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PHENOMENOLOGICAL APPROACH TO CRYSTAL-MEDIUM INTERACTIONS  
IN «SOLID SOLUTION-AQUEOUS SOLUTION» SYSTEMS

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Crystallization processes in binary «solid solution—aqueous solution» systems are considered theoretically. This phenomenological thermodynamic approach operates with chemical potentials of individual components in aqueous and solid solutions. Depending on the differences in chemical potentials the seed crystal can grow, dissolve, and participate in complex dissolution/precipitation reactions. Additionally, the crystal growth is often complicated by mismatch strain between seed crystal and ongrowing layers, which can significantly affect the phase relationships in a system. The results obtained are in qualitative and often in quantitative agreement with the experimental observations published in a literature.