

substance: WO₃

property: crystal structure, general remarks

The crystal chemistry of WO₃ is extremely complex. Below 130K a transition has been detected by dielectric loss measurements [75L] but nothing is known of the structure. Above 130 K and below 223 K a monoclinic low-temperature modification α -WO₃ is found [60T, 76S]. At higher temperatures a triclinic β -modification occurs, which converts to a second monoclinic γ -WO₃ form, stable between 290 K and 603 K. Between 603K and \approx 1013K, WO₃ has orthorhombic symmetry and above 973 K a tetragonal form occurs. (For transition temperatures, see also document .)

References:

- 60T Tanisaki, S.: J. Phys. Soc. Jpn. 15 (1960) 566.
75L Leikowitz, M., Dowell, M. B., Shields, M. A.: J. Solid State Chem. 15 (1975) 24.
76S Salje, E.: Ferroelectrics 12 (1976) 215.