



Theory of Structural Transformations in Solids (Paperback)

By Armen G. Khachaturyan

Dover Publications Inc., United States, 2008. Paperback. Condition: New. Language: English . Brand New Book. Addressing both theoretical and practical aspects of phase transformation in alloys, this text formulates significant aspects of the quantitative metallurgy of phase transformations. It further applies solid-state theoretical concepts to structure problems arising in experimental studies of real alloys. Author Armen G. Khachaturyan, Professor of Materials Science at Rutgers University, ranks among the foremost authorities on this subject. In this volume, he takes a creative approach to examining change in atomic structure and morphology caused by ordering, strain-induced ordering, strain-controlled decomposition, and strain-induced coarsening. Unifying relationships among various fields of solid-state physics are stressed throughout the book. Topics include structure changes in two-phase alloys controlled by the phase transformation elastic strain, in addition to important results in the area of microscopic elasticity regarding problems of elastic interaction in impurity atoms, and strain-induced ordering and decomposition in interstitial solutions. An excellent text for advanced undergraduate and graduate courses in physical metallurgy, solid state physics, solid state chemistry, and materials science, this volume is also a valuable reference for professionals conducting research in phase transformations.



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