$K_2ZrSi_3O_9$	*hP*30	(176) $P6_3/m$ – ih^2fb

$K_2ZrSi_3O_9$ [2], wadeite
Structural features: Rings of three vertex-linked SiO_4 tetrahedra share vertices with ZrO_6 octahedra to form a 3D-framework. Ordering variant of $K_2Si_4O_9$. See Fig. IV.60.

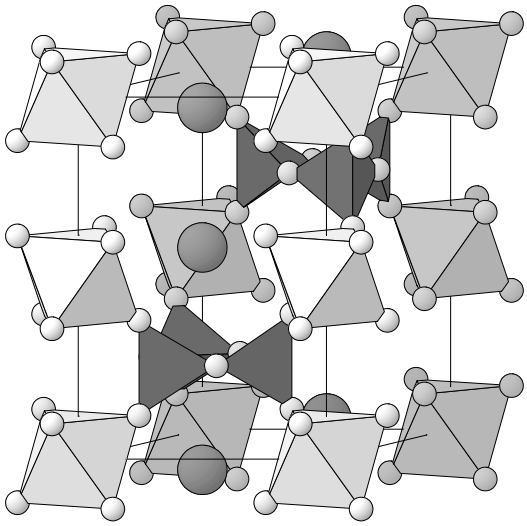

Fig. IV.60. **$K_2ZrSi_3O_9$**

Arrangement of ZrO_6 octahedra (light), SiO_4 tetrahedra (dark) (O atoms small) and K atoms (large).

Ferreira P. et al. (2001) [1]
$K_2O_9Si_3Zr$
a = 0.69291, c = 1.01848 nm, c/a = 1.470, V = 0.4235 nm^3, Z = 2

site	Wyck.	sym.	x	y	z	occ.	atomic environment
O1	12*i*	1	0.2562	0.0225	0.1185		single atom Si
Si2	6*h*	*m*..	0.3859	0.127	$^1/_4$		tetrahedron O_4
O3	6*h*	*m*..	0.6036	0.0942	$^1/_4$		non-colinear Si_2
K4	4*f*	3..	$^1/_3$	$^2/_3$	0.0572		non-coplanar triangle O_3
Zr5	2*b*	-3..	0	0	0		octahedron O_6

Transformation from published data: *y*,*x*,-*z*
Experimental: powder, diffractometer, X-rays, R_p = 0.055

References: [1] Ferreira P., Ferreira A., Rocha J., Soares M.R. (2001), Chem. Mater. 13, 355-363. [2] Henshaw D.E. (1955), Mineral. Mag. J. Mineral. Soc. 30, 585-595.