



Light in shallow waters: A brief research review

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ABSTRACT: Until recently, optical processes in shallow water, where a large portion of solar photons penetrate to the ocean floor, has received little attention outside of a relatively small number of modeling and remote sensing investigations. In the open ocean, scales of variability in relation to optical attenuation length often permit the treatment of the inwater light field as a one-dimensional, depth-dependent problem. In shallow waters hosting productive benthic ecosystems, such as coral reefs or seagrasses, the in-water light field is often three-dimensional in character. In the past decade, quantitative investigations of benthic optical properties and the resulting shallow-water light field have been conducted, fueled by a variety of new sensors designed specifically to address the shallow water problem. Recent publications, as well as the papers contained in this volume, illustrate the rich diversity and interdisciplinary nature of shallow-water optical problems and highlight important issues that should attract closer attention in the future.

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