1. Record Nr. UNINA9910426042703321 Autore Rajak Dipen Kumar Titolo An insight into metal based foams: processing, properties and applications / / Dipen Kumar Rajak, Manoj Gupta Pubbl/distr/stampa Gateway East, Singapore: ,: Springer, , [2020] ©2020 **ISBN** 981-15-9069-9 Edizione [1st ed. 2020.] Descrizione fisica 1 online resource (XIII, 133 p. 79 illus., 31 illus. in color.) Collana Advanced Structured Materials, , 1869-8433; ; 145 Disciplina 620.11 Soggetti Materials Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Introduction to Metal Foams -- Applications of Metallic Foams --Manufacturing Methods of Metal Foams -- Materials Selection and Design Considerations -- Yielding, Fatigue and Creep Response of Metal Foams -- Acoustic, Damping, Thermal and Electrical Properties of Metal Foams -- Concluding Remarks and Future Directions. Sommario/riassunto The primary focus of this book, accordingly, is to provide insight into the fundamentals, applications, manufacturing aspects and properties (mechanical, thermal, electrical etc.) of metal foams. Their potential applications in various small- as well as large-scale industries are highlighted. The present book also focuses on aspects of designing simple structures by taking into account loading conditions under tensile, compressive or torsional stress for metals and their foams. In view of theoretical analysis, clear explanation is provided as how metal foams can exhibit better structural properties when compared to their parent metal. It is hoped that the present book, in view of significant application potential of metal foams in near future, will be extremely useful to students and academicians in tertiary institutes and

researchers working in research labs who are attempting to find

lightweight solutions.