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Titolo	Acid-Base Balance and Nitrogen Excretion in Invertebrates : Mechanisms and Strategies in Various Invertebrate Groups with Considerations of Challenges Caused by Ocean Acidification / / edited by Dirk Weihrauch, Michael O'Donnell
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Descrizione fisica	1 online resource (X, 306 p. 63 illus., 25 illus. in color.)
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Soggetti	Physiology Invertebrates Animal ecology Animal Physiology Animal Ecology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1: Acid-base balance in crustaceans (Fehsenfeld, Weihrauch) -- Chapter 2: Acid-base balance in cephalopods (Hu, Tseng) -- Chapter 3: Acid-base balance in echinoderms (Stumpp) -- Chapter 4: Acid-base balance in the digestive tract of insects (Onken, Moffett) -- Chapter 5: Effect of elevated PCO <sub>2</sub> levels (global change) on the acid-base balance in marine invertebrates (Melzner, Thomson) -- Chapter 6: Nitrogen excretion in freshwater and soil invertebrates: planarians, leeches and nematodes. (Quijada-Rodriguez, Weihrauch) -- Chapter 7: Nitrogen excretion in aquatic crustaceans (Weihrauch) -- Chapter 8: Nitrogen excretion in terrestrial crustaceans (Linton) -- Chapter 9: Nitrogen excretion in insects (O'Donnell) -- Chapter 10: The Na/K-ATPase and its role in acid-base balance and ammonia excretion (Leone, Lucena, Garcon, Pinto, McNamara) -- Chapter 11: Sodium/hydrogen transporters (NHEs/MHAs) and their role in acid-base balance and ammonia excretion (Rheault).
Sommario/riassunto	This textbook provides a comprehensive overview on the diverse

strategies invertebrate animals have developed for nitrogen excretion and maintenance of acid-base balance and summarizes the most recent findings in the field, obtained by state-of-the-art methodology. A broad range of terrestrial, freshwater and marine invertebrate groups are covered, including crustaceans, cephalopods, insects and worms. In addition the impact of current and future changes in ocean acidification on marine invertebrates due to anthropogenic CO<sub>2</sub> release will be analyzed. The book addresses graduate students and young researchers interested in general animal physiology, comparative physiology and marine/aquatic animal physiology. Also it is an essential source for researchers dealing with the effects of increasing pCO<sub>2</sub> levels on aquatic animals, of which the vast majority are indeed invertebrates. All chapters are peer-reviewed. .

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