

1.

가

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가

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. 가

18

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가

가

. Kauzmann

(hydrophobic bond)

.

가 가

가

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가

.

2.

(lone pair) 2

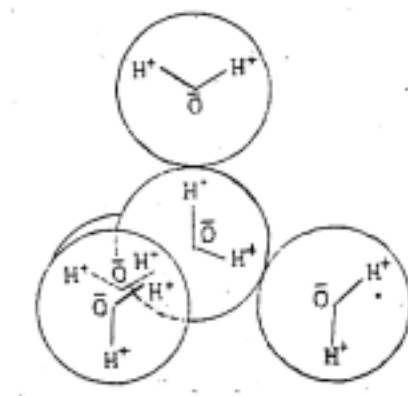
.

1 4 .

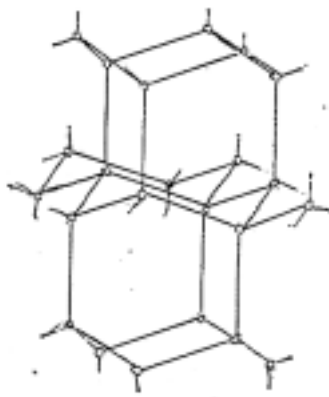
4 ,

2 4

2.76 .



< 1> 가



< 2> , ○ : , - : .

2

. X

가

.

4

가

가

.

(1) (continuum model, uniform state model)

X

. Bernal-Fowler X

4

가 가

.

4

,

. Pople, Luck

disorder

가

.

Pople

(bending)

(bent hydrogen-bond model, distorted hydrogen-bond

model)

.

Luck

10%

.

가

. Luck

.

(cooperative)

2, 3

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Pople

.

(2) (mixture model, multi-state model)

1948 Hall ice-like state close-packed state 가

2 .

가 가 가 ,

가 가

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Frank (cooperative)

flickering cluster model , Nemethy-Scheraga

. Nemethy-Scheraga flickering cluster

2 ,

tetra-, tri-, doubly, singly-bonded unbonded

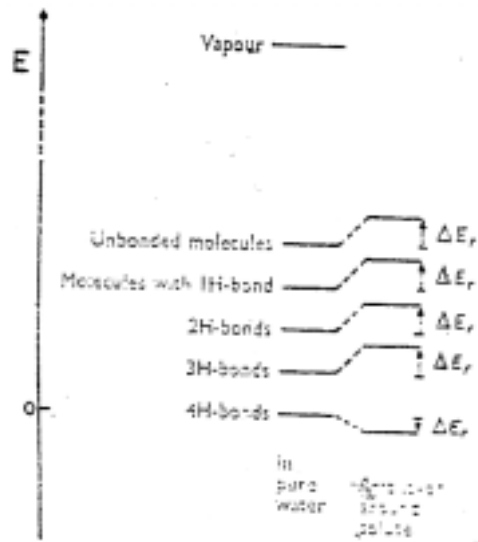
가 5 . 가

3 가

.

Nemethy-Scheraga

,



< 3>

1

2

, Pauling

frame-work

interstitial molecule

가

frame-work

interstitial model

<

>

가

Li^+

4

. 가 가

A

가

. 가

C

. B

A

4

ice-like structure

가

.

structure breaker

. B

A

가

가

가

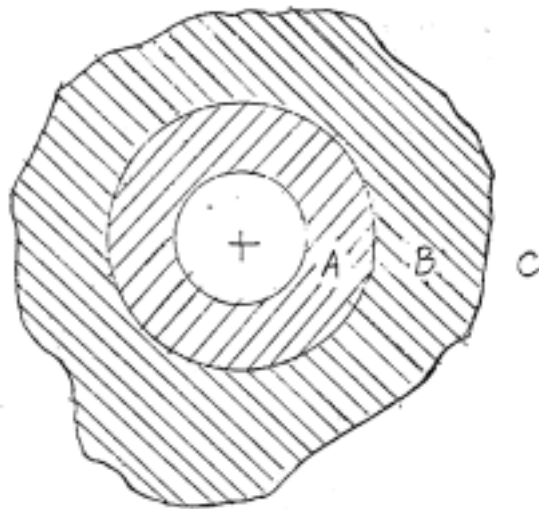
. K^+

1가

A

B

.



< 4 >

가

. Frank-Evans

가

가

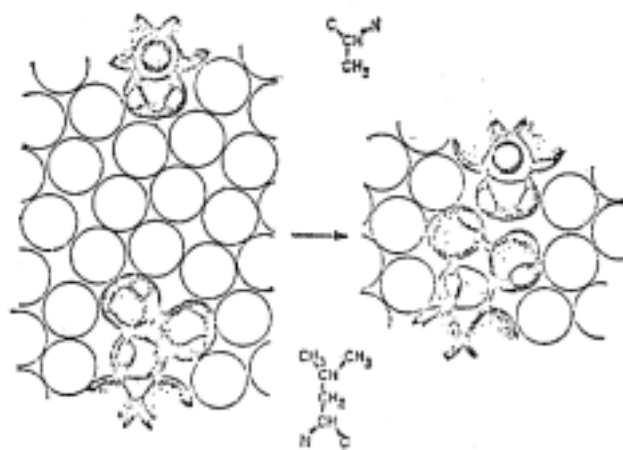
가

가

가 (crystallinity) 가
 . 가
 iceberg .

3.

가 가
 가 iceberg



< 5> , ○ : .

Iceberg

가 가 . 가
 iceberg가

iceberg

. 5

가

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. Iceberg

가

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4.

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가

iceberg

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가

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Klotz

albumin

Methyl Orange, Azosulfathiazol

1

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, ΔH

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Kauzmann

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가

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가

가

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,

.

< 1> albumin

	$-\Delta F$ 25°	$-H$ (cal/mol)	ΔS° (e. u.)
Methyl Orange	6411	2100	14.5
Azosulfathiazol	7151	2000	17.1

5.

가

,

. Zollinger

monochlorotriazinyl 가

가