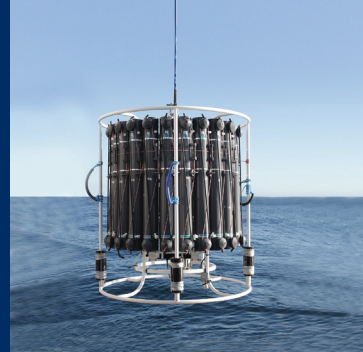


Elements

An International Magazine of Mineralogy, Geochemistry, and Petrology

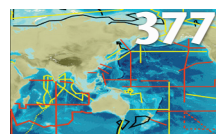


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Marine Biogeochemistry of Trace Elements and Their Isotopes

Guest Editors: **Catherine Jeandel, Zanna Chase, and Vanessa Hatje**

A trace metal–clean sampling system ready to collect seawater during the GEOVIDE cruise (GEOTRACES GA01). For the sample collection, Go-Flo bottles are mounted on a “rosette” and deployed open. Their closure, at depths down to ~6,000 m, is electrically controlled from the ship. CREDIT: GERALDINE SARTHOU



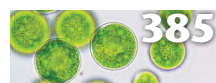
GEOTRACES: The Marine Biogeochemical Cycle of Trace Elements and Their Isotopes

Phoebe J. Lam and Robert F. Anderson



New Tools, New Discoveries in Marine Geochemistry

Catherine Jeandel and Derek Vance



Oceanic Micronutrients: Trace Metals that are Essential for Marine Life

Maeve C. Lohan and Alessandro Tagliabue



Processes that Regulate Trace Element Distribution in the Ocean

Walter Geibert



Discovering the Ocean’s Past through Geochemistry

Zanna Chase, Michael J. Ellwood, and Tina van de Flierdt



Trace-Metal Contaminants: Human Footprint on the Ocean

Vanessa Hatje, Carl H. Lamborg, and Edward A. Boyle



Changing Trace Element Cycles in the 21st Century Ocean

Gideon M. Henderson, Eric P. Achterberg, and Laurent Bopp

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