Table 1. Basic data for Ta used in this work. Values quoted are for 25°C. β is the volume coefficient of thermal expansion.

Atomic weight[9]	180.948
X-ray density, ρ[10] (gm cm^{-3})	16.626
Molar volume, V (cm^3)	10.883
Linear coefficient of thermal expansion[11] (10^{-6} deg^{-1})	6.5
Specific heat, C_p[12] (cal $mole^{-1}$ deg^{-1})	6.08
Debye temperature, θ[2] (°K)	~250
Gruneisen constant, γ	1.60
$\left(\frac{\partial \beta}{\partial T}\right)_P$[11] ($10^{-9}$ deg^{-2})	~3
$\left(\frac{\partial C_p}{\partial T}\right)_P$[12] ($10^{-3}$ cal $mole^{-1}$ deg^{-2})	2.2
$\left(\frac{\partial B_s}{\partial T}\right)_P$[2] ($10^{-1}$ kbar deg^{-1})	− 2.0
Adiabatic elastic stiffnesses[2] (10^3 kbar):	
C_{11}	2.610
$(C_{11} - C_{12})/2$	0.518
C_{44}	0.818
B_s	1.919
Isothermal Bulk Modulus, B_T (10^3 kbar)	1.901
B_s/B_T -1 (10^{-3})	9.30