ering’ in Chapter 7. Here, they characterize the essentials of the three principal weathering reactions (hydrolysis, carbonation, oxidation), and they elaborate on the thermodynamics and kinetics of relevant processes. Chapter 8, ‘Biological weathering’, provides a brief summary of weathering reactions at the interface between the living and the non-living realms, where biological activity is a powerful force. Chapter 9, ‘Intensity and rate of weathering’, reviews the effectiveness of the weathering process as a function of environmental factors and attempts to assess the turnover rates for weathering cycles on a global scale. The penultimate Chapter 10 entitled ‘Products of weathering’ is concerned with selected residual neoformations such as laterites, silcretes and calcretes that may form in the superficial weathering zone under specific environmental conditions. In this context, the chapter also addresses the concentrations of economic minerals and metals (aluminum, iron, manganese, copper and gold) occurring in intensely weathered terrains.

In summary, the above text, notably its introductory chapters, makes an excellent introduction to the subject of weathering processes. Any student who has absorbed the basic information set out in this book should have acquired a solid knowledge of the working mode of the global weathering and sediment-forming machine. Also helpful for the beginner is a wealth of boxed supplementary information and an Appendix containing a list of minerals and named compounds, a glossary of terms, an extremely useful table of units, constants and conversion factors and, last but not least, the Periodic Table of the Elements.

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Increasing levels of UV radiation reaching the Earth surface due to decreasing stratospheric ozone concentrations have promoted much research on UV radiation effects over the past two decades. The book edited by de Mora, Demers and Vernet evolved from a workshop entitled ‘The Effects of UV Radiation on Various Ecosystems at Different Latitudes’ held in Ensenada, Mexico, in 1996, and provides an up to date compilation of scientific information on UV radiation effects specifically in the marine environment (although reference to freshwater environments is also given).
A multidisciplinary approach covering physical, chemical and biological aspects is adopted in the book. Its 11 chapters can be grouped into five parts. The first part (Chapters 1 and 2) deals with the physics and optics of UV radiation in the atmosphere and in seawater, including a summary on the causes and effects of stratospheric ozone decline. A second part (Chapter 3) gives a general introduction to the principles of action spectra and spectral weighing functions, laying the basis for the discussion of the various UV effects in marine ecosystems discussed in the following chapters. I find this chapter particularly useful because it will help scientists new to the field of marine photochemistry and photobiology to familiarize themselves with the basic concepts and language of these fields. In the third part (Chapters 4 and 5), an overview on marine photochemistry and its impact on biogeochemical cycles is presented. The authors do a nice job in making clear the importance of interdisciplinary research, stressing the close link of photophysics and photochemistry to biota that use photochemically produced compounds as substrates and provide dissolved organic matter (DOM), which is the strongest light-absorbing component of seawater and the most important substrate for photochemical reactions in natural water. The remainder of the book treats the photobiological aspects of UV radiation. The fourth part (Chapters 6 and 7) offers a general discourse on the mechanisms of UV damage to aquatic organisms and their strategies to minimize this damage. In the last part (Chapters 8–11) specific UV effects on groups of organisms (going over the various trophic levels from viruses and bacteria through phytoplankton and zooplankton to fish) and at the community level are considered. Each chapter starts with an introduction giving an overview of the material covered and its relevance, and ends with a brief summary that underlines the most important concepts. An extensive and very up to date bibliography is given for each individual chapter, including several papers as recent as 1998 and 1999. The index at the end of the book makes it easy to find information on specific topics, although it might have been a good idea for even better orientation to include section titles in the table of contents, which lists chapter titles and authors only.

The fact that the book is a collection of articles with no less than 20 contributing authors naturally leads to some redundancy and incoherence in style and nomenclature, but by and large, the editors have done a very good job at integrating the information. The character of each chapter as a comprehensive review on one particular topic has the advantage of accommodating the reader who may choose to refer to just one or a few chapters rather than read the entire book. Only in some cases, the reader could have benefited from more cross referencing and coordination. Examples are the overlap in some of the material covered in the first two chapters, and the introduction of some principles in both the general and trophic level discussions on photobiological effects. For example, cyclobutane pyrimidine dimers are introduced in Chapters 6, 7 and 8. In Chapter 6 they are subsequently referred to as pyrimidine dimers, in the following chapters they are abbreviated CPDs. It is also slightly confusing, that Chapter 10 presents a detailed discussion