

# S-Si (Sulfur-Silicon)

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The only features known for the Si-S phase diagram in [Massalski2] were (a) the existence of a very small (0.0065 at.%) solubility of S in the liquid phase, and (b) the existence of  $\text{SiS}_2$ .

Figure 1 shows the Si-S phase diagram determined by [2000Odi] by means of thermal analyses and x-ray powder diffraction patterns. The speculative liquidus boundary below 40 at.% S has been added in this work.

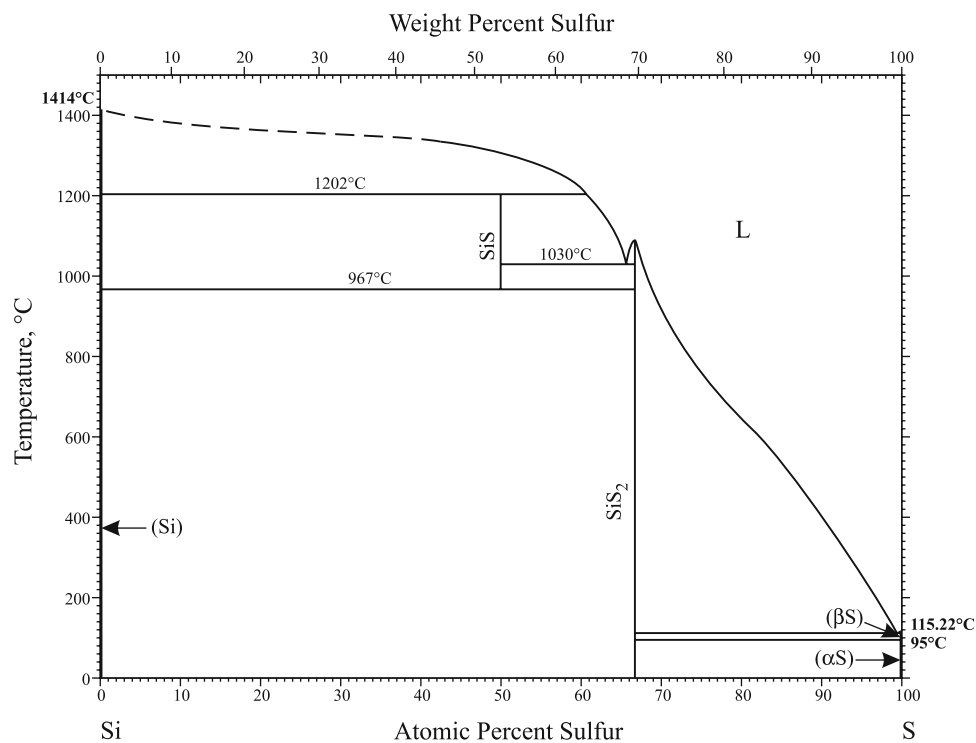
Si-S crystal structure data are shown in Table 1.

## Reference

**2000Odi:** I.N. Odin, V.A. Ivanov, A.Yu. Petrovskii, V.F. Kozlovskii, and R.R. Rezvanov, The  $p_{\text{tot}}$ -T-x Diagram of the Si-S System, *Zh. Neorg. Khim.*, 2000, **45**(3), p 545-547, in Russian; TR: *Russ. J. Inorg. Chem.*, 2000, **45**(3), p 479-481

**Table 1** Si-S crystal structure data

Phase	Composition, at.% S	Pearson symbol	Space group	Strukturbericht designation	Prototype
(Si)	0-0.0065	<i>cF8</i>	<i>Fd<math>\bar{3}m</math></i>	A4	C (diamond)
SiS	50	...	...	...	...
$\text{SiS}_2$	66.7	<i>oI12</i>	<i>Ibam</i>	C42	$\text{SiS}_2$
( $\beta$ S)	100	<i>mP48</i>	<i>P2<sub>1</sub>/a</i>	...	...
( $\alpha$ S)	100	<i>oF128</i>	<i>Fddd</i>	A16	$\alpha$ S



**Fig. 1** Si-S phase diagram