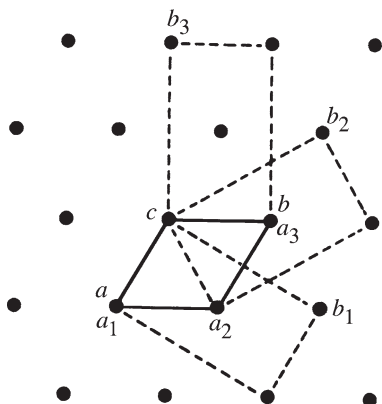
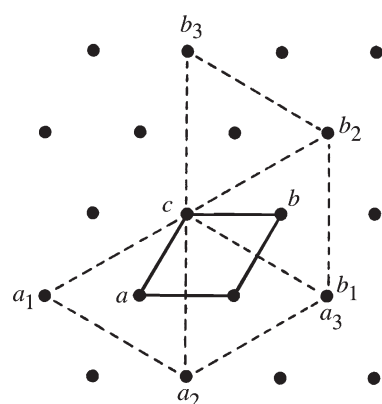


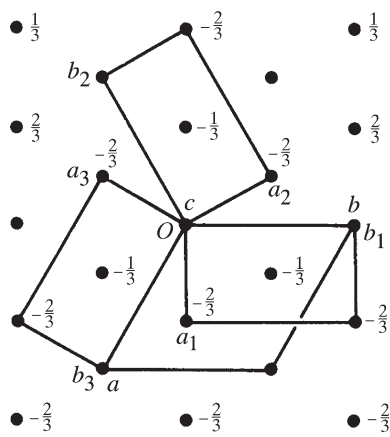
1. INTRODUCTION TO SPACE-GROUP SYMMETRY



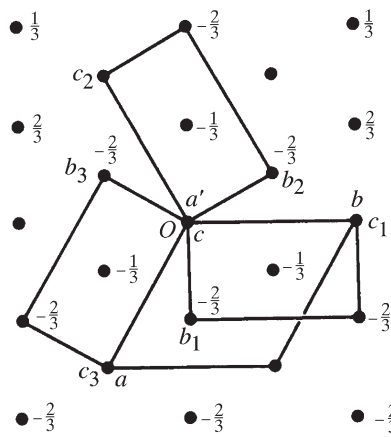
**Figure 1.5.1.7**  
Hexagonal lattice projected along  $[00\bar{1}]$ . Primitive hexagonal cell  $P$  with  $a, b, c$  and the three  $C$ -centred (orthohexagonal) cells  $a_1, b_1, c; a_2, b_2, c; a_3, b_3, c$ . The origin for all cells is the same.



**Figure 1.5.1.8**  
Hexagonal lattice projected along  $[00\bar{1}]$ . Primitive hexagonal cell  $P$  with  $a, b, c$  and the three triple hexagonal cells  $H$  with  $a_1, b_1, c; a_2, b_2, c; a_3, b_3, c$ . The origin for all cells is the same.

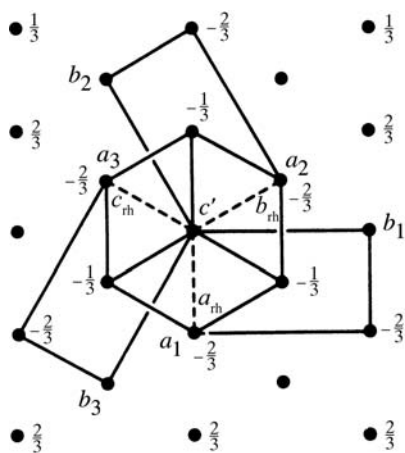


(a)

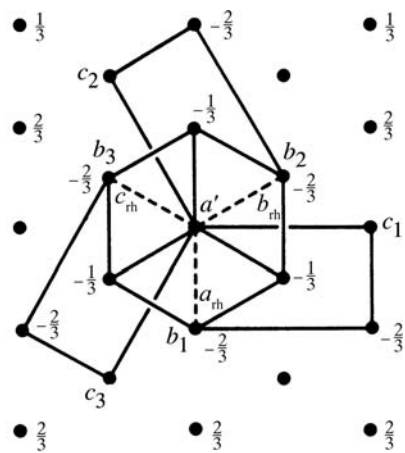


(b)

**Figure 1.5.1.9**  
Rhombohedral lattice with a triple hexagonal unit cell  $a, b, c$  in obverse setting (i.e. unit cell  $a_1, b_1, c$  in Fig. 1.5.1.6c) and the three centred monoclinic cells. (a)  $C$ -centred cells  $C_1$  with  $a_1, b_1, c; C_2$  with  $a_2, b_2, c; C_3$  with  $a_3, b_3, c$ . The unique monoclinic axes are  $b_1, b_2$  and  $b_3$ , respectively. The origin for all four cells is the same. (b)  $A$ -centred cells  $A_1$  with  $a', b_1, c_1; A_2$  with  $a', b_2, c_2; A_3$  with  $a', b_3, c_3$ . The unique monoclinic axes are  $c_1, c_2$  and  $c_3$ , respectively. The origin for all four cells is the same. The fractions indicate the height of the lattice points along the axis of projection.



(a)



(b)

**Figure 1.5.1.10**  
Rhombohedral lattice with primitive rhombohedral cell  $a_{rh}, b_{rh}, c_{rh}$  and the three centred monoclinic cells. (a)  $C$ -centred cells  $C_1$  with  $a_1, b_1, c'; C_2$  with  $a_2, b_2, c'; C_3$  with  $a_3, b_3, c'$ . The unique monoclinic axes are  $b_1, b_2$  and  $b_3$ , respectively. The origin for all four cells is the same. (b)  $A$ -centred cells  $A_1$  with  $a', b_1, c_1; A_2$  with  $a', b_2, c_2; A_3$  with  $a', b_3, c_3$ . The unique monoclinic axes are  $c_1, c_2$  and  $c_3$ , respectively. The origin for all four cells is the same. The fractions indicate the height of the lattice points along the axis of projection.