Chemical Bond In Inorganic Chemistry

The bond valence model is an evolution of Pauling's electrostatic valence principle first enunciated in 1929. Recent improvements in crystal structure determination have allowed the model to become more quantitative. Unlike other models of inorganic chemical bonding, the bond valence model is simple, intuitive, quantitative and predictive, and requires only a pocket calculator. It can be used for analysing crystal structures and the conceptual modelling of local as well as extendedstructures. This is the first book to explore the theoretical basis of the model and to show how it can be applied to synthetic and solution chemistry. In analysing the chemistry of solids, the book emphasizes the separate roles of the constraints of chemistry and the constraints of 3-dimensionalspace. It reviews many of the applications of the model in physics, materials science, chemistry, mineralogy, soil science, surface science and molecular biology. The final chapter describes how the bond valence model relates to, and represents a simplification of, other models of inorganic chemical bonding. EAN/ISBN : 9780191523212 Publisher(s): Oxford University Press Format: ePub/PDF Author(s): Brown, I. David

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