

CdTe: Debye-Waller factor

Semiconductors - New Data and Updates for several III-V (including mixed crystals) and II-VI Compounds

substance:	cadmium telluride (CdTe)
property:	Debye-Waller factor (lattice properties)

pressure dependence of the Debye-Waller factors (temperature factors) (wurtzite phase)

(in Å²)

Physical Property	Numerical Values	Remarks	Ref.
$U(\text{Cd})$	0.02376(6)	XRD experiment at $T = 295$ K	01R
$U(\text{Te})$	0.01679(3)	(harmonic model)	
$U(\text{Cd})$	0.03055(15)	XRD experiment at $T = 376$ K	01R
$U(\text{Te})$	0.02149(9)	(harmonic model)	
$U(\text{Cd})$	0.04095(11)	XRD experiment at $T = 491$ K	01R
$U(\text{Te})$	0.02862(6)	(harmonic model)	
$U(\text{Cd})$	0.04997(20)	XRD experiment at $T = 583$ K	01R
$U(\text{Te})$	0.03486(9)	(harmonic model)	

For the refinement with an anharmonic model (with slightly larger $U(\text{Cd})$ and slightly smaller $U(\text{Te})$) and with a disorder model see [\[01R\]](#).

References

- 01R Rabadanov, M.K., Verin, I.A., Ivanov, Y.M., Simonov, V.I.: Crystallogr. Reports **46** (2001) 636; transl. from Kristallografiya **46** (2001) 703.