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Sommario/riassunto

Due to their amorphous character and the concomitant lack of dislocations, metallic glasses exhibit physical and chemical properties that are quite different from those of other solid materials. For example, they can be twice as strong as steels, exhibit superior soft magnetic behavior and outstanding corrosion resistance and, sometimes, interesting catalytic properties, thus having potential for a widespread range of technological applications. The aim of this book is to address, from both experimental and theoretical points of view, some of the challenges to improve the glass forming ability of these materials, to optimize their overall mechanical performance, and to enhance their functional properties. Through the contributions from different renowned authors in the field, new prospects towards the development of innovative compositions and novel applications, particularly in devices with micrometer and submicrometer sizes, are provided, where the full potential of these glassy materials is being achieved.