

Supporting Information

Adsorption characteristics of dichloromethane-ethyl acetate/toluene vapor on a hypercrosslinked polystyrene adsorbent

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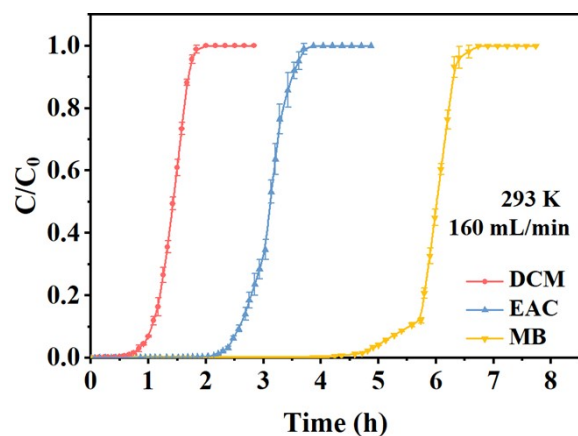


Figure S1. Breakthrough curves in the single vapor system on NDA-88.

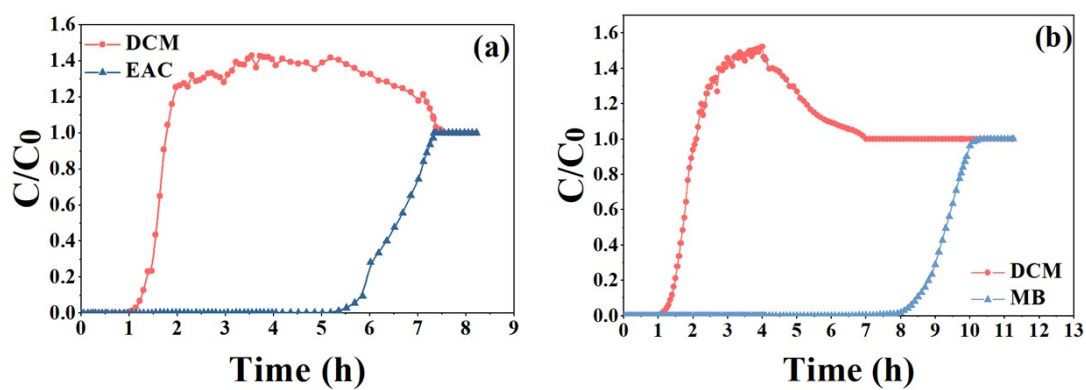


Figure S2. Breakthrough curves in the binary vapor system composed of the same initial concentration of (a) DCM and EAC, (b) DCM and MB on NDA-88.

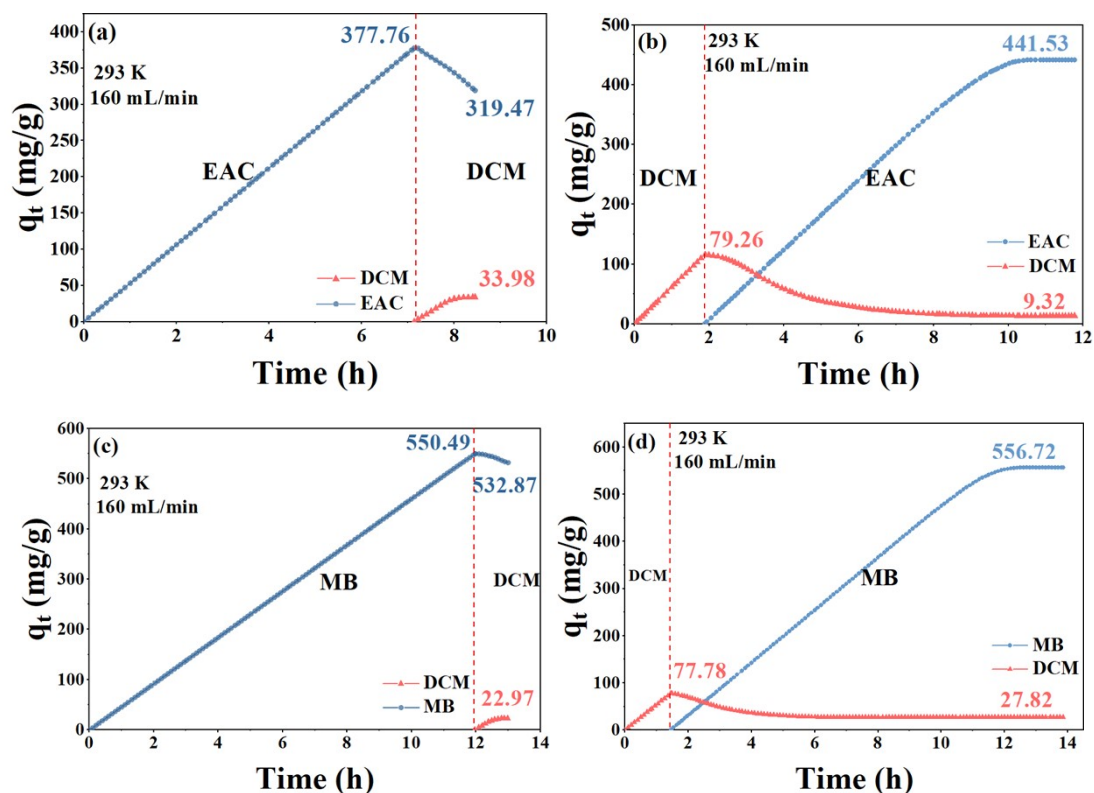


Figure S3. Plots of the quantity of VOCs adsorbed (q_t) versus time (t). (a) EAC first and then DCM, (b) DCM first and then EAC, (c) MB first and then DCM, (d) DCM first and then MB.

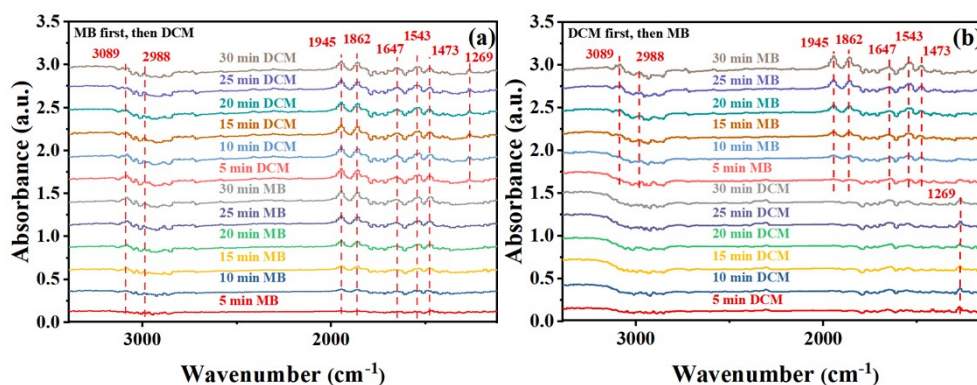


Figure S4. In situ FTIR spectra of (a) MB followed by DCM, (b) DCM followed by MB for the adsorption process on NDA-88.

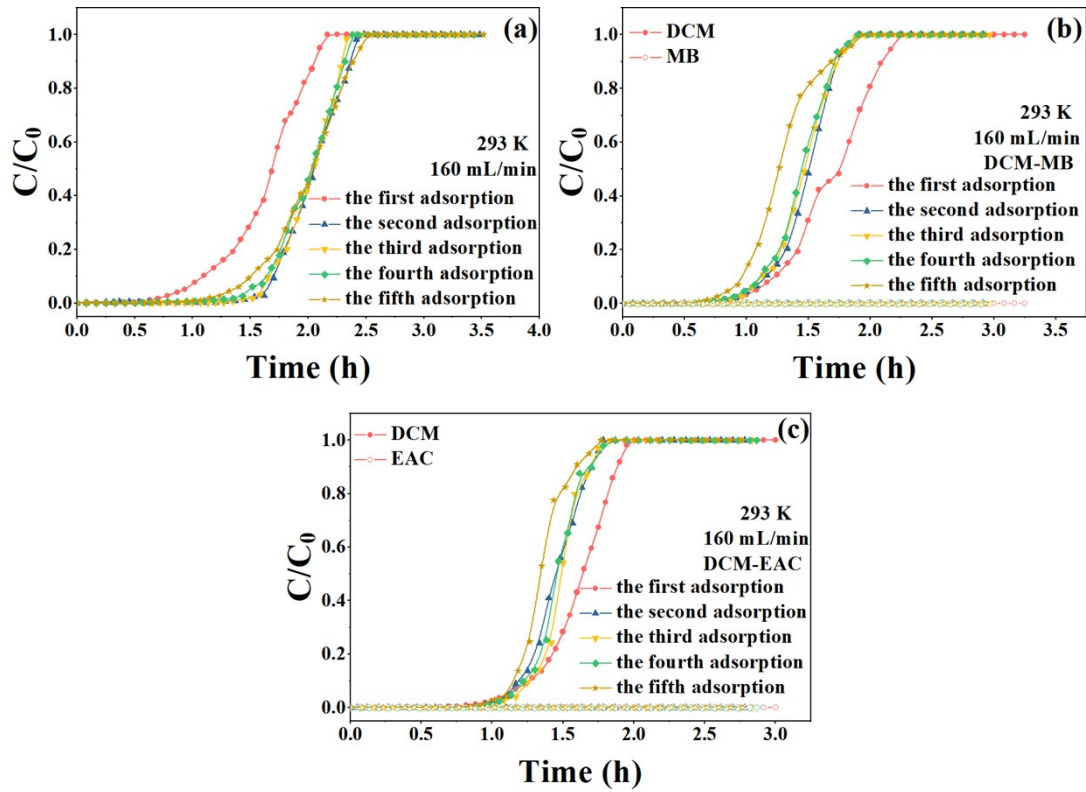


Figure S5. Breakthrough curves in NDA-88 regeneration experiments. (a) DCM, (b) DCM-MB, (c) DCM-EAC.

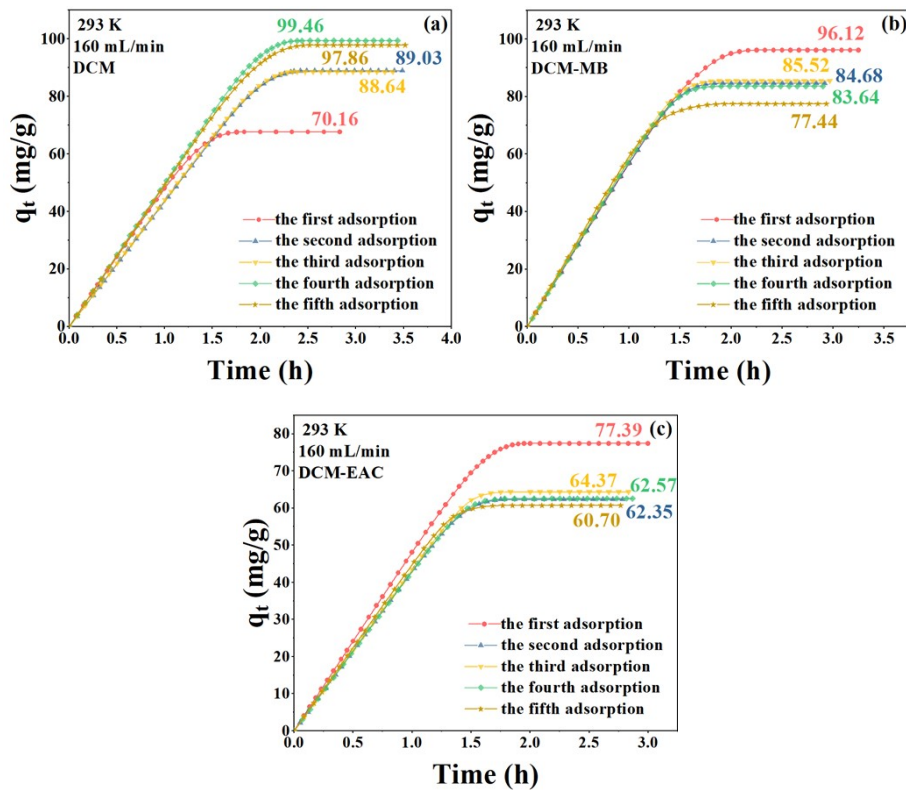


Figure S6. Plots of adsorption quantity vs. time of DCM in NDA-88 regeneration experiments. (a) DCM, (b) DCM-MB, (c) DCM-EAC.

Table S1**Saturation sorption of VOCs at different initial concentrations.**

$C_0(\text{DCM}):C_0(\text{EAC/MB})$	Relative humidity	VOCs	Saturated adsorption capacity (mg/g)
6.68:1	0	EAC	21.68
10.37:1	20%	EAC	12.28
8.62:1	40%	EAC	16.04
9.69:1	50%	EAC	13.69
8.01:1	0	MB	23.16
7.20:1	20%	MB	13.01
8.99:1	40%	MB	10.32
7.99:1	50%	MB	11.88