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designations and tempers; 5.4 Zirconium-free casting alloys; 5.5 Zirconium-containing casting alloys; 5.6 Wrought magnesium alloys; 5.7 Electrochemical aspects; 5.8 Fabrication of components; 5.9 Trends in applications of magnesium alloys; Further reading; Chapter 6. Titanium alloys; 6.1 Introduction; 6.2 a-alloys; 6.3 a/b alloys; 6.4 b-alloys; 6.5 Fabrication; 6.6 Titanium alloy castings; 6.7 Engineering performance; 6.8 Applications of titanium alloys; Further reading Chapter 7. Novel materials and processing methods 7.1 Composites; 7.2 Metallic Foams; 7.3 Rapid solidification processing; 7.4 Quasicrystals; 7.5 Amorphous alloys; 7.6 Mechanical alloying; 7.7 Physical vapour deposition; 7.8 Nanophase alloys; 7.9 Titanium aluminides; Further reading; Appendix; Index

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### Sommario/riassunto

The definitive overview of the science and metallurgy of aluminum, magnesium, titanium and beryllium alloys, this is the only book available covering the background materials science, properties, manufacturing processes and applications of these key engineering metals in a single accessible volume. Use of these metals is now more widespread than ever, and they are routinely found in motor vehicles and aircraft. New material includes materials characteristics and applications; heat treatment properties; fabrication; microstructure/property relationships; new applications and processes.

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