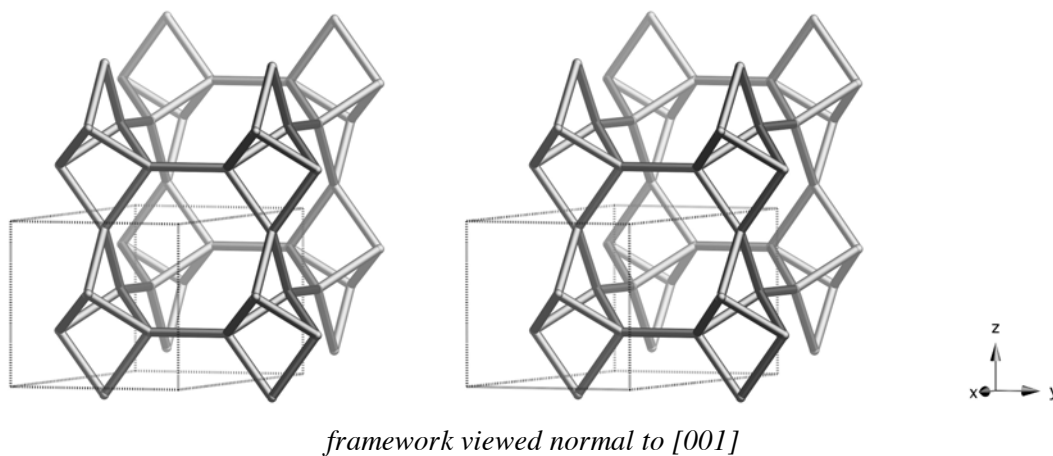


## Framework Type Data



**Idealized cell data:** orthorhombic, *Pmma*,  $a = 14.0\text{\AA}$ ,  $b = 7.0\text{\AA}$ ,  $c = 6.5\text{\AA}$

**Coordination sequences and vertex symbols:**

$T_1 (4,m)$	4	9	19	35	52	72	100	131	163	201	$4\cdot 8_3\cdot 4\cdot 8_3\cdot 4_2\cdot 8_4$
$T_2 (4,m)$	4	9	19	33	50	74	100	129	165	201	$4\cdot 8_3\cdot 4\cdot 8_3\cdot 4_2\cdot 8_4$
$T_3 (2,mm2)$	4	8	18	34	50	68	100	130	160	204	$4_2\cdot 4_2\cdot 8_4\cdot 8_4\cdot 8_4\cdot 8_4$

**Secondary building units:** 4=1

**Composite building units:**

*nat*



**Materials with this framework type:**

\*Thomsonite<sup>(1-3)</sup>

[Al-Co-P-O]-**THO**<sup>(4)</sup>

[Ga-Co-P-O]-**THO**<sup>(4)</sup>

[Zn-Al-As-O]-**THO**<sup>(5)</sup>

[Zn-P-O]-**THO**<sup>(6)</sup>

[Zn-P-O]-**THO**<sup>(7)</sup>

IRb<sub>20</sub>I[Ga<sub>20</sub>Ge<sub>20</sub>O<sub>80</sub>]-**THO**<sup>(8)</sup>

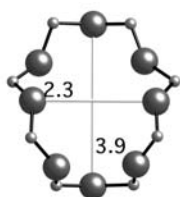
Na-V ([Ga-Si-O]-**THO**)<sup>(9)</sup>

Synthetic thomsonite<sup>(10)</sup>

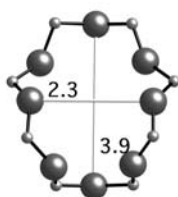
ZCP-**THO** ([Zn-Co-P-O]-**THO**)<sup>(11)</sup>

## Type Material Data

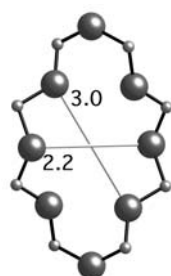
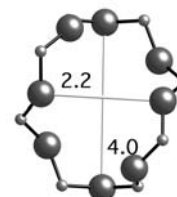
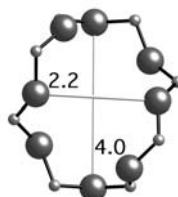
<b>Crystal chemical data:</b>	$\text{[Na}_4\text{Ca}_8(\text{H}_2\text{O})_{24}\text{] [Al}_{20}\text{Si}_{20}\text{O}_{80}\text{]-THO}$ orthorhombic, $Pn\bar{c}n$ , $a = 13.088\text{\AA}$ , $b = 13.052\text{\AA}$ , $c = 13.229\text{\AA}$ <sup>(3)</sup> (Relationship to unit cell of Framework Type: $a' = a$ , $b' = 2b$ , $c' = 2c$ )
<b>Framework density:</b>	17.7 T/1000 $\text{\AA}^3$
<b>Channels:</b>	[100] <b>8</b> 2.3 x 3.9* $\leftrightarrow$ [010] <b>8</b> 2.2 x 4.0* $\leftrightarrow$ [001] <b>8</b> 2.2 x 3.0* (variable due to considerable flexibility of framework)



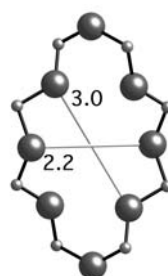
8-ring viewed along [100]



8-ring viewed along [010]



8-ring along [001], variable



## References:

- (1) Taylor, W.H., Meek, C.A. and Jackson, W.W. *Z. Kristallogr.*, **84**, 373-398 (1933)
- (2) Alberti, A., Vezzalini, G. and Tazzoli, V. *Zeolites*, **1**, 91-97 (1981)
- (3) Pluth, J.J., Smith, J.V. and Kvik, A. *Zeolites*, **5**, 74-80 (1985)
- (4) Feng, P., Bu, X. and Stucky, G.D. *Nature*, **388**, 735-741 (1997)
- (5) Feng, P., Zhang, T. and Bu, X. *J. Am. Chem. Soc.*, **123**, 8608-8609 (2001)
- (6) Neeraj, S. and Natarajan, S. *J. Phys. Chem. Solids*, **62**, 1499-1505 (2001)
- (7) Ng, H.Y. and Harrison, W.T.A. *Microporous Mesoporous Mat.*, **50**, 187-194 (2001)
- (8) Lee, Y.J., Kim, S.J. and Parise, J.B. *Microporous Mesoporous Mat.*, **34**, 255-271 (2000)
- (9) Barrer, R.M., Baynham, J.W., Bultitude, F.W. and Meier, W.M. *J. Chem. Soc.*, 195-208 (1959)
- (10) Ghobarkar, H. and Schaefer, O. *Cryst. Res. Technol.*, **32**, 653-657 (1997)
- (11) Ke, Y.X., He, G.F., Li, J.M., Zhang, Y.G. and Lu, S.M. *New J. Chem.*, **25**, 1627-1630 (2001)