

1. Record Nr.	UNINA9910782367203321
Titolo	Nitrogen in the marine environment [[electronic resource] /] / Edward J. Carpenter, Douglas G. Capone, Deborah A. Bronk, Margaret R. Mulholland
Pubbl/distr/stampa	New York, : Academic Press, 2008
ISBN	1-281-91118-6 9786611911188 0-08-055892-5
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (1758 p.)
Altri autori (Persone)	CarpenterEdward J CaponeDouglas G BronkDeborah A MulhollandMargaret R
Disciplina	574.52636 577.7145 577/.145
Soggetti	Nitrogen cycle Marine biology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographies and index.
Nota di contenuto	Front Cover; Nitrogen in the Marine Environment; Copyright Page; Contents; Dedication Page; Foreword; A Timely Book for Interesting Times; Preface to Second Edition; Acknowledgements; Contributors; Chapter 1: The Marine Nitrogen Cycle: Overview and Challenges; 1. Introduction; 4. Budgets; 5. Nitrogen Challenges; 6. Conclusions; Acknowledgements; References; Chapter 2: Gaseous Nitrogen Compounds (NO, N2O, N2, NH3) in the Ocean; 1. Introduction; 3. Nitrous Oxide; 4. Dinitrogen; 5. Ammonia; 6. Outlook; Note Added to Proof; References Chapter 3: Chemical Composition of Marine Dissolved Organic Nitrogen3. Bulk Chemical Composition of High Molecular Weight Dissolved Organic Nitrogen; 5. Sources and Sinks Based on Chemical Information; 6. Summary and Future Direction; Chapter 4: Nitrogen Fixation in the Marine Environment; 3. Pelagic Nitrogen Fixation; 4.

What Limits Nitrogen Fixation; 5. Biogeochemical Significance of Marine Nitrogen Fixation; Chapter 5: Nitrification in Marine Systems; 2. Nitrifying Microorganisms; 3. Role of Nitrification in the Marine Nitrogen Cycle  
4. Environmental Variables Affecting Nitrification Rates and Distributions  
6. Future Directions; References; Chapter 6: Denitrification including Anammox; 2. Pathways and Controls of Nitrogen Oxide Reduction and Denitrification; 3. Sites of Marine Denitrification; 4. Isotopic Consequences of Denitrification; Acknowledgements; Chapter 7: Nitrogen Uptake and Assimilation; 2. Re-Evaluation of Nitrogen Limitation and New Production in the Sea; 4. Pathways of Nitrogen Uptake and Assimilation; 5. What Does the Future Hold?; Acknowledgements; Chapter 8: Nitrogen Regeneration  
2. Types of Regenerated Nitrogen  
5. Rates of Nitrogen Regeneration in the Water Column; Chapter 9: Land-Based Nitrogen Sources and Their Delivery to Coastal Systems; 2. Spatial Patterns in Amount and Form of River Nitrogen Export; 3. Sources of Nitrogen and Factors Controlling Nitrogen Export; 4. Temporal Patterns in River Export of Nitrogen; 5. Effects on Nitrogen Export of Long-Term Human Modification of Discharge; 6. Groundwater; 7. Atmospheric Deposition Directly to Coastal Waters; 8. Summary and Future Directions; Appendix; Acknowledgements; References  
Chapter 10: Phototransformations of Dissolved Organic Nitrogen  
1. Introduction; 2. Photochemical Production of Inorganic Nitrogen; 4. Recommendation for Future Research; Chapter 11: Nitrogen and Marine Eutrophication; 2. The Evidence for the Role of Nitrogen in Marine Eutrophication; 3. Nutrient, Physical and Climatic Controls of Marine Eutrophication; 4. Is Nitrogen Nitrogen? Roles of Different Nitrogen Sources in Marine Eutrophication; 5. The Role of Nitrogen in Relation to other Nutrients; 7. The Future and Nitrogen Management; Chapter 12: Nitrogen Uptake in the Southern Ocean  
2. Environmental Factors Regulating Nitrogen Uptake

---

Sommario/riassunto

Since the first edition of Nitrogen in the Marine Environment was published in 1983, it has been recognized as the standard in the field. In the time since the book first appeared, there has been tremendous growth in the field with unprecedented discoveries over the past decade that have fundamentally changed the view of the marine nitrogen cycle. As a result, this Second Edition contains twice the amount of information that the first edition contained. This updated edition is now available online, offering searchability and instant, multi-user access to this important information.\*

---