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Sommario/riassunto	Linking of materials properties with microstructures is a fundamental theme in materials science, for which a detailed knowledge of the modern characterization techniques is essential. Since modern materials such as high-temperature alloys, engineering thermoplastics and multilayer semiconductor films have many elemental constituents distributed in more than one phase, characterization is essential to the systematic development of such new materials and understanding how they behave in practical applications. X-ray techniques play a major role in providing information on the elemental composit