

もう少し詳しいご説明

P4MP1 film as Porous Material





Discussion

Selective Absorption of Larger Alkanes



Selective Absorption of Larger Alkanes



Why large molecules are selected ? Depletion force !

There's an effective attraction due to configurational entropy.



Mechanism of Selective Absorption

Depletion force works more prominently for a concave surface.



- The overlap volume becomes larger.
- The difference between L and S also becomes larger.

Selectivity

Discussion

Theory: Asakura-Oosawa model



Experiment



Experiment / Results

Discussion

Theory: Asakura-Oosawa model



Experiment



Summary

P4MP1 film selectively absorbs larger alkane molecules from alkane mixtures.

Why large molecules are selected ?

We explained the phenomena by the depletion force between host and guest.

P4MP1 as an ideal host which doesn't have aromatic rings.
Selective absorption as a common phenomenon.

