

<<系统合金科学>>

图书基本信息

书名：<<系统合金科学>>

13位ISBN编号：9787548701613

10位ISBN编号：7548701616

出版时间：2010-12

出版时间：中南大学

作者：谢佑卿

页数：620

版权说明：本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问：<http://www.tushu007.com>

## 内容概要

Taking Fe , Co , Ni pure metals and Ag - Cu , Ti - Al , Au - Cu systems as examples , the systematic science of alloys has been presented in the monograph , which includes six levels : separated theory of potential energies and volumes for characteristic atoms , valence bond theory of characteristic crystals , separated theory of thermodynamic properties for characteristic crystals , characteristic atom arrangement crystallography of alloy phases , thermodynamics of mixed characteristic crystals for alloy phases and comprehensive theory of mixed characteristic crystals for phase transformation , phase equilibrium and phase diagrams. It may be available for reference to graduates , teachers and researchers.

## 作者简介

谢佑卿，男，1937年12月出生，汉族，湖南邵阳人，大学文化，民盟盟员，2003年、2005年和2007年为中国科学院院士候选人，中南大学教授，国家重点学科、材料物理与化学专业博士生导师、首席教授，粉末冶金国家重点实验室兼职教授，湖南大学材料科学与工程学院兼职教授，湖南省十届人大常委会副主任，十届全国人大常委会委员。美国科学促进协会（AAAS）会员，美国纽约科学院（NYAS）院士，湖南省归国留学生联谊会会长，享受政府特殊津琉。

## 书籍目录

Foreword Systematic Science of Alloys and Its Innovation Chapter Ideology and Methodology of Systematic Science of Alloys Theoretical Framework of Systematic Science of Alloys Development Course of Metallic Materials Science and Evolution of Human Thinking Mode Chapter Systematic Science of Pure Metals--Valence Bond Theory of Characteristic Crystals Background and Outline of One-atom Valence Bond Theory of Pure Metals A New Potential Function with Many-atom Interactions in Solid Electronic Structure and Properties of Pure Iron Electronic Structure and Properties of Pure Cobalt Electronic Structure and Properties Ni Metal Chapter Systematic Science of Ag - Cu System Atomic Energies and Gibbs Energy Functions of Ag- Cu Alloys Atomic Volumes and Volume Functions for Ag -Cu Alloys Electronic Structure of Ag- Cu Alloys Phase Diagram and Thermodynamic Properties of Ag -Cu Alloys Chapter Systematic Science of Ti - Al System Influence of XTi/XA on Atomic States, Lattice Constants and Potential-energy Planes of Ordered Fcc TiAl Type Alloys Atomic States, Potential Energies, Volumes, Stability and Brittleness of Ordered Fcc TiAl<sub>3</sub> Type Alloys Atomic States, Potential Energies, Volumes, Stability and Brittleness of Ordered Fcc Ti<sub>3</sub>Al Type Alloys Atomic States, Potential Energies, Volumes, Stability and Brittleness of Ordered Fcc TiAl<sub>2</sub> Type Alloys Chapter Systematic Science of Cu -Ni and Au -Ni Systems Microstructure and Properties of Cu- Ni Alloys Relationship Between Partial and Average Atomic Volumes of Components in Au- Ni Alloys Chapter Systematic Science of Au - Cu System Based on Experimental Data of Disordered Alloys Potential Energy Sequences of Characteristic Atoms on Basis of Heats of Formation of Disordered Au ( 1-x ) Cu<sub>x</sub> Alloys Volume Sequences of Characteristic Atoms Separated from Experimental Volumes of Disordered Au Cu Alloys Chapter Systematic Science of Au - Cu System Based on First-principles Electron Theory of Alloys Potential Energies of Characteristic Atoms Separated from First-principles Calculated Heats of Formation of AuCu and AuCu<sub>3</sub> Compounds Volumes of Characteristic Atoms Separated from First-principles Calculated Volumes of L10 -AuCu and L12 -AuCu<sub>3</sub> Compounds Chapter Systematic Science of Au- Cu System Based on Experimental Data of Intermetallics Potential Energies of Characteristic Atoms Separated from Experimental Heats of Formation of AuCu and AuCu<sub>3</sub> Compounds Volume Sequences of Characteristic Atoms Separated from Experimental Volumes of AuCu and AuCu<sub>3</sub> Compounds Systematic Science of Au -Cu System Based on Experimental Data of Disordered Alloys : Characteristic Atom Occupation Patterns of Au<sub>3</sub>Cu, AuCu<sub>3</sub>, AuCu<sub>1</sub> and AuCu<sub>11</sub> Energetic Properties of Characteristic Crystals Separated from Experimental Heats of Formation of AuCu and AuCu<sub>3</sub> Compounds Energetic Properties of Disordered Au Cu<sub>x</sub> Alloys Obtained on Basis of Experimental Heats of Formation of AuCu and AuCu<sub>3</sub> Compounds Variations in Energetic Properties on Disorder L12 -AuCu<sub>3</sub> Compound Studied on Basis of Experimental Heats of Formation of AuCu and AuCu<sub>3</sub> Compounds Changing with Temperature

编辑推荐

购买纸质版图书可以同时获赠该图书的电子版。  
登录有色金属在线首页，查看“电子书激活流程”，输入随书附带有该书的电子书序列号  
和密码即可拥有该图书的电子书及100有色币，同时更多免费专业资源和和服务供您使用。

版权说明

本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问:<http://www.tushu007.com>