$TlCdS_2$	*hP*4	(187) *P*-6*m*2 – ida

$CdTlS_2$ [1]
Structural features: Directly superposed close-packed S layers; Cd and Tl in trigonal prismatic voids (stacking sequence AbAγ). CdS_6 trigonal prisms share edges to form infinite slabs; Tl in trigonal prismatic voids between the slabs.

Guseinov G.D. et al. (1967) [1]
CdS_2Tl
$a = 0.3645$, $c = 0.681$ nm, $c/a = 1.868$, $V = 0.0784$ nm^3, $Z = 1$

site	Wyck.	sym.	*x*	*y*	*z*	occ.	atomic environment
S1	2*i*	3*m*.	$^2/_3$	$^1/_3$	0.25		octahedron Cd_3Tl_3
Tl2	1*d*	-6*m*2	$^1/_3$	$^2/_3$	$^1/_2$		trigonal prism S_6
Cd3	1*a*	-6*m*2	0	0	0		trigonal prism S_6

Experimental: single crystal, Weissenberg and rotation photographs, X-rays

Remarks: The description in space group (156) *P*3*m*1 in [1] does not take into consideration all symmetry elements of the proposed structure. In the abstract of [1] the compound is misprinted as $GdTlS_2$ instead of $CdTlS_2$.

References: [1] Guseinov G.D., Ismailov M.Z., Guseinov G.G. (1967), Mater. Res. Bull. 2, 765-772.