$CsMo_{15}In_{2.2}S_{19}$	*hP*82	(176) $P6_3/m$ – $i^4h^3f^3e$

$CsIn_{2.2}Mo_{15}S_{19}$ [1]
Structural features: Mo_6S_8 units (a Mo_6 octahedron surrounded by a S_8 cube) and Mo_9S_{11} units (two fused Mo_6S_8 units) in an α-Nd type (d.h.c.p.) arrangement; Ca and In between the units (partial disorder). Mo_6 and Mo_9 clusters.

Salloum D. et al. (2004) [1]
$Cs_{1.06}In_{2.29}Mo_{15}S_{19}$
a = 0.95446, c = 1.88625 nm, c/a = 1.976, V = 1.4881 nm^3, Z = 2

site	Wyck.	sym.	x	y	z	occ.	atomic environment
Mo1	12*i*	1	0.16885	0.01367	0.05799		tricapped trigonal prism S_5Mo_4
S2	12*i*	1	0.28284	0.31397	0.05149		4-vertex polyhedron Mo_4
S3	12*i*	1	0.38528	0.02243	0.13728		4-vertex polyhedron Mo_4
Mo4	12*i*	1	0.50023	0.31962	0.13123		tricapped trigonal prism S_5Mo_4
In5	6*h*	*m*..	0.05159	0.2138	$^1/_4$	0.449	tricapped trigonal prism S_6MoIn_2
S6	6*h*	*m*..	0.35974	0.3165	$^1/_4$		trigonal bipyramid Mo_4In
Mo7	6*h*	*m*..	0.50459	0.16219	$^1/_4$		pseudo Frank-Kasper S_4Mo_6In
In8	4*f*	3..	$^1/_3$	$^2/_3$	0.11241	0.471	
Cs9	4*f*	3..	$^1/_3$	$^2/_3$	0.15112	0.529	
S10	4*f*	3..	$^1/_3$	$^2/_3$	0.53267		tetrahedron Mo_3In
S11	4*e*	3..	0	0	0.15823		trigonal prism Mo_3In_3

Experimental: single crystal, diffractometer, X-rays, R = 0.031, T = 293 K
Remarks: Short interatomic distances for partly occupied site(s).

References: [1] Salloum D., Gougeon P., Roisnel T., Potel M. (2004), J. Alloys Compd. 383, 57-62.