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| Descrizione fisica | 1 online resource (467 p.) |
| Collana | Wiley Works |
| Disciplina | 552/.58 |
| Soggetti | Carbonate rocks Sedimentary rocks Diagenesis Electronic books. |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Description based upon print version of record. |
| Nota di bibliografia | Includes bibliographical references at the end of each chapters and index. |
| Nota di contenuto | Title Page; Copyright Page; CONTENTS; PREFACE; ACKNOWLEDGEMENTS; ABOUT THE COMPANION WEBSITE; PART I CARBONATE SEDIMENTOLOGY: AN OVERVIEW; Introduction; Carbonate minerals and their chemistry; The carbonate factory; The different carbonate factories; Microbes and algae; Invertebrate biofragments; Further reading; CHAPTER 1 CARBONATE ROCKS AND PLATFORMS; What are carbonate sedimentary rocks?; Why should we care about studying these rocks?; What is the scientific approach?; The carbonate continuum; How do carbonate sediments form?; Where are carbonates produced and where do they accumulate? Tectonic settings and the nature of carbonate platforms How do we study carbonate sediments and rocks?; Further reading; CHAPTER 2 CARBONATE CHEMISTRY AND MINERALOGY; Introduction; Chemistry; Carbonate precipitation and dissolution in the ocean; Further reading; CHAPTER 3 THE CARBONATE FACTORY; Introduction; Sediment production; Component modification; Karst and carbonate spring precipitates; Further reading; CHAPTER 4 MARINE CARBONATE FACTORIES AND ROCK CLASSIFICATIONS; Introduction; Environmental |

controls; Benthic marine factories; Pelagic marine factories; Limestone classification schemes

Further reading CHAPTER 5 THE CARBONATE FACTORY: MICROBES AND ALGAE; Introduction; Microbes and carbonates; Microbialites; Modern stromatolites; Calcimicrobes; Calcareous algae; Further reading;

CHAPTER 6 THE CARBONATE FACTORY: SINGLE CELLS AND SHELLS; Introduction; Single-cell microfossils; Macrofossils; Further reading;

CHAPTER 7 THE CARBONATE FACTORY: ECHINODERMS AND COLONIAL INVERTEBRATES; Introduction; Echinoderms; Sponges; Bryozoans;

Corals; Further reading; PART II CARBONATE DEPOSITIONAL SYSTEMS: AN OVERVIEW; Introduction; Terrestrial systems; Strandline systems; Marine systems

Further reading CHAPTER 8 LACUSTRINE CARBONATES; Introduction; Modern lakes: Zonation and classification; Controls on lake sedimentation; Lake sedimentation; Lacustrine microbialites;

Classification of ancient lake deposits; Further reading; CHAPTER 9 CARBONATE SPRINGS; Introduction; Spring systems; Classification of springs; Tufa, travertine, or sinter?; Biota of spring systems; Carbonate precipitation in spring systems; Spring architecture; Calcareous spring carbonate facies; Further reading;

CHAPTER 10 WARM-WATER NERITIC CARBONATE DEPOSITIONAL SYSTEMS; Introduction; The carbonate factory

Depositional systems Further reading; CHAPTER 11 THE COOL-WATER NERITIC REALM; Introduction; The Carbonate Factory; Depositional settings; Warm-temperate carbonates; Cool-temperate carbonates;

Cold-water, polar carbonate systems; The rock record; Further reading;

CHAPTER 12 MUDDY PERITIDAL CARBONATES; Introduction; Andros Island: The Bahamas; Shark Bay: Western Australia; The United Arab Emirates: Persian Gulf; Stratigraphy; The shallowing-upward peritidal cycle; How do numerous peritidal cycles form?; Temporal variations on the peritidal cycle theme; Further reading

CHAPTER 13 NERITIC CARBONATE TIDAL SAND BODIES

Sommario/riassunto

This textbook provides an overview of the origin and preservation of carbonate sedimentary rocks. The focus is on limestones and dolostones and the sediments from which they are derived. The approach is general and universal and draws heavily on fundamental discoveries, arresting interpretations, and keystone syntheses that have been developed over the last five decades. The book is designed as a teaching tool for upper level undergraduate classes, a fundamental reference for graduate and research students, and a scholarly source of information for practicing professionals whose expertise lies
