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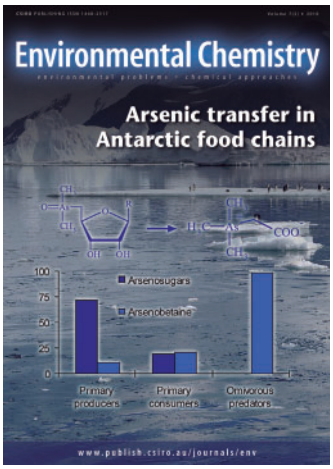
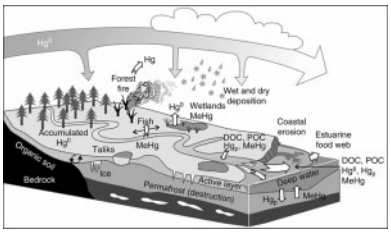


Cover

Antarctic ecosystems provide the opportunity to investigate the natural cycles of the elements, because the food webs are relatively simple and trace element contamination from anthropogenic sources is negligible. See Grotti et al. (pp. 207–214) for a report on the arsenic species from a range of Antarctic organisms, and a comparison to the patterns of arsenicals with those from similar studies in temperate and tropical waters.



Recent research on mercury contamination has discovered a photochemical process unique to the Arctic that leads to mercury deposition on frozen surfaces after polar sunrise, but the connection between mercury deposition and entry into food webs remains tenuous and poorly understood. In Macdonald and Loseto (pp. 133–138) it is proposed that the Arctic Ocean's sensitivity to the global mercury cycle depends far more on neglected post-deposition processes that lead to methylation within the ice–ocean system, and the vulnerability of these processes to changes occurring in the cryosphere.

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