1. Record Nr. UNINA9910483932603321 Titolo Materials Processing Fundamentals [[electronic resource] /] / edited by Lifeng Zhang, Antoine Allanore, Cong Wang, James A. Yurko, Justin Crapps Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa **ISBN** 3-319-48197-5 1 online resource (XIII, 318 p.) Descrizione fisica 620.16 Disciplina Soggetti Materials science Mechanical engineering Metals Materials Science Metallic Materials Characterization and Evaluation of Materials Mechanical Engineering Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia This collection provides researchers and industry professionals with Sommario/riassunto complete guidance on the synthesis, analysis, design, monitoring, and control of metals, materials, and metallurgical processes and phenomena. Along with the fundamentals, it covers modeling of diverse phenomena in processes involving iron, steel, non-ferrous metals, and composites. It also goes on to examine second phase particles in metals, novel sensors for hostile-environment materials processes, online sampling and analysis techniques, and models for real-time process control and quality monitoring systems.