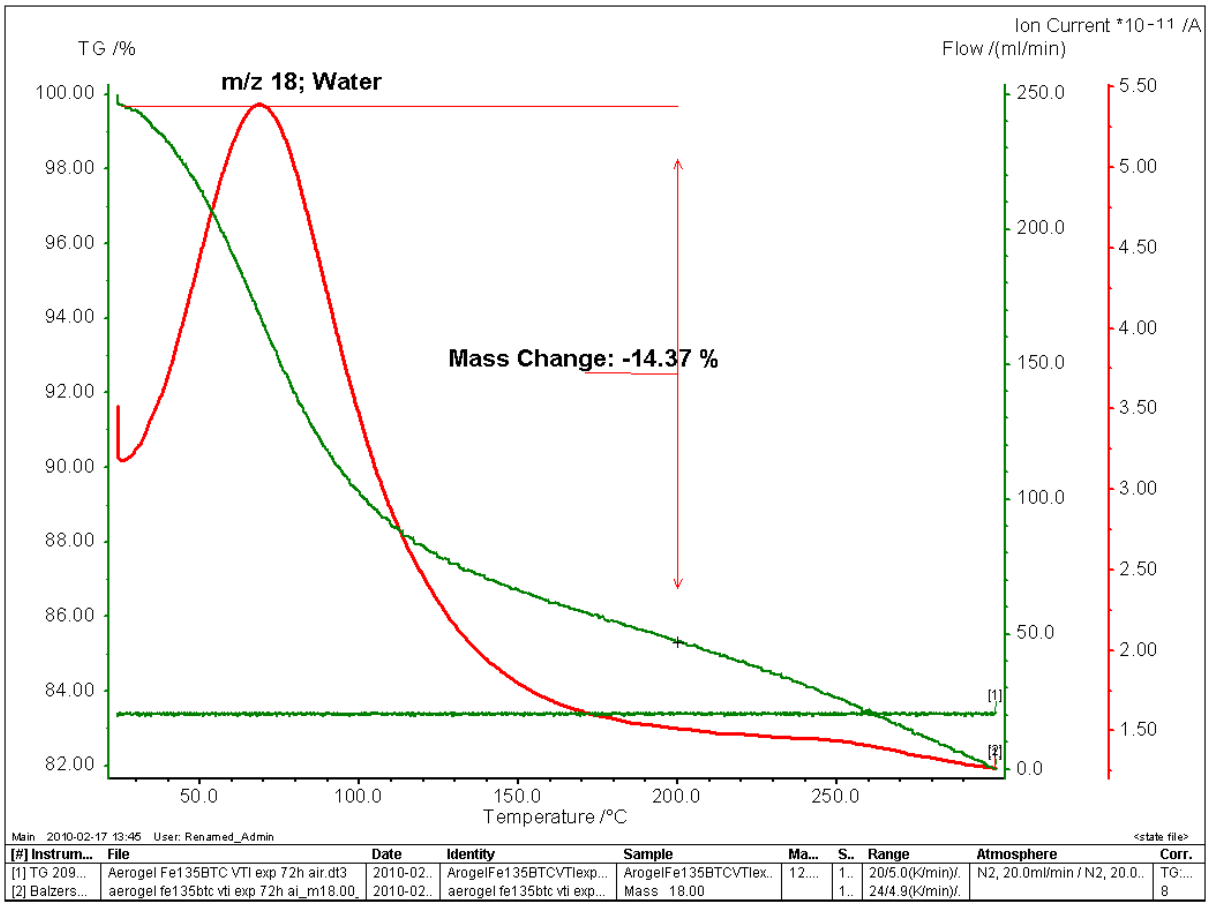


Figure S1. Thermo gravimetric analysis of as-synthesized Fe-1,3,5 BTC, MOF



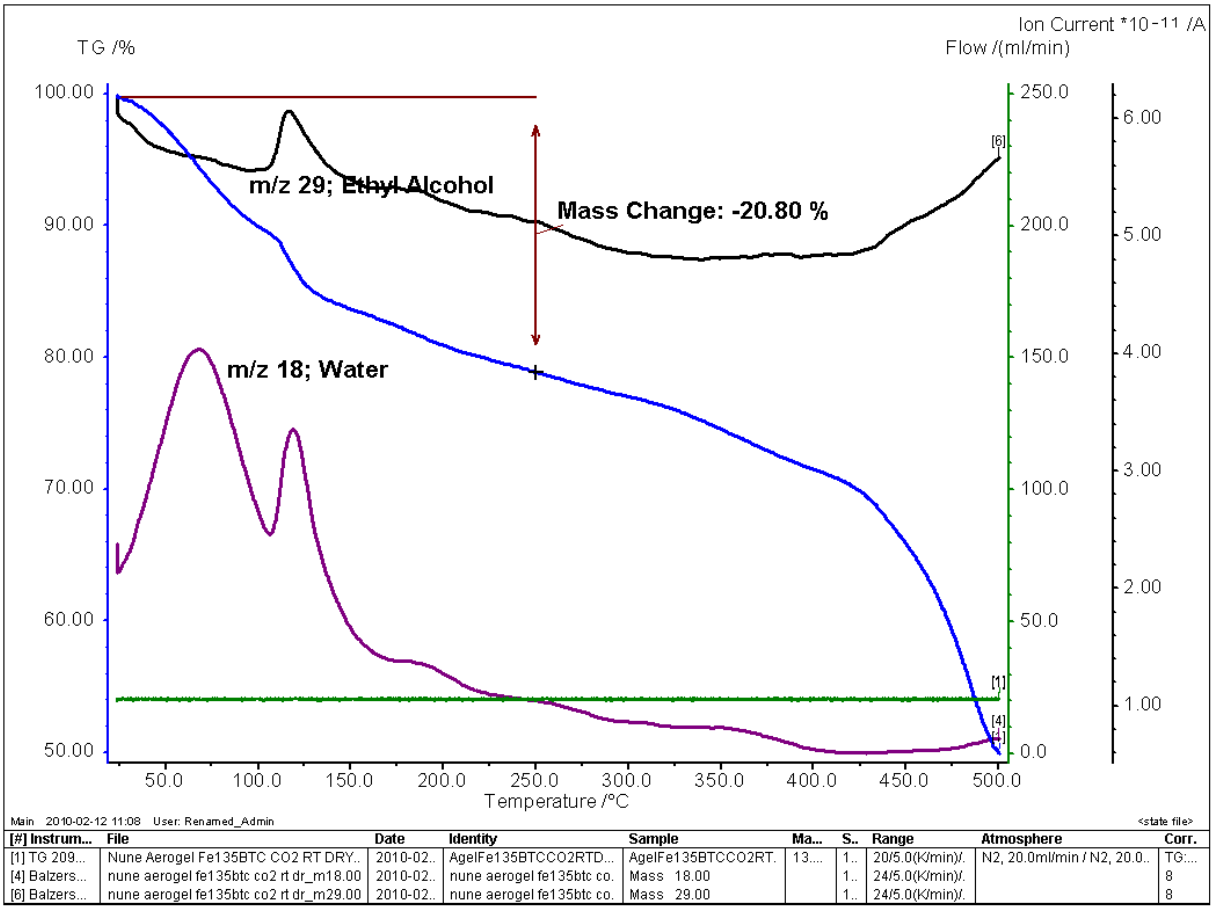
[#] Instrume...	File	Date	Identity	Sample	Mas...	S...	Range	Atmosphere	C...
[1] TG 209 F1	Nune Aerogel Fe 135 BTC.dt3	2010-02-..	Nune Aerogel Fe 135 B..	Nune Aerogel Fe 135 B..	10.9...	1...	20/5.0(K/min)/5..	N2, 20.0ml/min / N2, 20.0ml/.	0...
[4] Balzers M...	nune aerogel fe 135 btc_m18.00_s1	2010-02-..	nune aerogel fe 135 btc	Mass 18.00		1...	24/5.0(K/min)/5..		8
[6] Balzers M...	nune aerogel fe 135 btc_m29.00_s1	2010-02-..	nune aerogel fe 135 btc	Mass 29.00		1...	24/5.0(K/min)/5..		8

Figure S2. Thermo gravimetric analysis of **MOG-1a**



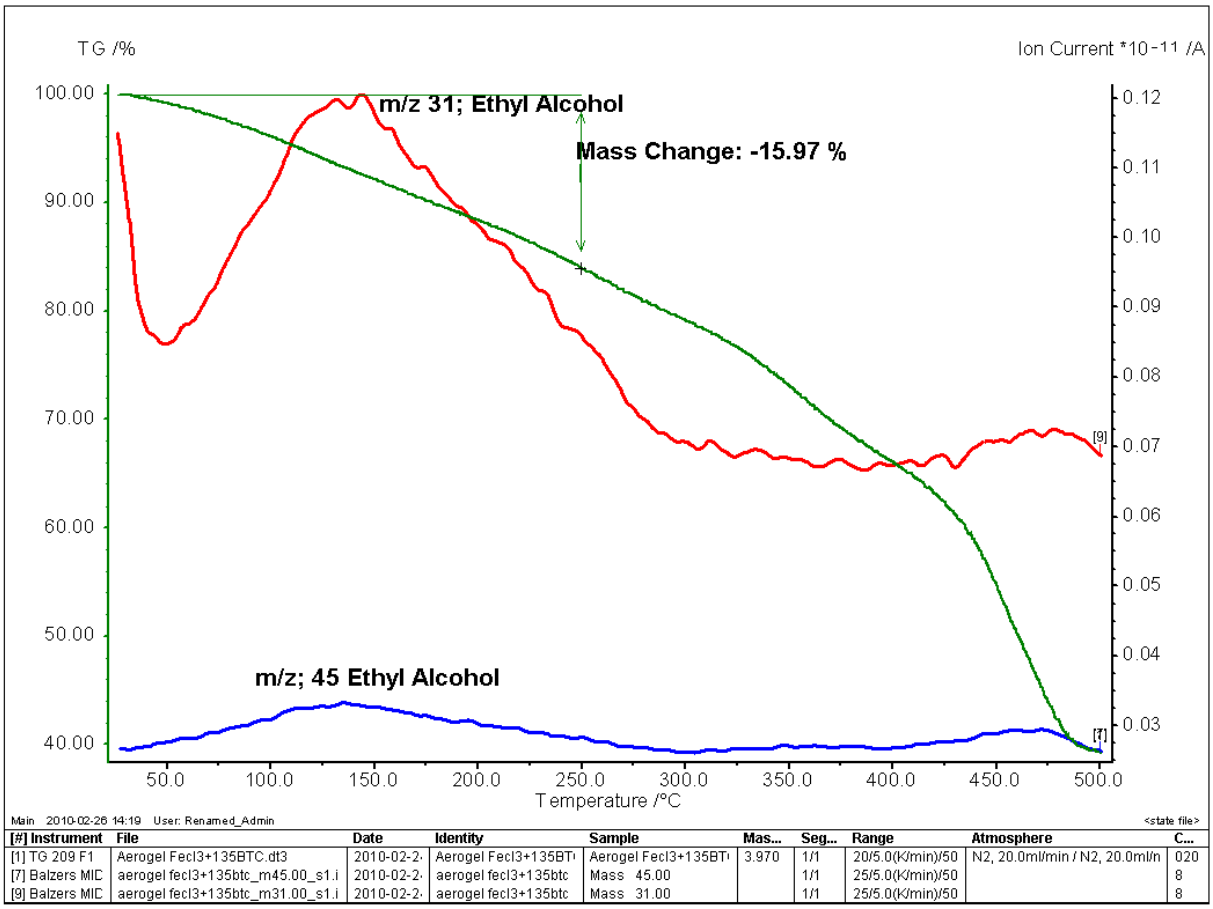
[#] Instrum...	File	Date	Identity	Sample	Ma...	S..	Range	Atmosphere	Corr.
[1] TG 209...	Aerogel Fe135BTC VTI exp 72h air.dt3	2010-02..	ArogelFe135BTCVTlexp...	ArogelFe135BTCVTlex..	12....	1..	20/5.0(K/min)/.	N2, 20.0ml/min / N2, 20.0..	TG:...
[2] Balzers...	aerogel fe135btc vti exp 72h ai_m18.00_	2010-02..	aerogel fe135btc vti exp...	Mass 18.00		1..	24/4.9(K/min)/.		8

Figure S3. Thermo gravimetric analysis of **MOG-1a** after VTI 72 h exposing to air



[#] Instrum...	File	Date	Identity	Sample	Ma...	S..	Range	Atmosphere	Corr.
[1] TG 209...	Nune Aerogel Fe135BTC CO2 RT DRY..	2010-02..	AgelFe135BTCCO2RTD...	AgelFe135BTCCO2RT.	13....	1..	20/5.0(K/min)/.	N2, 20.0ml/min / N2, 20.0..	TG:...
[4] Balzers...	nune aerogel fe135btc co2 rt dr_m18.00	2010-02..	nune aerogel fe135btc co.	Mass 18.00		1..	24/5.0(K/min)/.		8
[6] Balzers...	nune aerogel fe135btc co2 rt dr_m29.00	2010-02..	nune aerogel fe135btc co.	Mass 29.00		1..	24/5.0(K/min)/.		8

Figure S3. Thermo gravimetric analysis of **MOG-1b**



[#] Instrument	File	Date	Identity	Sample	Mas...	Seg...	Range	Atmosphere	C...
[1] TG 209 F1	Aerogel FeCl3+135BTC.dt3	2010-02-2·	Aerogel FeCl3+135BT·	Aerogel FeCl3+135BT·	3.970	1/1	20/5.0(K/min)/50	N2, 20.0ml/min / N2, 20.0ml/n	020
[7] Balzers MIC	aerogel fecl3+135btc_m45.00_s1.i	2010-02-2·	aerogel fecl3+135btc	Mass 45.00		1/1	25/5.0(K/min)/50		8
[9] Balzers MIC	aerogel fecl3+135btc_m31.00_s1.i	2010-02-2·	aerogel fecl3+135btc	Mass 31.00		1/1	25/5.0(K/min)/50		8

Figure S3. Thermo gravimetric analysis of **MOG-2a**

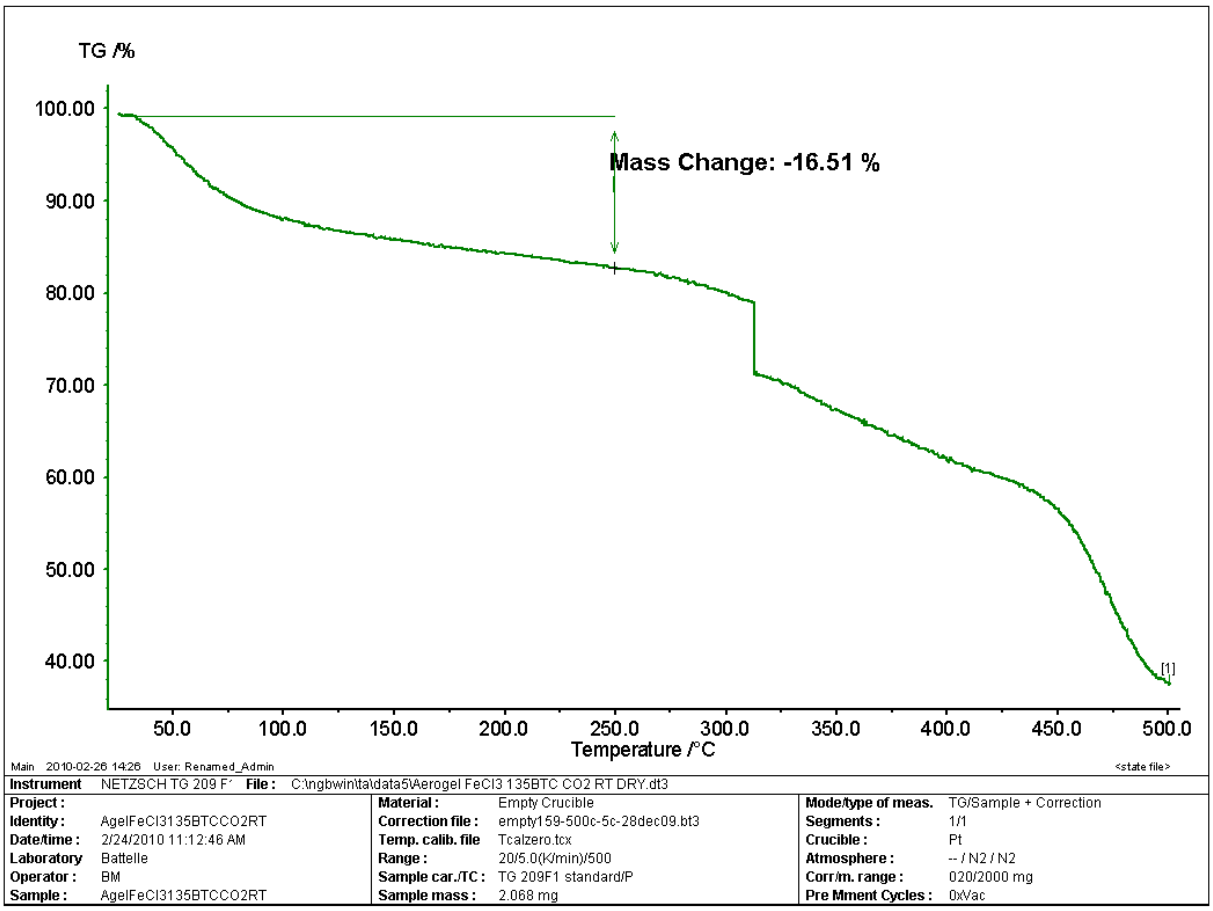


Figure S3. Thermo gravimetric analysis of **MOG-2b**

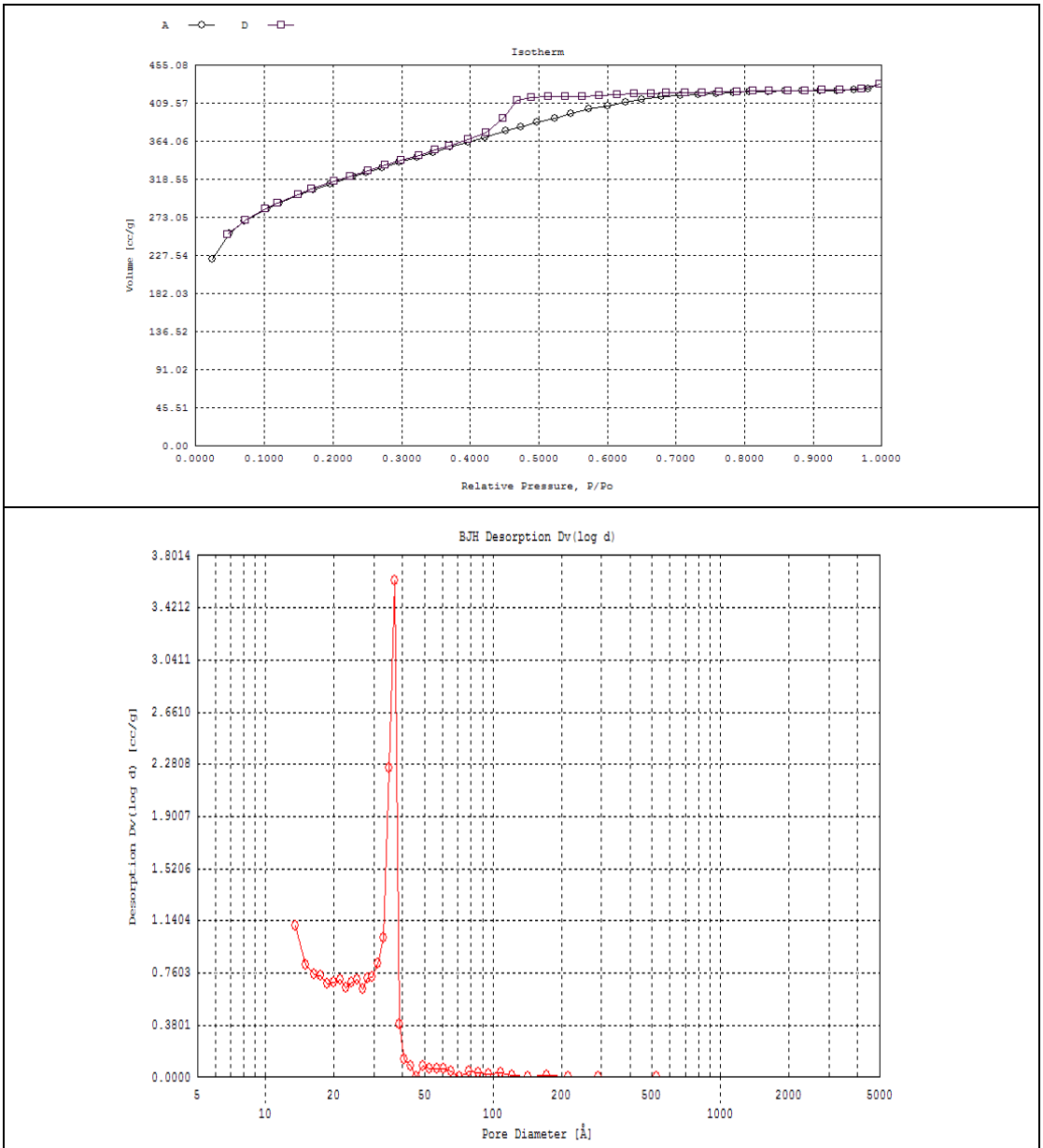
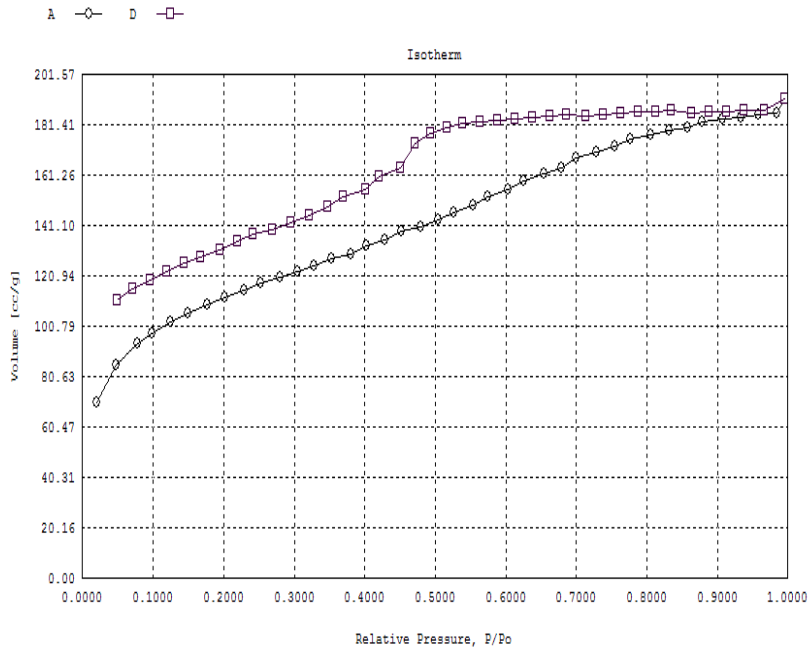


Figure S4. BET surface are measurements on MOG-1a at 77K using liquid nitrogen.



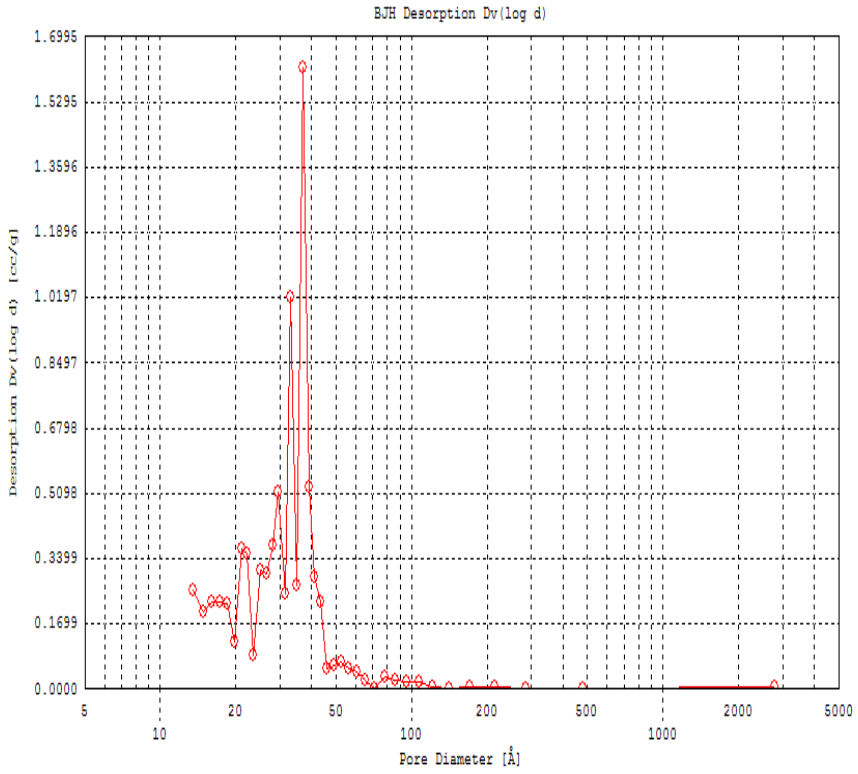


Figure S4. BET surface area measurements on **MOG-1b** at 77K. The calculated BET surface area found to be 368 m^2/g.

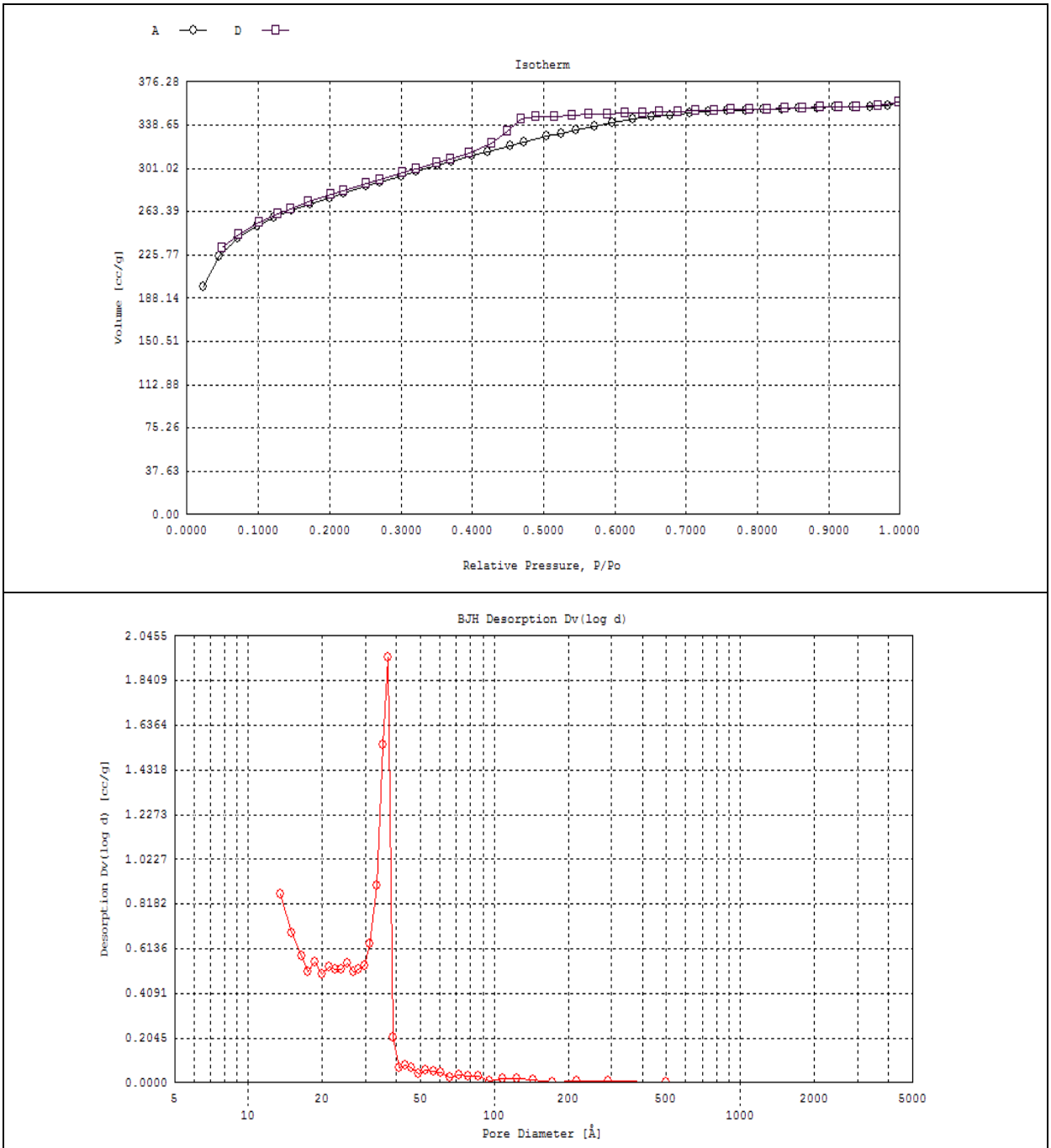
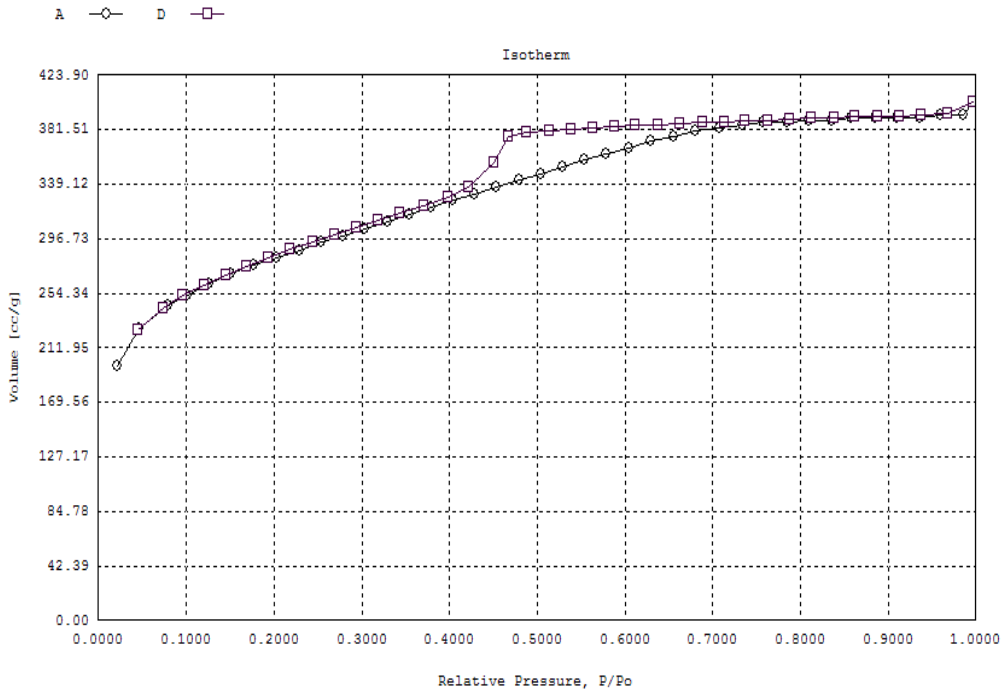


Figure S5. The BET surface area measurements on MOG-1c. The surface are of MOG-1c is 873 m^2/g



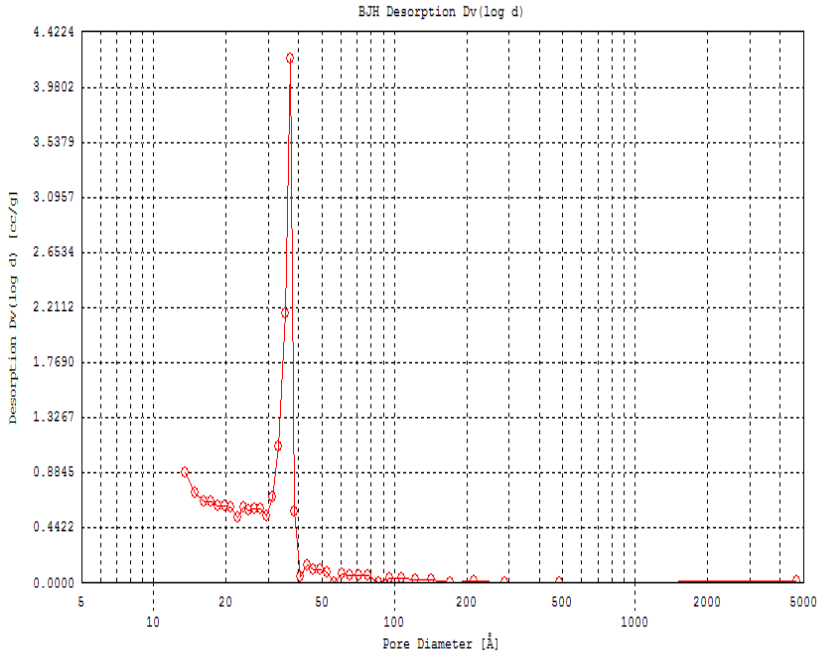


Figure S6. The BET surface area measurements on **MOG-2a**. The surface are of MOG-2a is 906 m^2/g.

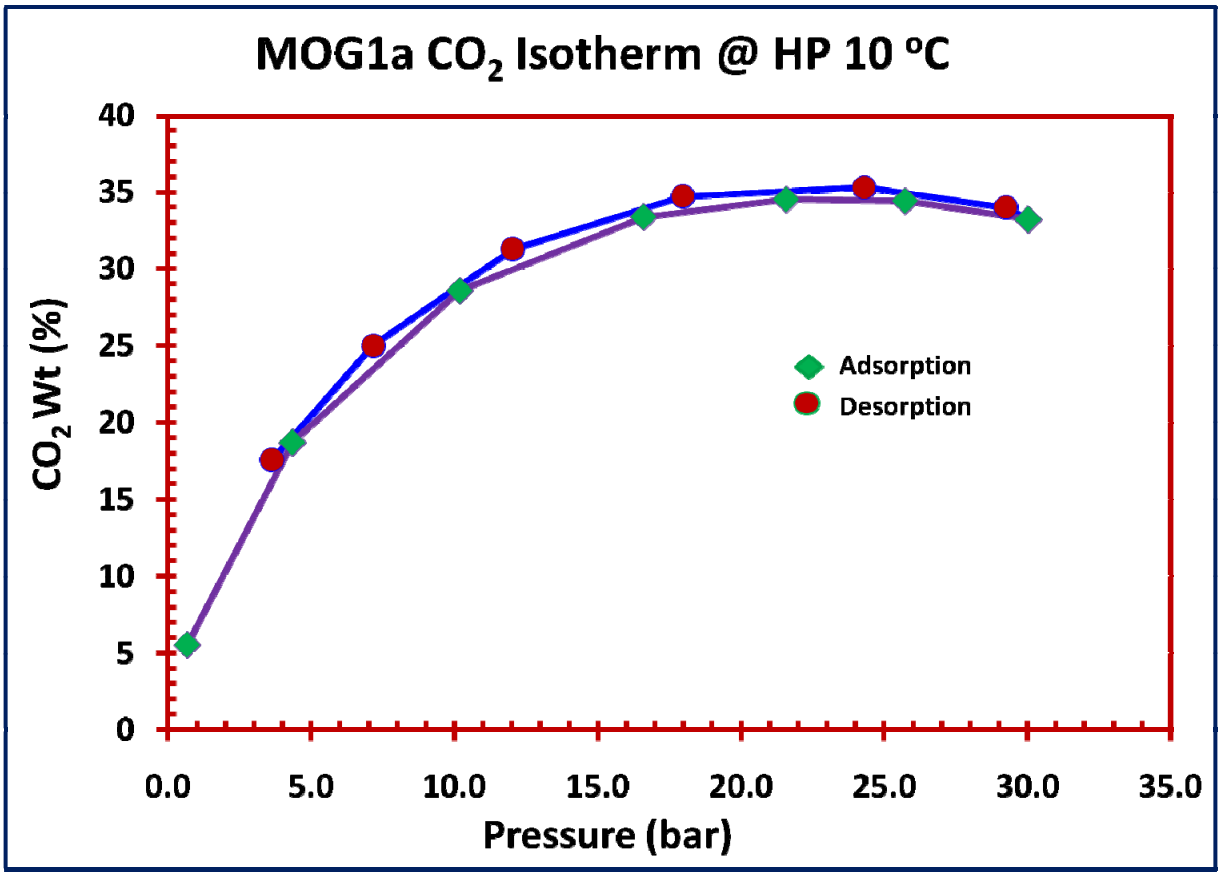


Figure S7: Carbon dioxide adsorption and desorption in MOG-**1a** at high pressure at 10 °C.

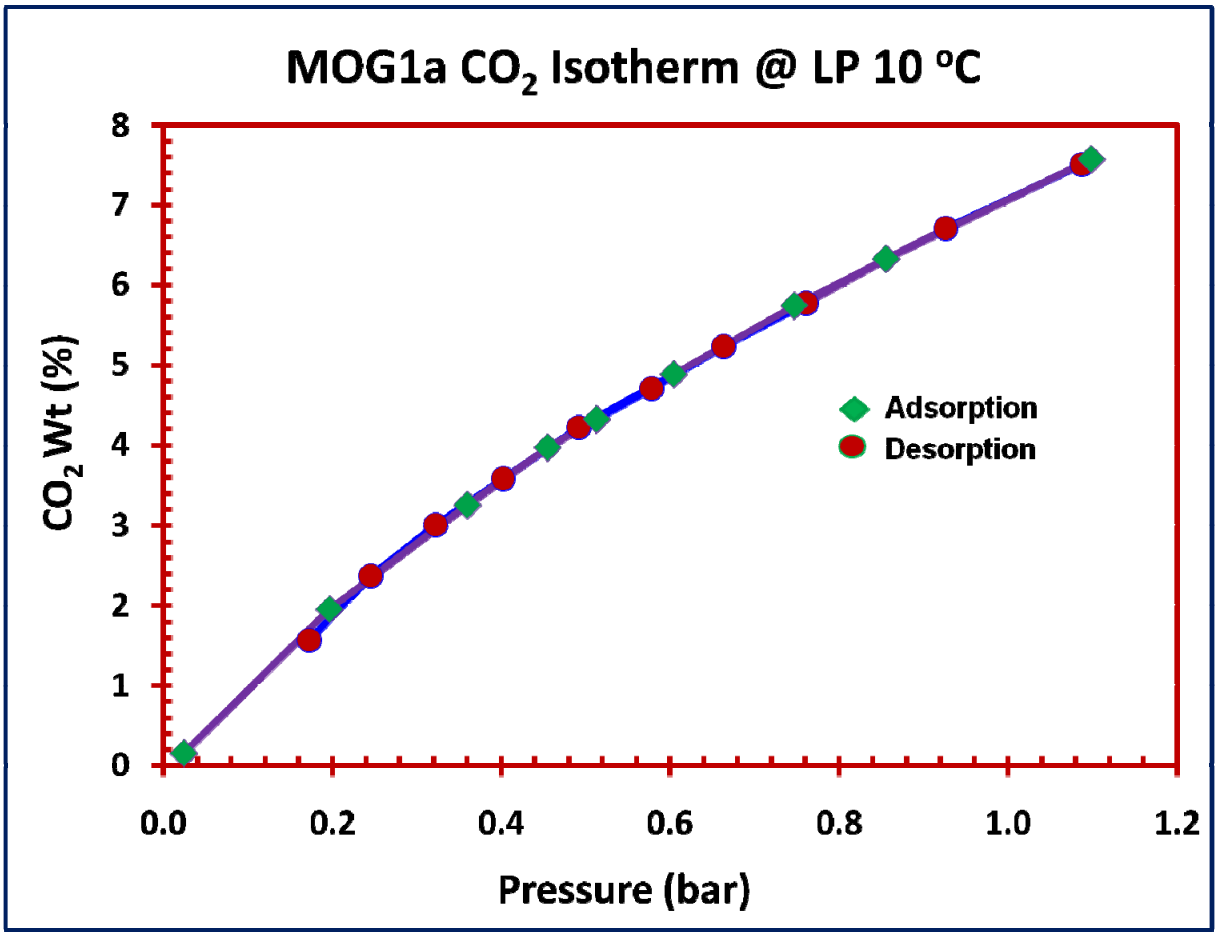


Figure S8: Carbon dioxide adsorption and desorption in MOG-**1a** at low pressure at 10 °C.

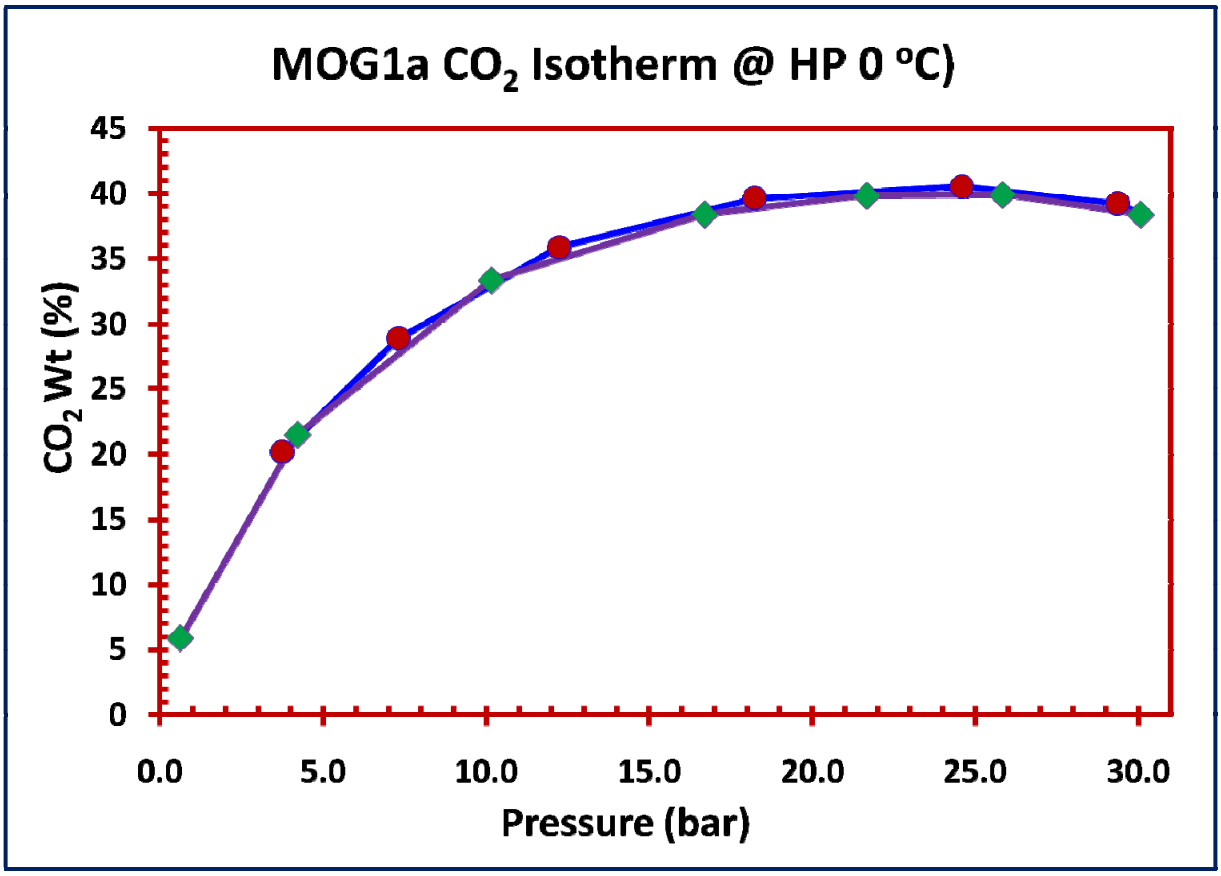


Figure S9: Carbon dioxide adsorption and desorption in MOG-**1a** at high pressure at 0 ^{o}C.

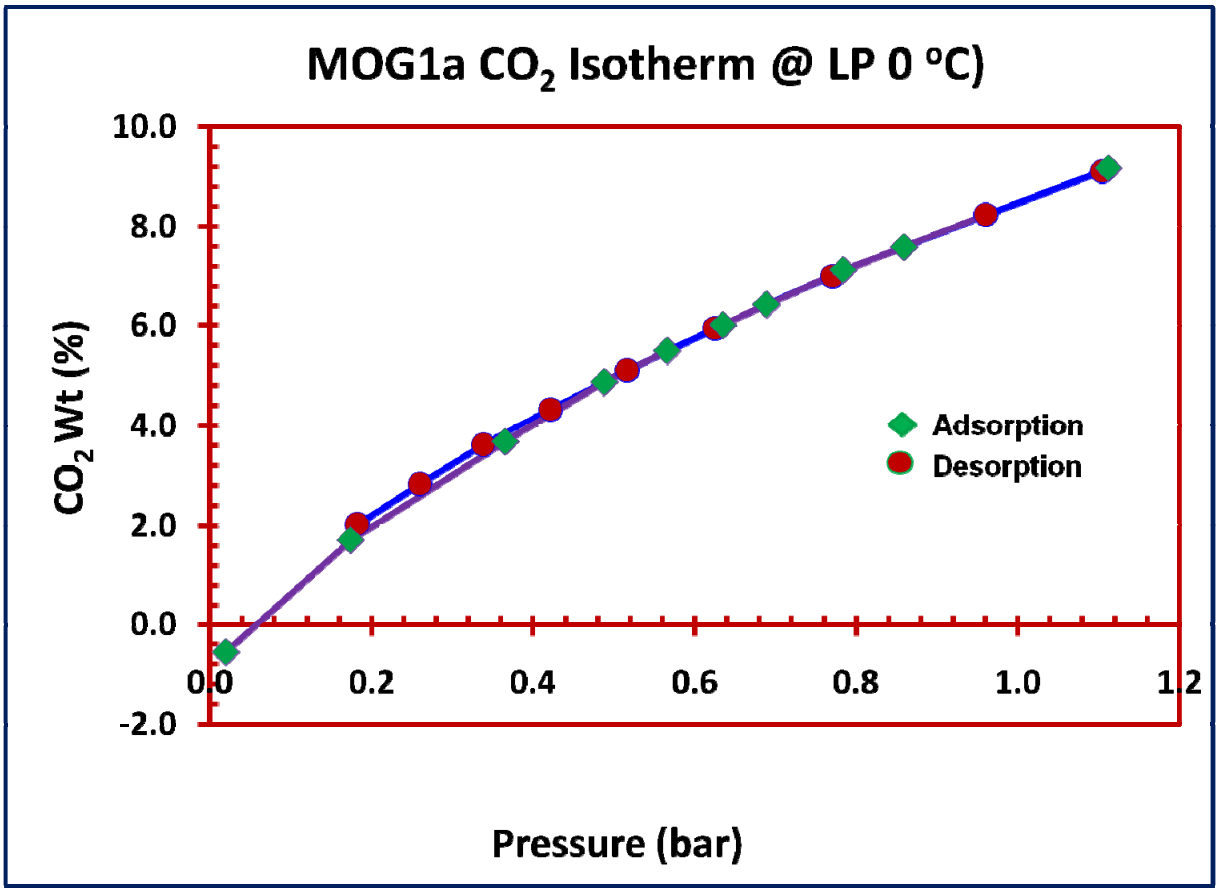


Figure S10: Carbon dioxide adsorption and desorption in MOG-**1a** at low pressure at 0 °C.