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| Nota di contenuto | Beyond the iron age: the ecological relevance of non-ferrous bioactive trace metals and organic growth factors in aquatic systems -- Molybdenum limitation of microbial nitrogen assimilation in aquatic ecosystems and pure cultures --Redox chemistry of molybdenum in natural waters and its involvement in biological evolution --Potential trace metal co-limitation controls on N ₂ fixation and NO ₃ uptake in lakes with varying trophic status --Regression modeling of the North East Atlantic Spring Bloom suggests previously unrecognized biological roles for V and Mo --Interrelated influence of light and Ni on Trichodesmium growth --Phytoplankton responses to atmospheric metal deposition in the coastal and open-ocean Sargasso Sea -- Microplate-reader method for the rapid analysis of copper in natural waters with chemiluminescence detection --Geographical gradients of dissolved Vitamin B12 in the Mediterranean Sea --The distribution of thiamin and pyridoxine in the western tropical North Atlantic Amazon |

River plume --Vitamin B1 and B12 uptake and cycling by plankton communities in coastal ecosystems.

Sommario/riassunto

In the last three decades, research has extensively focused on the role of Fe and other mineral nutrients in regulating biological processes, ranging from the surface to the deep ocean. This has produced major breakthroughs in our understanding of the fundamental role of those bioactive elements on the carbon, nitrogen and sulfur cycles and ecosystem function. However, biological processes cannot be entirely sustained by that small set of chemical elements, and new scientific evidence suggests that trace metals other than Fe (e.g., Co, Mo and Ni) as well as essential organic growth factors (e.g., vitamins) may also be crucial in most aquatic systems. We would like to solicit all types of articles (e.g., original research, methods, hypothesis & theory, review, perspective, general commentary, opinion, mini review and technology reports) that address the impact of bioactive substances other than Fe on ecosystem dynamics. Topics may include genomics, elemental and vitamin limitation, metabolite production and excretion, ectocrine relationships and biogeochemical cycles in different aquatic systems (e.g., marine, fresh waters, hydrothermal vents) and sediments. Articles addressing other related topics not listed above are also welcome.
