

Supporting information for

**Organo-clay hybrid hydrophobic spherical styrene divinyl benzene crosslink
beads for high performance carbon dioxide capture**

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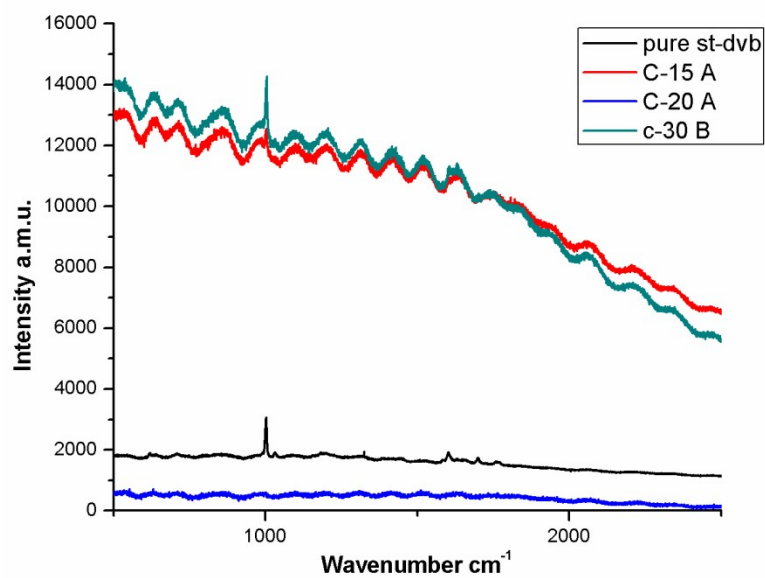


Figure S1. Raman spectra of styrene-divinyl benzene copolymers and various incorporated cloisites-SDBC.

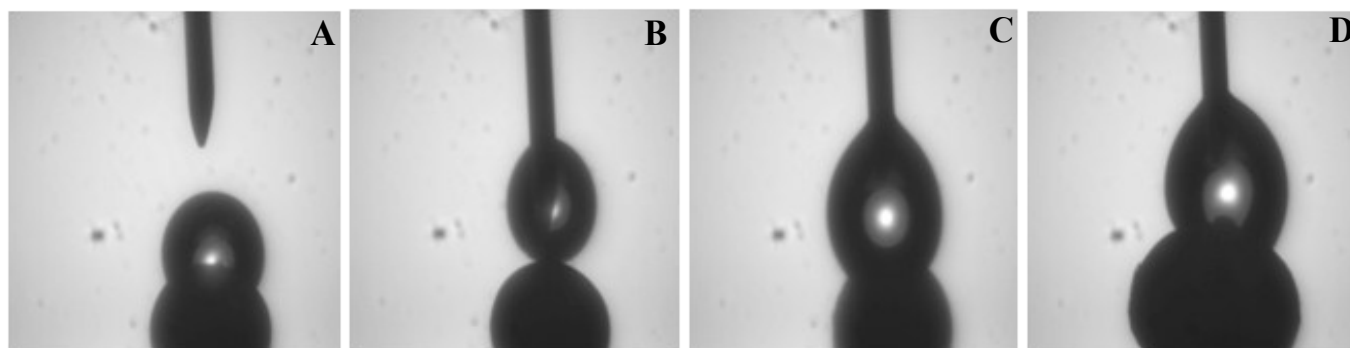


Figure S2. Contact angle measurement of (A) Pure SDBC, (B) Cloisite 15A-SDBC, (C) Cloisite 20A-SDBC, (D) Cloisite 30 B-SDBC.

Table S1. E-dax analysis data for Cloisite 15 A- SDBC, Cloisite 20B- SDBC and Cloisite 30B-SDBC showing Nitrogen, Carbon, Oxygen (At. Wt %) for each sample.

Sample Name	Carbon At. Wt%	Nitrogen At. Wt %	Oxygen At. Wt %
Cloisite 15 A-SDBC-a	82.50	10.91	6.59
Cloisite 15 A-SDBC-b	77.89	17.74	3.63
Cloisite 15 A-SDBC-c	59.50	33.19	7.32
Cloisite 15 A-SDBC-d	55.84	39.11	5.05
Cloisite 20A-SDBC-a	47.85	36.74	5.38
Cloisite 20A-SDBC-b	47.54	38.10	10.86
Cloisite 20A-SDBC-c	50.50	36.22	3.26
Cloisite 20A-SDBC-d	49.99	39.20	10.81
Cloisite 30B-SDBC-a	90.49	5.00	4.51
Cloisite 30B-SDBC-b	83.40	5.82	7.68
Cloisite 30B-SDBC-c	73.30	6.78	19.92
Cloisite 30B-SDBC-d	58.84	25.40	14.41

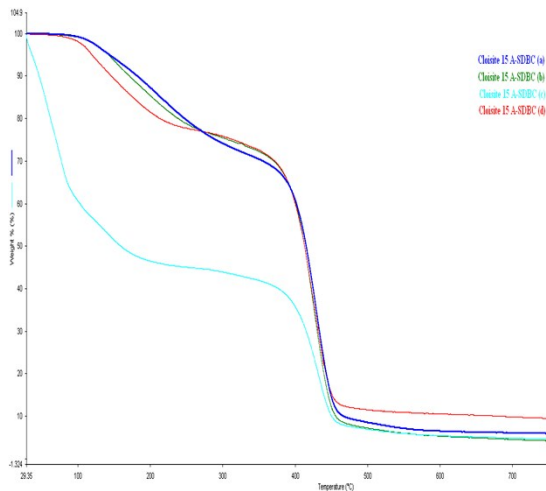


Fig S3(A)

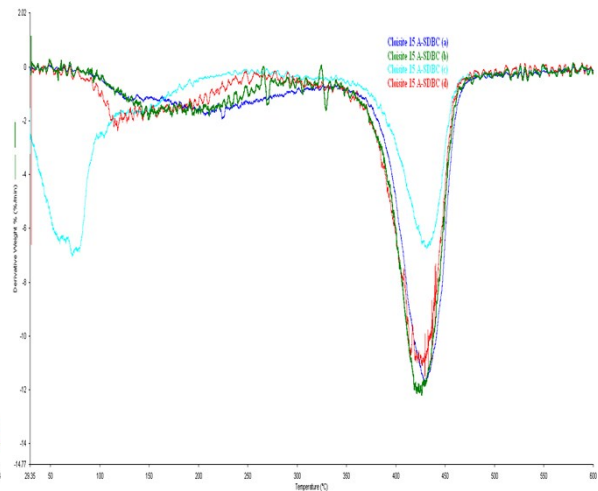


Fig S3 (B)

Figure S3. (A)Thermogravimetric analysis (TGA) and **(B)**Derivative thermo gravimetric analysis for (a) Cloisite 15A-SDBC-0.16 g (b) Cloisite 15A-SDBC-0.32 g (c) Cloisite 15A-SDBC-0.64 g (d) Cloisite 15A-SDBC-1.28gm g.

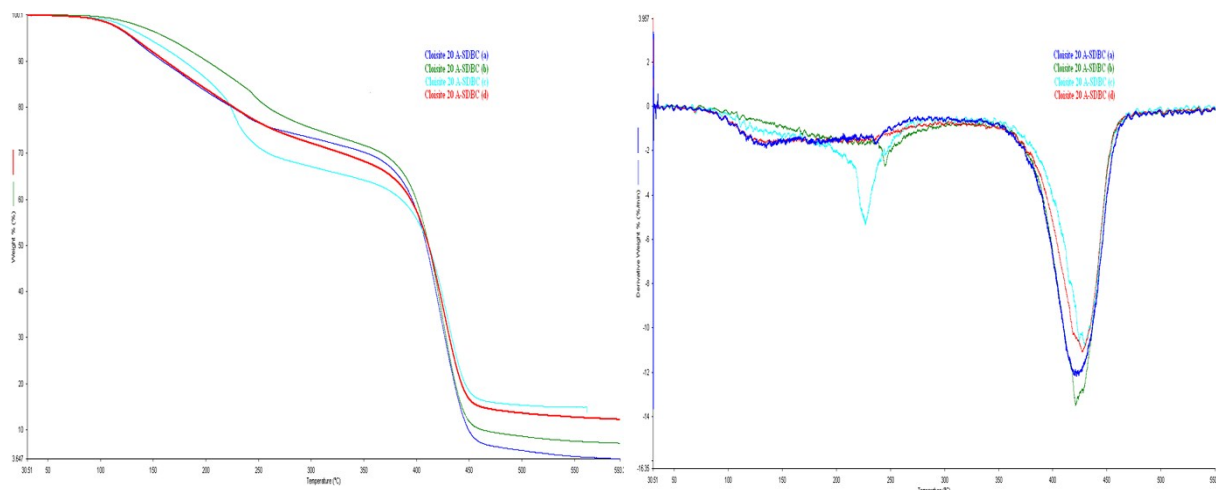


Fig S4(A)

Fig S4 (B)

Figure S4. (A) Thermogravimetric analysis (TGA) **(B)** Derivative thermo gravimetric analysis for 7(B) Cloisite 20A-SDBC (a) Cloisite 20A-SDBC-0.16 g (b) Cloisite 20A-SDBC-0.32 g (c) Cloisite 20A-SDBC-0.64 g (d) Cloisite 20A-SDBC-1.28 g

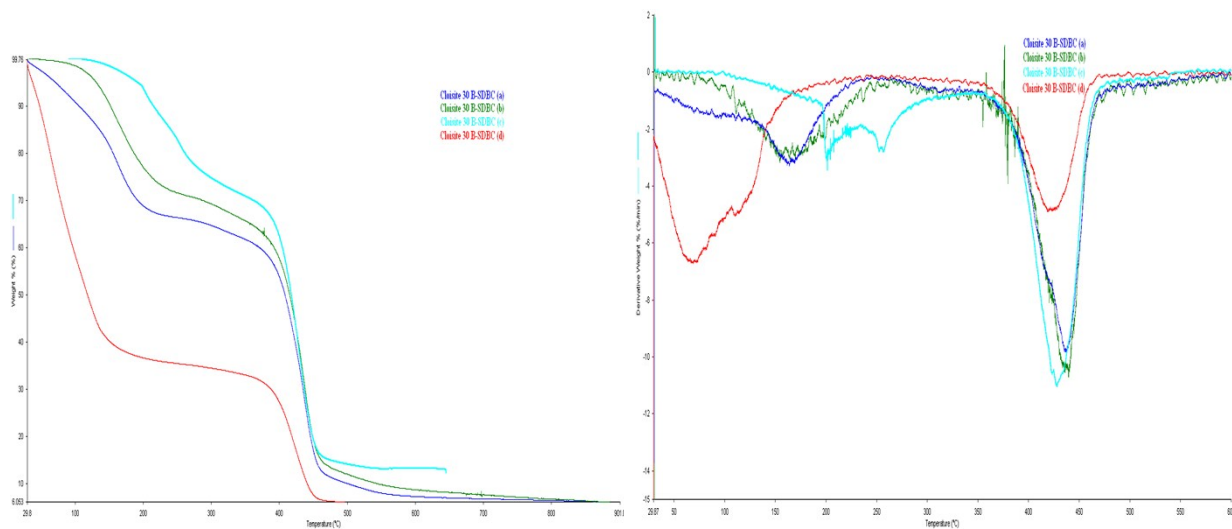


Fig S5(A)

Fig S5 (B)

Figure S5. (A) Thermogravimetric analysis (TGA) **(B)** Derivative thermo gravimetric analysis for 7(C) Cloisite 30B-SDBC (a) Cloisite 30B-SDBC-0.16 g (b) Cloisite 30B-SDBC-0.32 g (c) Cloisite 30B-SDBC-0.64 g (d) Cloisite 30B-SDBC-1.28 g .