

RECENT DEVELOPMENTS IN THE QUASICHEMICAL MODEL

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Recent developments in the quasichemical model for short-range ordering for one- and two-sublattices in the pair approximation will be discussed. Applications to the critical evaluation/optimization of thermodynamic and phase equilibrium data, and to the prediction of the thermodynamic properties of multicomponent solutions, will be illustrated for oxide slags, sulfide mattes, and molten salt solutions. A technique for taking into account the charge-compensation effect in silica-rich $\text{SiO}_2\text{-Al}_2\text{O}_3\text{-Na}_2\text{O}$ and similar slags will be outlined. For molten salt solutions which exhibit both inter- and intra-sublattice short-range ordering, a quasichemical model in the quadruplet approximation will be presented and illustrated with examples.