1. Record Nr. UNINA9910557361903321 Autore Behrens Bernd-Arno Titolo Hybrid Bulk Metal Components Basel, Switzerland, : MDPI - Multidisciplinary Digital Publishing Pubbl/distr/stampa Institute, 2021 Descrizione fisica 1 electronic resource (224 p.) Soggetti Technology: general issues Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia In recent years, the requirements for technical components have Sommario/riassunto steadily been increasing. This development is intensified by the desire for products with a lower weight, smaller size, and extended functionality, but also with a higher resistance against specific stresses. Mono-material components, which are produced by established processes, feature limited properties according to their respective material characteristics. Thus, a significant increase in production quality and efficiency can only be reached by combining different materials in a hybrid metal component. In this way, components with tailored properties can be manufactured that meet the locally varying requirements. Through the local use of different materials within a component, for example, the weight or the use of expensive alloying elements can be reduced. The aim of this Special Issue is to cover the recent progress and new developments regarding all aspects of hybrid bulk metal components. This includes fundamental questions regarding

parts.

the joining, forming, finishing, simulation, and testing of hybrid metal