Record Nr. UNINA9910133590303321 Autore Gupta M (Manoj) Titolo Magnesium, magnesium alloys, and magnesium composites: a guide / / [edited by] Manoj Gupta, Nai Mui Ling Sharon New York, : John Wiley & Sons, 2011 Pubbl/distr/stampa **ISBN** 1-118-10270-3 1-283-07221-1 9786613072214 0-470-90508-5 0-470-90509-3 Edizione [1st ed.] Descrizione fisica 1 online resource (277 p.) Altri autori (Persone) GuptaM (Manoj) SharonNai Mui Ling Disciplina 620.1/87 Soggetti Magnesium Magnesium compounds Magnesium alloys Metallic composites Lingua di pubblicazione Inglese **Formato** Materiale a stampa Monografia Livello bibliografico Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographic references and index. Nota di contenuto CONTENTS; PREFACE; ACKNOWLEDGMENTS; 1 INTRODUCTION TO MAGNESIUM; 2 SYNTHESIS TECHNIQUES FOR MAGNESIUM-BASEDMATERIALS; 3 MAGNESIUM ALLOYS; 4 FUNDAMENTALS OF METAL MATRIX COMPOSITES: 5 MAGNESIUM COMPOSITES: 6 CORROSION ASPECTS OF MAGNESIUM-BASEDMATERIALS; 7 STRENGTH-DUCTILITY COMBINATIONS OFMAGNESIUM-BASED MATERIALS; APPENDIX: LIST OF SOME MAGNESIUM SUPPLIERS: ABOUT THE AUTHORS: INDEX "Properties of Magnesium Composites for Material Scientists, Engineers Sommario/riassunto and Selectors is the first book-length reference to provide an insight into current and future magnesium-based materials in terms of science, characteristics, and applications. It emphasizes the properties of magnesium-based composites and the effects of different types of

reinforcements, from micron length to nanometer scale, on the properties of the resulting composites. With the popularity of

magnesium-based materials in the automotive, aerospace, electronics, and sports equipment industries, and its unique role as a lightweight, energy-saving and high-performance material, both professionals and students will find this a must-have resource"--

"This book is the first to provide readers insight into the science, characteristics, and applications of current and futuristic magnesium-based materials, with particular emphasis placed upon the properties of magnesium-based composites and the effects of different types (metallic, ceramic, interconnected and intermetallic) of reinforcements from micron length scale to nanometric length scale on the properties of the resultant composites. While many books and reviews have been written on magnesium-based materials and the technology of magnesium, there has not been a consolidated book on the properties of other futuristic magnesium-based materials, in particular magnesium-based composites that have been developed actively over the last 15 years. Since magnesium is the lightest of all structural metals, and due to its low density and high specific mechanical properties, it has become a popular material for applications in the automotive, aerospace, electronics and sports equipment industries"--