

Corn stalk-derived porous carbonaceous adsorbent for adsorption of ionic liquids from aqueous solution

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Table S1. Structural characteristics and properties of activated carbons derived from corn stalk

according to preparation conditions of activation temperature and weight ratio of KOH to

hydrochar (KOH:HC).

| Sample | Temperature e (°C) | KOH/HC ratio | S _{BET} ^a (m ² /g) | S _{micro} (m ² /g) | V _t ^b (cm ³ /g) | V ₀ ^c (cm ³ /g) |
|--------------|--------------------------|-----------------|--|---|---|---|
| CSCM-600-2-2 | 600 | 2 | 955 | 788 | 0.43 | 0.31 |
| CSCM-700-2-2 | 700 | 2 | 1539 | 1232 | 0.72 | 0.48 |
| CSCM-800-2-2 | 800 | 2 | 2442 | 2149 | 1.56 | 0.86 |
| CSCM-900-2-2 | 900 | 2 | 2225 | 1199 | 1.11 | 0.49 |
| CSCM-800-1-2 | 800 | 1 | 1543 | 1439 | 0.71 | 0.61 |
| CSCM-800-4-2 | 800 | 4 | 2170 | 1983 | 1.27 | 0.66 |

^a Surface area was calculated using the Brunauer-Emmett-Teller method at P/P₀=0.01-0.1. ^b Total pore volume at P/P₀=0.99. ^c Total micropore volume was calculated from N₂ adsorption data by t-plot method.

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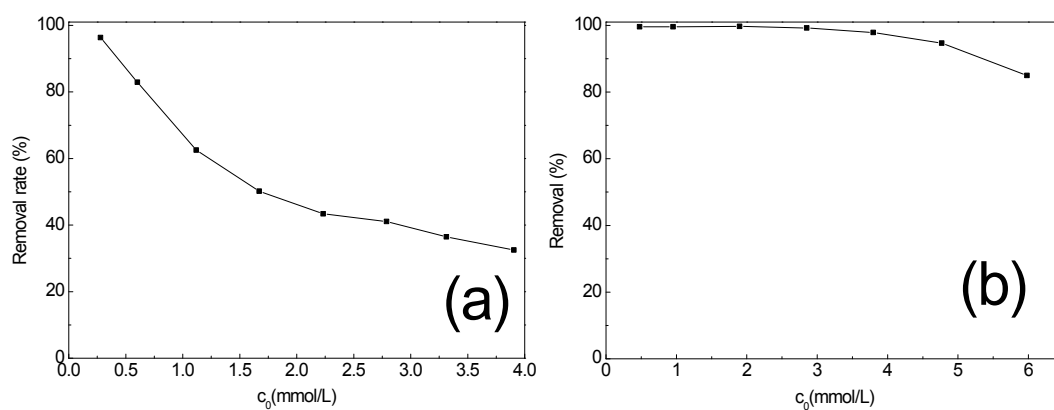


Figure S1. The effect of the initial concentration of (a) [Bmim]Cl and (b) [Bmim][NTf₂] on adsorption removal onto the CSCM adsorbent (adsorption conditions: adsorption temperature, 30 °C; pH = 10).