SiO_2	*hP*12	(182) $P6_322$ – gfc

SiO_2 tridymite β [1], tridymite low
Structural features: SiO_4 tetrahedra share vertices to form a 3D-framework with channels delimited by 6-rings parallel to [001].

Fleming J.E., Lynton H. (1960) [1]
O_2Si
$a = 0.501$, $c = 0.818$ nm, $c/a = 1.633$, $V = 0.1778$ nm^3, $Z = 4$

site	Wyck.	sym.	*x*	*y*	*z*	occ.	atomic environment
O1	6*g*	.2.	0.425	0	0		non-colinear Si_2
Si2	4*f*	3..	$^1/_3$	$^2/_3$	0.03		tetrahedron O_4
O3	2*c*	3.2	$^1/_3$	$^2/_3$	$^1/_4$		colinear Si_2

Experimental: single crystal, Weissenberg photographs, X-rays, R = 0.105

Remarks: 0.04 wt.% CaO, 0.07 wt.% TiO_2, and 0.015 wt.% Fe_2O_3 were detected by chemical analysis. We deduced the space group from the coordinates of all the atoms in the unit cell. Average structure; additional reflections could be indexed with a 216-fold supercell (new axes 6a,6b,6c).

References: [1] Fleming J.E., Lynton H. (1960), Phys. Chem. Glasses 1, 148-154.