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Sommario/riassunto	Since the mid-nineties, magnesium-based alloys and compounds have been revisited in the hope that they will yield light functional materials. In this third wave of research and development of magnesium-based hydrogenstorage and thermoelectric materials, new factors have become important in addition to the improvement of their properties and performance. The move to reduce environmental damage requires the assurance of non-toxicity and energy-saving during manufacture. For example, the use of lead or bismuth additions must be avoided. Furthermore, due to the diminishing sources of antimony,