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Sommario/riassunto	During the past decade, research and development in the area of synthesis and applications of different nanostructured titanium dioxide have become tremendous. This book briefly describes properties, production, modification and applications of nanostructured titanium dioxide focusing in particular on photocatalytic activity. The physicochemical properties of nanostructured titanium dioxide are highlighted and the links between properties and applications are emphasized. The preparation of TiO2 nanomaterials, including nanoparticles, nanorods, nanowires, nanosheets, nanofibers, and nanotubes a