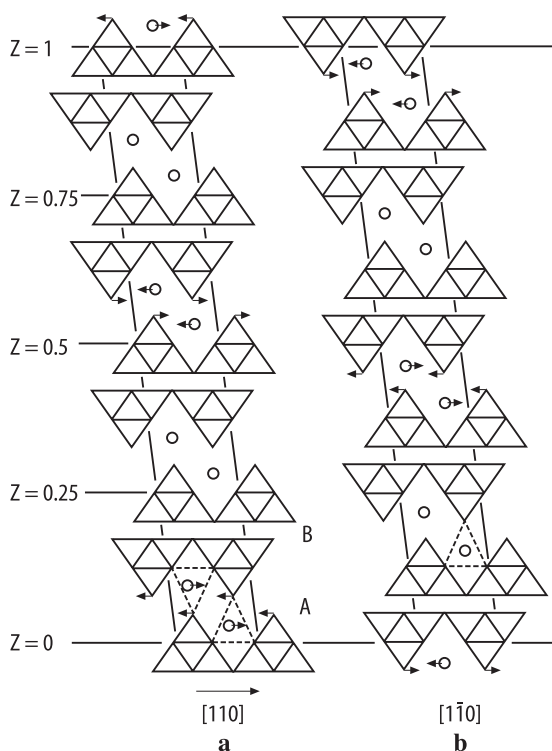
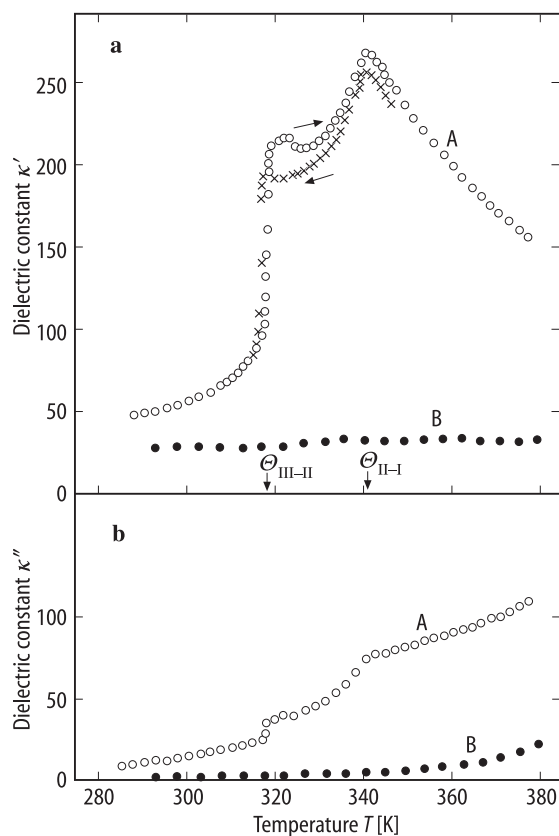


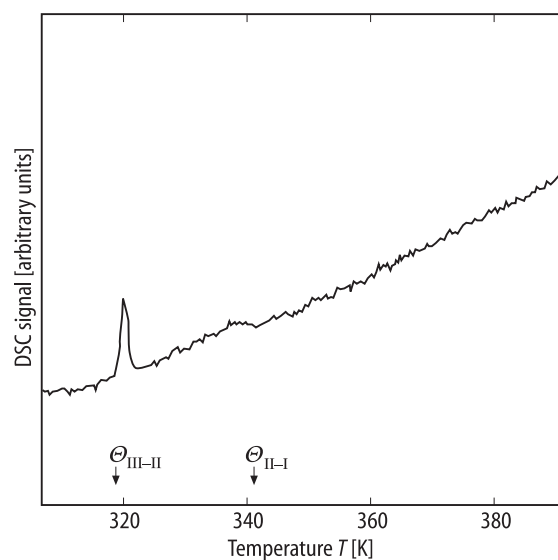
**Fig. 21A-1-001.** TIS. Schematic representation of the subcell or average structure in phase III [93Nak]. Structure is characterized by Tl-S layers: Four  $\text{Ti}^{3+}\text{S}_4$  tetrahedra are packed to form adamantane-like units, the upper and lower edges of these units are linked along the  $[110]$  or the  $[1\bar{1}0]$  axis. The layers are stacked along the  $c$  axis so that the successive layers are rotated each other by  $90^\circ$ . Between these layers,  $\text{Ti}^{1+}$  ions are located in channels along the  $[110]$  or the  $[1\bar{1}0]$  axis.



**Fig. 21A-1-002.** TIS. Layer stacking structure [93Nak]. (a) Projection along  $[110]$ , (b) projection along  $[1\bar{1}0]$ . The triangles represent  $\text{Ti}^{3+}\text{S}_4$  tetrahedra. The dotted lines represent trigonal prisms around the  $\text{Ti}^{1+}$  ion. The arrows represent the displacements of ions from the positions in the subcell or average structure.



**Fig. 21A-1-003.** TIS.  $\kappa'$  and  $\kappa''$  vs.  $T$  [92Kas].  $f = 1$  MHz. A: a naturally grown thin plate crystal, of which plane makes an angle of about  $50^\circ$  with  $a$ - $b$  plane. B: a cleaved thin plate crystal, of which plane is parallel to  $a$ - $b$  plane.



**Fig. 21A-1-004.** TIS. DSC chart [93Nak]. Temperature scanning rate is  $2 \text{ K min}^{-1}$ . DSC: Differential scanning calorimetry.