

Solving Solid State-Crystal Lattice problems using Jmol application

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ABSTRACT

This report explores crystal lattices and unit cells, fundamental to crystallography, using Jmol visualisation software. It elucidates the significance of lattices in understanding arrangement of atoms within crystals, covering primitive, body-centred, and face-centred types. Through Jmol-generated visuals, it delves into diverse unit cell structures, including simple cubic, body-centred cubic, and face-centred cubic, detailing their geometric properties and atomic arrangements. Additionally, lattice parameters' role in defining crystal symmetry is examined, using Jmol application, illustrating their relationship. By integrating theory with interactive visualisation, this report aims to provide a comprehensive understanding of crystallography principles.

Keywords:

Jmol, Crystal lattices, cubic, crystal structure, solid state.