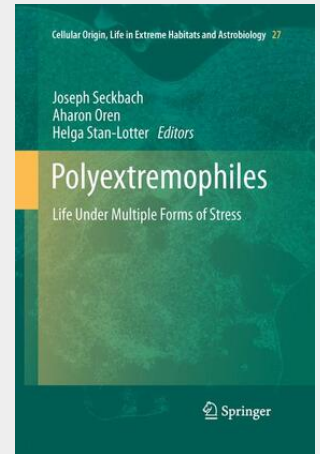


Polyextremophiles

Life Under Multiple Forms of Stress

Many Microorganisms and some macro-organisms can live under extreme conditions. For example, high and low temperature, acidic and alkaline conditions, high salt areas, high pressure, toxic compounds, high level of ionizing radiation, anoxia and absence of light, etc. Many organisms inhabit environments characterized by more than one form of stress (Polyextremophiles). Among them are those who live in hypersaline and alkaline, hot and acidic, cold/hot and high hydrostatic pressure, etc. Polyextremophiles found in desert regions have to cope with intense UV irradiation and desiccation, high as well as low temperatures, and low availability of water and nutrients. This book provides novel results of application to polyextremophiles research ranging from nanotechnology to synthetic biology to the origin of life and beyond.

Many Microorganisms and some macro-organisms can live under extreme conditions. For example, high and low temperature, acidic and alkaline conditions, high salt areas, high pressure, toxic compounds, high level of ionizing radiation, anoxia and absence of light, etc. Many organisms inhabit environments characterized by more than one form of stress (Polyextremophiles). Among them are those who live in hypersaline and alkaline, hot and acidic, cold/hot and high hydrostatic pressure, etc. Polyextremophiles found in desert regions have to cope with intense UV irradiation and desiccation, high as well as low temperatures, and low availability of water and nutrients. The chapters of this book provide an updated picture of our current understanding of the distribution of polyextremophilic microorganisms in nature and about the special physiological and biochemical properties that enable them to withstand multiple environmental extremes. It provides descriptions of unusual and less explored ecosystems such as Earth's cryosphere, marine hypersaline deeps, hot and cold desert environments, hot springs with elevated temperature and low or high pH. This book provides novel results of application to polyextremophiles research ranging from nanotechnology to synthetic biology to the origin of life and beyond. The topics of this volume are of importance not only for the understanding of the limits of life on Earth, but also for Astrobiology with the exploration of the possibility of life 'as we know it' to be present on other extraterrestrial bodies in the Universe.



213,99 €

199,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9789400792401

Medium: Buch

ISBN: 978-94-007-9240-1

Verlag: Springer Netherlands

Erscheinungstermin: 24.06.2015

Sprache(n): Englisch

Auflage: 2013

Serie: Cellular Origin, Life in Extreme

Habitats and Astrobiology

Produktform: Kartoniert

Gewicht: 9942 g

Seiten: 634

Format (B x H): 155 x 235 mm

