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| Sommario/riassunto | This expert volume addresses the practical challenges which have so far inhibited the commercial realization of a rechargeable magnesium battery, placing the discussion within the context of the already established lithium-ion battery. Lithium-ion batteries are becoming commonplace in most power applications, starting with portable electronics and expanding to motor vehicles, stationary storage, and backup power. Since their introduction 25 years ago, they have slowly been replacing all other battery chemistries. As the technology has |

matured, it is nearing its theoretical limits in terms of energy density, so research and development worldwide is quickly shifting towards the study of new battery chemistries with cheaper components and higher energy densities. A very popular battery candidate which has generated a lot of recent interest is the magnesium rechargeable battery. Magnesium is five orders of magnitude more abundant than lithium, can move two electrons per cation, and is known to plate smoothly without any evidence of dendritic growth. However, many challenges remain to be overcome. This essential volume presents an unfiltered view on both the realistic promises and significant obstacles for this technology, providing key insights and proposed solutions. .
