Environmental Chemistry environmental problems • chemical approaches



399

406

413

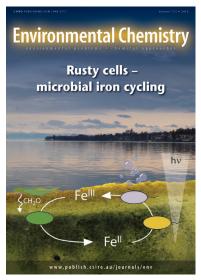
422

429

435

443

CONTENTS



Cover

Microbial ecosystems are characterised by the interplay of various microorganisms with their biotic and abiotic environment. Biogeochemical niches host adapted microbial communities that are in constant competition for substrates and nutrients. Their natural distribution, interactions and responses to fluctuating environmental conditions are often impossible to simulate in laboratory studies. Using biogeochemical iron redox cycling as an example, Kappler and coworkers (pp. 399-405) suggest the application of a conceptual framework to improve our understanding of the principal functioning of (geo)microbial ecosystems.



Iodine in the atmosphere plays an important role in troposphere ozone destruction and climate change. However, cycling of atmospheric iodine is still poorly understood because of uncertainties in iodine speciation in aerosols. Xu et al. (see pp. 406-412) report iodine levels and speciation in marine aerosols collected along a cruise path from Shanghai to the Arctic Ocean.

EDITORIAL

New editor for atmospheric chemistry, and free open access for Rapid Communications Kevin A. Francesconi

CONCEPT

Ecosystem functioning from a geomicrobiological perspective – a conceptual framework for biogeochemical iron cycling

Caroline Schmidt, Sebastian Behrens and Andreas Kappler

RESEARCH PAPERS

Iodine speciation in marine aerosols along a 15 000-km round-trip cruise path from Shanghai, China, to the Arctic Ocean

Siqi Xu, Zhouqing Xie, Bing Li, Wei Liu, Liguang Sun, Hui Kang, Hongxia Yang and Pengfei Zhang

Salinity-induced acidification in a wetland sediment through the displacement of clay-bound iron(II)

Annaleise R. Klein, Darren S. Baldwin, Balwant Singh and Ewen J. Silvester

Distribution of perfluoroalkyl compounds and mercury in fish liver from high-mountain lakes in France originating from atmospheric deposition Lutz Ahrens, Nicolas Marusczak, Janne Rubarth, Aurélien Dommergue, Rachid Nedjai, Christophe Ferrari and Ralf Ebinghaus

Perfluorinated compounds in marine surface waters: data from the Baltic Sea and methodological challenges for future studies

Torben Kirchgeorg, Ingo Weinberg, Annekatrin Dreyer and Ralf Ebinghaus

Investigation of an amoxicillin oxidative degradation product formed under controlled environmental conditions Igal Gozlan, Adi Rotstein and Dror Avisar

Biogeochemistry and cyanobacterial blooms: investigating the relationship

in a shallow, polymictic, temperate lake

Michael R. Grace, Todd R. Scicluna, Chamindra L. Vithana, Peter Symes and Katrina P. Lansdown



EARLY ALERT

Sign-up at www.publish.csiro.au/journals/env for our electronic early alert.