Record Nr. UNINA9910462665403321 **Titolo** Advances in powder metallurgy: properties, processing and applications / / edited by Isaac Chang and Yuyuan Zhao Pubbl/distr/stampa Cambridge;; Philadelphia:,: Woodhead Publishing,, 2013 **ISBN** 1-62870-368-7 0-85709-890-X Descrizione fisica 1 online resource (624 p.) Collana Woodhead publishing series in metals and surface engineering;; number 60 Altri autori (Persone) Changlsaac ZhaoYuyuan Disciplina 671.37 Soggetti Metallurgy Powder metallurgy Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Cover: Advances in powder metallurgy: Properties, processing and applications; Copyright; Contents; Contributor contact details; Woodhead Publishing Series in Metals and Surface Engineering; Part I Forming and shaping of metal powders; 1Advances in atomisation techniques for the formation of metal powders; 1.1 Introduction; 1.2 Atomisation techniques; 1.3 Problems and advances in gas atomisation; 1.4 Problems and advances in water atomisation; 1.5 Centrifugal atomisation; 1.6 Other atomisation techniques; 1.7 Conclusion; 1.8 References; 2Forming metal powders by electrolysis 2.1 Background of electrometallurgy and powder metallurgy2.2 Principle and main technological prospects for the FFC Cambridge process; 2.3 Production of metal powders by the FFC Cambridge process: 2.4 Direct route from oxide precursors to alloyed powders: 2.5 Conclusions and future trends; 2.6 Acknowledgement; 2.7 References; 3Mechanochemical synthesis of nanocrystalline metal powders; 3.1 Introduction; 3.2 Mechanochemical processing; 3.3 The process; 3.4 Grain size and process variables; 3.5 Displacement reactions; 3.6

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Powder metallurgy (PM) is a popular metal forming technology used to produce dense and precision components. Different powder and component forming routes can be used to create an end product with specific properties for a particular application or industry. Advances in powder metallurgy explores a range of materials and techniques used for powder metallurgy and the use of this technology across a variety of application areas. Part one discusses the forming and shaping of metal powders and includes chapters on atomisation techniques, electrolysis and plasma synthesis of metallic nanopow

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