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| Nota di bibliografia | Includes bibliographical references at the end of each chapters. |
| Nota di contenuto | Introduction -- Visible light photocatalysis of natural semiconducting minerals -- Visible-Light-Driven Photocatalytic Treatment by Environmental Minerals -- Visible light photocatalytic inactivation by Bi-based photocatalysts -- Synthesis and Performance of Silver Photocatalytic Nanomaterials for Water Disinfection -- Solar Photocatalytic Disinfection by Nano Ag-based Photocatalyst -- Photocatalytic Disinfection by Metal-free Materials -- Disinfection of Waters/Wastewaters by Solar Photocatalysis -- Photoelectrocatalytic Materials for Water Disinfection -- Photocatalytic and Photoelectrocatalytic Inactivation Mechanism of Biohazards -- Photoelectrocatalytic Inactivation Mechanism of Bacteria -- Bacterial oxidative stress responses and cellular damage caused by photocatalytic and photoelectrocatalytic inactivation -- Mechanistic Modeling of Photocatalytic Water Disinfection. |

Sommario/riassunto

This book presents the latest results related to photocatalytic inactivation/killing of microorganisms, which is a promising alternative disinfection method that produces less or even no disinfection byproduct. The book is divided into 13 chapters, which introduce readers to the latest developments in the photocatalytic disinfection of microorganisms, examine essential photocatalytic (PC) and photoelectrocatalytic (PEC) disinfection studies, and forecast and make recommendations for the further development of PC and PEC disinfection. Bringing together contributions by various leading research groups worldwide, it offers a valuable resource for researchers and the industry alike, as well as the general public. Taicheng An, PhD, is Chair Professor and Director at the Institute of Environmental Health and Pollution Control, School of Environmental Science and Engineering, Guangdong University of Technology, Guangzhou, China. Huijun Zhao, PhD, is Chair Professor and Director at the Centre for Clean Environment and Energy & Griffith School of Environment, Griffith University, Australia. Po Keung Wong, PhD, is a Professor at the School of Life Sciences, the Chinese University of Hong Kong, Hong Kong SAR, China.