Record Nr. UNINA9910814563803321 Surface properties and engineering of complex intermetallics / / edited **Titolo** by Esther Belin-Ferre Pubbl/distr/stampa Singapore;; Hackensack, NJ,: World Scientific, c2010 **ISBN** 1-282-76375-X 9786612763755 981-4304-77-8 Edizione [1st ed.] Descrizione fisica 1 online resource (408 p.) Collana Book series on complex metallic alloys;; v. 3 Altri autori (Persone) Belin-FerreEsther Disciplina 669 Soggetti Alloys Intermetallic compounds Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia "Third volume of a series of books issued from the lectures delivered at Note generali the Euro-School on Materials Science, organised yearly in Ljubljana"--Foreword. Includes bibliographical references. Nota di bibliografia Nota di contenuto Foreword; CONTENTS; Chapter 1: Properties and characterization of thin films Miha Cekada: Chapter 2: Chemical vapor deposition of metals: From unary systems to complex metallic alloys Constantin Vahlas; Chapter 3: Physical vapor deposition of thin film coatings Witold Gulbinski; Chapter 4: Engineering analysis of chemical vapor deposition processes Andreas G. Boudouvis; Chapter 5: Surface structure of complex metallic alloys Ronan McGrath Chapter 6: Fundamentals of surface science: Are complex metallic alloys - especially quasicrystals - different from simple alloys or elemental metals? Patricia A. ThielChapter 7: Clean and oxidized surfaces of complex metallic alloys Vincent Fournee; Chapter 8: Metal/organic surface and interface analysis and its application studies on the next generation electronic devices Jouhahn Lee; Chapter 9: Formation of the interphase in epoxy-amine/ aluminium joints: From surface corrosion to metal bonding M.-G. Barthes-Labrousse, D. Mercier and F. Debontridder Chapter 10: Quasicrystals dealing with catalysis A.P. Tsai and S. KameokaChapter 11: The Hume-Rothery rules for structurally complex

alloy phases Uichiro Mizutani

## Sommario/riassunto

This book, the third in a series of four publications issued annually as a deliverable of the research school established within the European Network of Excellence CMA (for Complex Metallic Alloys), is written by reputed experts in the fields of surface physics and chemistry, metallurgy and process engineering. It combines expertise found inside as well as outside the network. The CMA network focuses on the huge group of largely unknown multinary alloys and compounds formed with crystal structures based on giant unit cells containing clusters, with many tens or up to thousands of atoms per uni