## Environmental problems · chemical approaches



Environmental Chemistry PREARCHTRIONE CDEAL ATMYOSPEERIC CHEMISTRY Ministry Minis

## Cover

Atmospheric biological particles have been largely overlooked in the past. While some microorganisms have been studied, the majority of other biological particles have not. The presence of these particles might force us to view the atmospheric aerosol differently. Measurements of biological particles in the atmosphere during the last decade indicate that the presence of these particles seems to have been underestimated by atmospheric scientists. This article will hopefully simulate further research in this area.

Photo courtesy of NASA (http://visibleearth.nasa.gov/)



Ice cores provide an excellent way of finding out about the past. Air bubbles trapped in the ice allow us to directly access the concentration of stable trace gases, including important greenhouse gases. This is one way we have of determining whether we have included all processes correctly into models, and then of verifying their behaviour.

## **RESEARCH FRONT**

**Global Atmospheric Chemistry** 

## HIGHLIGHTS

Past atmospheric composition and chemistry from ice cores – progress and prospects	
Eric W. Wolff, Manuel A. Hutterli and Anna E. Jones	211
Omnipresence of biological material in the atmosphere Ruprecht Jaenicke, Sabine Matthias-Maser and Sabine Gruber	217
<b>REVIEW</b> Iron-binding ligands and their role in the ocean biogeochemistry of iron <i>Keith A. Hunter and Philip W. Boyd</i>	221
<b>RAPID COMMUNICATIONS</b> Global dust teleconnections: aerosol iron solubility and stable isotope composition	
Matthieu Waeles, Alex R. Baker, Tim Jickells and Jurian Hoogewerff	233
Major influence of BrO on the NO <sub>x</sub> and nitrate budgets in the Arctic spring, inferred from $\Delta^{17}O(NO_3^-)$ measurements during ozone depletion events <i>S. Morin, J. Savarino, S. Bekki, A. Cavender, P. B. Shepson</i> and <i>J. W. Bottenheim</i>	238
<b>RESEARCH PAPER</b> Atmospheric variation of nitrous acid at different sites in Europe <i>Karin Acker and Detlev Möller</i>	242
<b>RAPID COMMUNICATION</b> An actual scenario that demonstrates sulcotrione photodegradation on maize leaves after spraying <i>Alexandra ter Halle, Agnès Piquet and Claire Richard</i>	256
<b>RESEARCH PAPERS</b> Experimental determination of the dissolution kinetics of zero-valent iron in the presence of organic complexants <i>Eric M. Pierce, Dawn M. Wellman, Alexander M. Lodge</i> <i>and Elsa A. Rodriguez</i>	260
Comparing bulk extraction methods for chemically available polycyclic aromatic hydrocarbons with bioaccumulation in worms <i>Mickael Barthe and Émilien Pelletier</i>	271

**EARLY ALERT** Sign-up at **www.publish.csiro.au/journals/env** for our electronic early alert and receive the next table of contents **weeks in advance** of the print version.