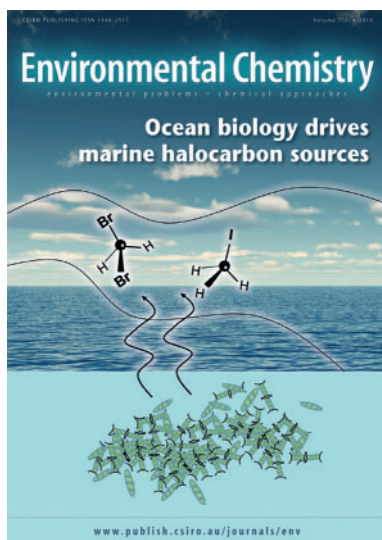


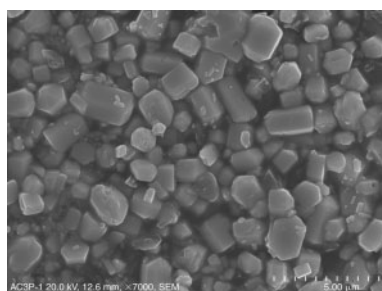
Environmental Chemistry

environmental problems • chemical approaches



Cover

The exchange of gases between the atmosphere and oceans impacts Earth's climate. Over the remote oceans, marine emissions of organic species may have significant impacts on cloud properties and the atmosphere's oxidative capacity. Quantifying these emissions and their dependence on ocean biology over the global oceans is a major challenge. See Arnold et al. (pp. 232–241) for a presentation of a new method that relates atmospheric abundance of several organic chemicals over the South Atlantic Ocean to the exposure of air to ocean biology over several days before its sampling.



The mobility of toxic arsenic compounds in the environment can be controlled by the solubility of certain minerals. To predict and model the fate and behaviour of these contaminants, the solubility and related thermodynamic properties of the lead and arsenic mineral mimetite were determined. The data obtained in the Bajda paper (see pp. 268–278) will be used to optimise and increase the effectiveness of remediation procedures that are already applied to contaminated sites.

EDITORIAL

Environmental Chemistry: New international team of editors
Kevin A. Francesconi i

RAPID COMMUNICATION

Monitoring advanced oxidation of Suwannee River fulvic acid
Janey V. Camp, Dennis B. George, Martha J. M. Wells
and Pedro E. Arce 225

RESEARCH PAPERS

Relationships between atmospheric organic compounds and air-mass exposure to marine biology
S. R. Arnold, D. V. Spracklen, S. Gebhardt, T. Custer, J. Williams,
I. Peeken and S. Alvaín 232

Dynamic features of speciation analysis by adsorptive stripping techniques
Raewyn M. Town and Herman P. van Leeuwen 242

Impact of various inorganic oxyanions on the removal rates of hexavalent chromium mediated by zero-valent iron
Mario Rivero-Huguet and William D. Marshall 250

Palladium(II) sequestration by phytate in aqueous solution – speciation analysis and ionic medium effects
Antonio Gianguzza, Demetrio Milea, Alberto Pettignano and Silvio Sammartano 259

Solubility of mimetite $\text{Pb}_5(\text{AsO}_4)_3\text{Cl}$ at 5–55°C
Tomasz Bajda 268

Tolerance of seven perennial grasses to high nickel in sand culture
P. M. Kopittke, F. P. C. Blamey, R. A. Kopittke, C. J. Asher
and N. W. Menzies 279

Matrix-bound phosphine in paddy fields under a simulated increase in global atmospheric CO_2
J. Zhang, J. J. Geng, R. Zhang, H. Q. Ren and X. R. Wang 287

Quantitative determination of fullerene (C_{60}) in soils by high performance liquid chromatography and accelerated solvent extraction technique
Ali Shareef, Guihua Li and Rai S. Kookana 292

A method for determination of retention of silver and cerium oxide manufactured nanoparticles in soils
Geert Cornelis, Jason K. Kirby, Douglas Beak, David Chittleborough
and Mike J. McLaughlin 298

Cu and Pb accumulation by the marine diatom *Thalassiosira weissflogii* in the presence of humic acids
Paula Sánchez-Marín, Vera I. Slaveykova and Ricardo Beiras 309

EARLY ALERT

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