

THEMATIC ISSUE

FEMS

MICROBIOLOGY ECOLOGY

**Microbial ecology of biogeochemical
interfaces – diversity, structure and
function of microhabitats in soil**

Volume 86

Issue 1

October 2013

ISSN 0168-6496

Guest Editors:

Joanna Hanzel

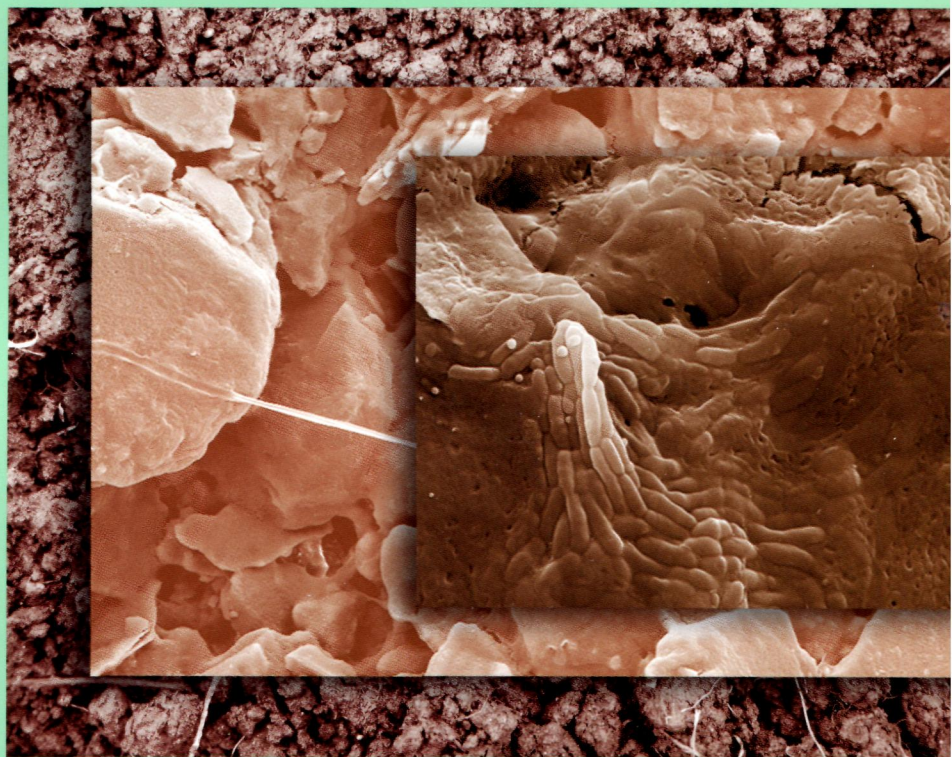
David Myrold

Angela Sessitsch

Kornelia Smalla

Christoph C. Tebbe

Kai Uwe Totsche



WILEY
Blackwell



Discover this journal online at

WILEY ONLINE LIBRARY
wileyonlinelibrary.com/journal/femsec

Editorial

- 1 Microbial ecology of biogeochemical Interfaces – diversity, structure and function of microhabitats in soil
J. Hanzel, D. Myrland, A. Sessitsch, K. Smalla, C.C. Tebbe and K.U. Totsche

Research Articles

- 3 Metal oxides, clay minerals and charcoal determine the composition of microbial communities in matured artificial soils and their response to phenanthrene
D. Babin, G.-C. Ding, G.J. Pronk, K. Heister, I. Kögel-Knabner and K. Smalla
- 15 Mineral composition and charcoal determine the bacterial community structure in artificial soils
G.-C. Ding, G.J. Pronk, D. Babin, H. Heuer, K. Heister, I. Kögel-Knabner and K. Smalla
- 26 Regulation of soil organic C mineralisation at the pore scale
L.S. Ruamps, N. Nunan, V. Pouteau, J. Leloup, X. Raynaud, V. Roy and C. Chenu
- 36 Swimming behavior of the monotrichous bacterium *Pseudomonas fluorescens* SBW25
L. Ping, J. Birkenbeil and S. Monajembashi
- 45 Alkane-degrading bacteria at the soil–litter interface: comparing isolates with T-RFLP-based community profiles
J. Giebler, L.Y. Wick, A. Chatzinotas and H. Harms
- 59 Spatial patterns of methanotrophic communities along a hydrological gradient in a riparian wetland
S. Krause, M. Meima-Franke, M.M. Hefting and P.L.E. Bodelier
- 71 Response of microbial communities to long-term fertilization depends on their microhabitat
D. Neumann, A. Heuer, M. Hemkemeyer, R. Martens and C.C. Tebbe
- 85 Succession of bacterial and fungal 4-chloro-2-methylphenoxyacetic acid degraders at the soil–litter interface
F. Ditterich, C. Poll, H. Pagel, D. Babin, K. Smalla, M.A. Horn, T. Streck and E. Kandeler
- 101 Dryland soil microbial communities display spatial biogeographic patterns associated with soil depth and soil parent material
B. Steven, L.V. Gallegos-Graves, J. Belnap and C.R. Kuske
- 114 Consumers of 4-chloro-2-methylphenoxyacetic acid from agricultural soil and drilosphere harbor *cadA*, *r/sdpA*, and *tfdA*-like gene encoding oxygenases
Y.-J. Liu, S.-J. Liu, H.L. Drake and M.A. Horn
- 130 Active and total prokaryotic communities in dryland soils
R. Angel, Z. Pasternak, M.I.M. Soares, R. Conrad and O. Gillor
- 139 Importance of microbial soil organic matter processing in dissolved organic carbon production
A. Malik and G. Gleixner