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Sommario/riassunto

Extremophiles: Diversity, Adaptation and Applications brings up-todate knowledge about different types of extremophiles, the fascinating group of microorganisms that love to live in extreme environmental conditions. The book consists of fourteen chapters, of which, the first provides an overview of all the major types of extremophiles and the relationship with their respective extreme environments. The chapters following this introduction explain the diversity of prokaryotes based on environmental conditions, adaptation mechanisms, and industrial applications. The book concludes with a summary of the diverse biotechnological and industrial applications of extremophiles, emphasizing the importance of these microorganisms for human welfare. The book is intended as a primary textbook reference that enriches the knowledge base of scholars in the field of microbiology and biotechnology. It can also serve as a secondary reference for anyone who is interested in research on extremophiles. Key Features -Covers all the major types of extremophiles, including hyperthermophiles, psychrophiles, halophiles, acidophiles, alkaliphiles, xerophiles, oligotrophs, chemolithotrophs, anaerobes and others -Provides a fundamental overview of the microbiology of extreme environments - Supplements fundamentals with information about industrial and scientific applications - Presents information in a simple structured format suitable for learners - Includes references for further