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Urbach's Rule and Optical Properties for TIGaS₂

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Abstract: Absorption measurements were carried out on TIGaS₂ sample in the temperature range between 10 and 320 K in 10 K steps. There is an abrupt change in the Urbach energy at 180 K and 280 K and steepness parameter at 120 K and 220 K. Obtained from the changing of the Urbach energy, these may be phase transition temperatures. The phonon energies calculated for TIGaS₂ is 19.7 μ m 5 meV.



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