



## Statics and Dynamics of Alloy Phase Transformations

By -

Springer-Verlag New York Inc., United States, 2012. Paperback. Book Condition: New. 254 x 178 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*.The study of phase transformations in substitutional alloys, including order-disorder phenomena and structural transformations, plays a crucial role in understanding the physical and mechanical properties of materials, and in designing alloys with desired technologically important characteristics. Indeed, most of the physical properties, including equilibrium properties, transport, magnetic, vibrational as well as mechanical properties of alloys are often controlled by and are highly sensitive to the existence of ordered compounds and to the occurrence of structural transformations. Correspondingly, the alloy designer facing the task of processing new high-performance materials with properties that meet specific industrial applications must answer the following question: What is the crystalline structure and the atomic configuration that an alloy may exhibit at given temperature and concentration? Usually the answer is sought in the phase-diagram of a relevant system that is often determined experimentally and does not provide insight to the underlying mechanisms driving phase stability. Because of the rather tedious and highly risky nature of developing new materials through conventional metallurgical techniques, a great deal of effort has been expended in...



**READ ONLINE**  
[ 6.49 MB ]

### Reviews

*An extremely wonderful book with lucid and perfect information. It is one of the most awesome publication i have read. Your life period will probably be enhance the instant you total looking at this pdf.*

-- Prof. Dan Windler MD

*It is really an amazing publication i actually have at any time read. It is really simplistic but unexpected situations inside the 50 percent of your pdf. Its been written in an exceptionally simple way in fact it is just right after i finished reading this ebook where actually transformed me, alter the way i really believe.*

-- Dr. Celestino Spinka III