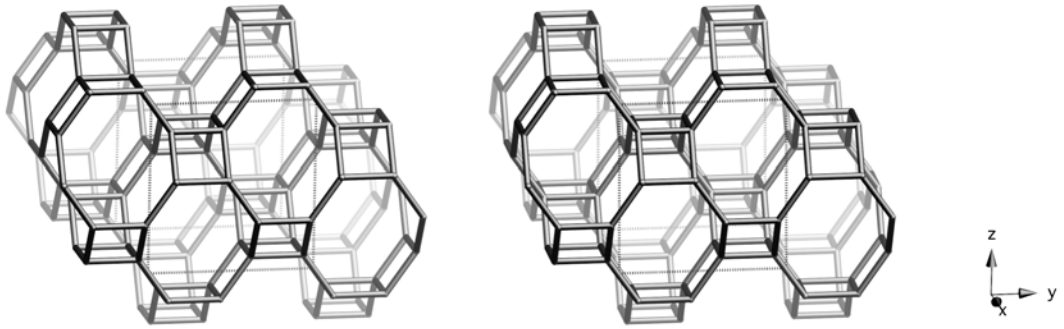
GIS

$I4_1/amd$

Framework Type Data



framework viewed along [100]

Idealized cell data: tetragonal, $I4_1/amd$ (origin choice 2), a = 9.8Å, c = 10.2Å

Coordination sequences and vertex symbols:

T_1 (16,2)	4	9	18	32	48	67	92	120	150	185	$4{\cdot}4{\cdot}4{\cdot}8_2{\cdot}8{\cdot}8$

Secondary building units: 8 or 4

Composite building units:

dcc

double crankshaft chain

gis

Materials with this framework type:

*Gismondine[1]
[Al-Co-P-O]-**GIS**[2]
[Al-Ge-O]-**GIS**[3,4]
[Al-P-O]-**GIS**[5]
[Be-P-O]-**GIS**[6]
[Co-Al-P-O]-**GIS**[7]
[Co-Ga-P-O]-**GIS**[8]
[Co-P-O]-**GIS**[9]
[Ga-Si-O]-**GIS**[10]
[Mg-Al-P-O]-**GIS**[7]
[Zn-Al-As-O]-**GIS**[11]
[Zn-Co-B-P-O]-**GIS**[12]
[Zn-Ga-As-O]-**GIS**[11]
[Zn-Ga-P-O]-**GIS**[13]
$|(C_3H_{12}N_2)_4|[Be_8P_8O_{32}]$-**GIS**[14]
$|(C_3H_{12}N_2)_4|[Zn_8P_8O_{32}]$-**GIS**[15]
$|(NH_4)_4|[Zn_4B_4P_8O_{32}]$-**GIS**[16]
$|Cs_4|[Zn_4B_4P_8O_{32}]$-**GIS**[16]
$|Rb_4|[Zn_4B_4P_8O_{32}]$-**GIS**[16]
Amicite[17]
Garronite[17,19]
Gobbinsite[20]
High-silica Na-P[21]
Low-silica Na-P (MAP)[22]
MAPO-43[23]
MAPSO-43[24,25]
Na-P1[26]
Na-P2[27]
SAPO-43[28]
Synthetic Ca-garronite[29]
Synthetic amicite[30]
Synthetic garronite[30]
Synthetic gobbinsite[30]
TMA-gismondine[31]

Type Material: Gismondine GIS

Type Material Data

Crystal chemical data: |Ca_4 $(H_2O)_{16}$| [$Al_8Si_8O_{32}$]-**GIS**
monoclinic, $P2_1/a$
a = 9.843Å, b = 10.023Å, c = 10.616Å, γ = 92.417° (1)
(Relationship to unit cell of Framework Type: $a' = a$, $b' = b$, $c' = c$)

Framework density: 15.3 T/1000Å^3

Channels: {[100] **8** 3.1 x 4.5 ↔ [010] **8** 2.8 x 4.8}***
(variable due to considerable flexibility of framework)
see Appendix A for 8-rings viewed along [100] and [010]

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