

1. Record Nr.	UNINA9910733710303321
Titolo	Chemical oceanography of frontal zones // edited by Igor M. Belkin
Pubbl/distr/stampa	Berlin ; ; Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2022
ISBN	3-662-65839-9
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (445 pages)
Collana	The Handbook of Environmental Chemistry, , 1616-864X ; ; 116
Disciplina	551.4601
Soggetti	Chemical oceanography Oceanography
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction -- Large-scale, persistent nutrient fronts of the world ocean: Impacts on biogeochemistry -- Colored dissolved organic matter in frontal zones -- Contamination by persistent organic pollutants and related compounds in deep-sea ecosystems along frontal zones around Japan -- Major nutrient fronts in the northeastern Atlantic -- from the subpolar gyre to adjacent shelves -- The Pacific-Atlantic front in the East Siberian Sea of the Arctic Ocean -- Fronts and gradients in the northeastern Baltic Sea: a review -- Lateral and vertical mixing in the chemical frontal zones: the Kuroshio nutrient stream -- Observations of the coastal oceanic fronts in the northern South China Sea -- Front-driven physical-biogeochemical-ecological interactions in the Yellow Sea Large Marine Ecosystem -- Microplastic transport in the South China Sea -- Lagrangian methods to study fronts and pathways of marine litter in tidal basins -- The role of fronts and eddies in accumulating and influencing floating macro and microplastic dispersal -- Fate of mercury in the Subarctic Front of the North Pacific -- Biogeochemical oceanography and sedimentology of the Macquarie Ridge region, SW Pacific sector of the Southern Ocean -- Biochemical aspects of fronts and eddies of the Mediterranean Sea -- Microbial community and environmental chemistry in the hypoxic zone of the Changjiang River Estuary.
Sommario/riassunto	This book is a unique and authoritative review of chemical fronts in the ocean world. It includes regional chapters on chemical fronts in all

major oceans (Atlantic, Indian, Pacific, Arctic, and Southern) and marginal seas (North Sea, Baltic Sea, Mediterranean Sea, Gulf of Mexico, Yellow Sea, and the East Siberian Sea). Thematic chapters focus on diverse topics such as cross-frontal transfer of nutrients; diapycnal mixing and its impact on nutrient fluxes in western boundary currents (Gulf Stream and Kuroshio); front-driven physical-biogeochemical-ecological interactions; dynamics of coloured dissolved organic matter; pollutant concentration and fish contamination in frontal zones; distribution of microplastics in the ocean, and Lagrangian methods to study the transport of marine litter. This volume will appeal to a broad audience, including researchers, instructors, students, and practitioners of all kinds involved in scientific and applied research, environment protection and conservation, and maritime industries including fisheries, aquaculture, and mining. Chapter "Lagrangian Methods for Visualizing and Assessing Frontal Dynamics of Floating Marine Litter with a Focus on Tidal Basins" is available open access under a Creative Commons Attribution 4.0 International License via link.springer.com.
