

1. INTRODUCTION TO SPACE-GROUP SYMMETRY

Table 1.6.4.25

Reflection conditions and possible space groups with Bravais lattice cP and Laue class $m\bar{3}$; hkl are cyclically permutable; Patterson symmetry $Pm\bar{3}$

Reflection conditions			Space group		Space group	
$0kl$	$h\pm hl$	$h00$	group	No.	group	No.
			$P23$	195	$Pm\bar{3}$	200
k		h	$P2_13$	198		
		h	$Pa\bar{3}$	205		
		h	$Pb\bar{3}$	205		
		h	$Pn\bar{3}$	201		

Table 1.6.4.26

Reflection conditions and possible space groups with Bravais lattice cP and Laue class $m\bar{3}m$; hkl are permutable; Patterson symmetry $Pm\bar{3}m$

Reflection conditions			Space group		Space group		Space group	
$0kl$	$h\pm hl$	$h00$	group	No.	group	No.	group	No.
			$P432$	207	$P\bar{4}3m$	215	$Pm\bar{3}m$	221
$k+l$		h	$P4_232$	208				
		$h=4n$	$P4_332$	212	$P4_132$	213		
	l	h	$P\bar{4}3n$	218	$Pm\bar{3}n$	223		
		h	$Pn\bar{3}m$	224				
	l	h	$Pn\bar{3}n$	222				

Table 1.6.4.27

Reflection conditions and possible space groups with Bravais lattice cI and Laue class $m\bar{3}$; hkl are cyclically permutable; Patterson symmetry $Im\bar{3}$

Reflection conditions				Space group		Space group		Space group	
hkl	$0kl$	$h\pm hl$	$h00$	group	No.	group	No.	group	No.
$h+k+l$	$k+l$	l	h	$I23$	197	$I2_13$	199	$Im\bar{3}$	204
$h+k+l$	k, l	l	h	$Ia\bar{3}$	206				

Table 1.6.4.28

Reflection conditions and possible space groups with Bravais lattice cI and Laue class $m\bar{3}m$; hkl are permutable; Patterson symmetry $Im\bar{3}m$

Reflection conditions				Space group		Space group		Space group	
hkl	$0kl$	$h\pm hl$	$h00$	group	No.	group	No.	group	No.
$h+k+l$	$k+l$	l	h	$I432$	211	$I\bar{4}3m$	217	$Im\bar{3}m$	229
$h+k+l$	$k+l$	l	$h=4n$	$I4_132$	214				
$h+k+l$	$k+l$	$2h+l=4n$	$h=4n$	$I\bar{4}3d$	220				
$h+k+l$	k, l	$2h+l=4n$	$h=4n$	$Ia\bar{3}d$	230				

Table 1.6.4.29

Reflection conditions and possible space groups with Bravais lattice cF and Laue class $m\bar{3}$; hkl are cyclically permutable; Patterson symmetry $Fm\bar{3}$

Reflection conditions				Space group		Space group	
hkl	$0kl$	$h\pm hl$	$h00$	group	No.	group	No.
$h+k, h+l, k+l$	k, l	$h+l$	h	$F23$	196	$Fm\bar{3}$	202
$h+k, h+l, k+l$	$k+l=4n; k, l$	$h+l$	$h=4n$	$Fd\bar{3}$	203		