CONCEPTS
Methane formation in aerobic environments
Frank Keppler, Mihály Boros, Christian Frankenberg, Jos Lelieveld, Andrew McLeod, Anna Maria Pirrttialä, Thomas Röckmann and Jörg-Peter Schnitzler

Contact metamorphism, halocarbons, and environmental crises of the past
Henrik Svensen, Norbert Schmidbauer, Marco Roscher, Frode Stordial and Sverre Planke

RAPID COMMUNICATION
Quantification of natural DOM from UV absorption at two wavelengths
Edward Tipping, Heather T. Corbishley, Jean-Francois Koprivnjak, Daniel J. Lapworth, Matthew P. Miller, Colin D. Vincent and John Hamilton-Taylor

RESEARCH PAPERS
Understanding small-scale features in DGT measurements in sediments
Łukasz Sochaczewski, William Davison, Hao Zhang and Wlodeck Tych

Selenite enhances arsenate toxicity in Thunbergia alata
Katharina Blümlein, Elizabeth Klimm, Andrea Raab and Jörg Feldmann

Seasonal variations of volatile organic compounds in the coastal Baltic Sea
Anna Orlikowska and Detlef E. Schulz-Bull

Postfrontal nanoparticles at Cape Grim: observations
John L. Gras, Salah I. Jimi, Steven T. Siems and Paul B. Krummel

Postfrontal nanoparticles at Cape Grim: impact on cloud nuclei concentrations
John L. Gras

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Khan M. G. Mostofo and Hiroshi Sakugawa

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Juan Antelo, Sarah Fiol, Silvia Mariño, Florencio Arce, Dora Gondar and Rocio Lopez

Empirical model for predicting concentrations of refractory hydrophobic organic compounds in digested sludge from municipal wastewater treatment plants
Randhir P. Deo and Rolf U. Halden

Dissolution kinetics of meta-torbernite under circum-neutral to alkaline conditions
Dawn M. Wellman, Bruce K. McNamara, Diana H. Bacon, Elsa A. Cordova, Ruby M. Ermi and Laken M. Top

What caused the biggest known mass extinction on Earth ~252 million years ago? A possible killer mechanism was the release of halocarbons, which destroyed the ozone layer. New experiments support this hypothesis – explosive gas eruptions from 252 million years ago were reconstructed by heating rocks from East Siberia (Russia), generating ozone-destroying gases. See Svensen et al. (pp. 466–471). Image: H. Svensen.