

A diagram of a diamond-shaped network. It consists of four nodes: a blue square node labeled 'a' on the left, a red square node labeled 'c' on the right, a blue circle node at the top, and a red circle node at the bottom. There are two edges: a dashed blue edge connecting node 'a' to the top blue circle node, and a dashed red edge connecting node 'c' to the bottom red circle node. The entire network is enclosed within a red diamond-shaped border.

A diagram of a simple graph with four nodes and two edges. The nodes are labeled 'a' (red square), 'b' (blue square), 'c' (blue circle), and 'd' (red circle). The edges are represented by dashed lines: a red dashed line connects 'a' and 'd', and a blue dashed line connects 'b' and 'c'.

Diagram illustrating the irreducible representations of the octahedral group  $O_h$ . The diagram shows a cube with three planes (xy, yz, xz) intersecting at the center. The intersection of all three planes is the central point, labeled  $4g$ . The intersection of two planes is a line, labeled  $4g_c$ . The intersection of one plane is a face, labeled  $4s$ .

A diagram showing a diamond-shaped lattice. Two blue paths, representing the  $\Delta g$  and  $\Delta s$  modes, are shown intersecting. The  $\Delta g$  path is labeled with a green dot at its start and end. The  $\Delta s$  path is also labeled with a green dot at its start and end.

A diagram showing a hexagonal lattice structure. A central blue hexagon is surrounded by six blue triangles. A horizontal line segment connects two green dots on the left and right triangles, labeled  $\Delta g$ . A vertical line segment connects two green dots on the top and bottom triangles, labeled  $\Delta g_c$ .

A diagram of a 2D hexagonal lattice. The lattice is composed of many small hexagons. A central region of the lattice is shaded in blue. Three green dots are marked on the lattice. The dot on the left is labeled  $\Delta g$ . The dot on the right is labeled  $\Delta g_c$ . The dot in the middle is labeled  $\Delta g$ .

A diagram showing a large circle containing a blue, irregularly shaped region. Inside the blue region, there is a green dot labeled  $\Delta g$  and a green square labeled  $\Delta s$ .