

Dr. Martina I. Gocke

List of publications

2010

- Wiesenberg G.L.B., Gocke M.I., Kuzyakov Y. 2010. Optimization of ^{14}C liquid scintillation counting of plant and soil lipids to trace short term formation, translocation, and degradation of lipids. *Journal of Radioanalytical and Nuclear Chemistry* 284, 99-108.
- Gocke M.I., Pustovoytov K., Kuzyakov Y. 2010. Effect of CO_2 concentration on the initial recrystallization rate of pedogenic carbonate – Revealed by ^{14}C and ^{13}C labelling. *Geoderma* 155, 351-358.
- Wiesenberg G.L.B., Gocke M.I., Kuzyakov Y. 2010. Fast incorporation of root-derived lipids and fatty acids in soil – evidence from a short term multiple $^{14}\text{CO}_2$ pulse labelling experiment. *Organic Geochemistry* 41, 1049-1055.
- Gocke M.I., Kuzyakov Y., Wiesenberg G.L.B. 2010. Rhizoliths in loess – evidence for postsedimentary incorporation of root-derived organic matter in terrestrial sediments as assessed from molecular proxies. *Organic Geochemistry* 41, 1198-1206.

2011

- Gocke M.I., Pustovoytov K., Kuzyakov Y. 2011. Pedogenic carbonate recrystallization assessed by isotopic labeling: a comparison of ^{13}C and ^{14}C tracers. *Journal of Plant Nutrition and Soil Science* 174, 809-817.
- Gocke M.I., Pustovoytov P., Kuzyakov Y. 2011. Carbonate recrystallization in root-free soil and rhizosphere of *Triticum aestivum* and *Lolium perenne* estimated by ^{14}C labeling. *Biogeochemistry* 103, 209-222.
- Gocke M.I., Pustovoytov K., Kühn P., Wiesenberg G.L.B., Löscher M., Kuzyakov Y. 2011. Carbonate rhizoliths in loess and their implications for paleoenvironmental reconstruction – revealed by isotopic composition: $\delta^{13}\text{C}$, ^{14}C . *Chemical Geology* 283, 251-260.
- Gocke M.I., Kuzyakov Y. 2011. Effect of temperature and rhizosphere processes on pedogenic carbonate recrystallization: Relevance for paleoenvironmental applications. *Geoderma* 166, 57-65.

2012

- Huguet A., Wiesenberg G.L.B., Gocke M.I., Fosse C., Derenne S. 2012. Branched tetraether membrane lipids associated with rhizoliths in loess: rhizomicrobial overprinting of initial biomarker record. *Organic Geochemistry* 43, 12-19.
- Gocke M.I., Pustovoytov K., Kühn P., Wiesenberg G.L.B., Löscher M., Kuzyakov Y. 2012. Erratum to 'Carbonate rhizoliths in loess and their implications for paleoenvironmental reconstruction – revealed by isotopic composition: $\delta^{13}\text{C}$, ^{14}C '. *Chemical Geology* 283, 251-260'. *Chemical Geology* 291, 294-295.
- Gocke M.I., Pustovoytov P., Kuzyakov Y. 2012. Pedogenic carbonate formation: Recrystallization versus migration – Process rates and periods assessed by ^{14}C labelling. *Global Biogeochemical Cycles* 26, GB1018.

2013

- Gocke M.I., Lehnert O., Frýda J. 2013. Facies development across the Late Silurian Lau Event based on temperate carbonates of the Prague Basin (Czech Republic). *Facies* 59, 611-630.

- Wiesenberg G.L.B., Gocke M.I. 2013. Comment on 'Reconstruction of the late Quaternary paleoenvironments of the Nussloch loess paleosol sequence, Germany, using *n*-alkane biomarkers' by Zech et al. (Quaternary Research 78, 226-235). Quaternary Research 79, 304-305.
- Gocke M.I., Kuzyakov Y., Wiesenberg G.L.B. 2013. Differentiation of plant derived organic matter in soil, loess and rhizoliths based on *n*-alkane molecular proxies. Biogeochemistry 112, 23-40.
- Huguet A., Gocke M.I., Derenne S., Fosse C., Wiesenberg G.L.B. 2013. Root-associated tetraether source microorganisms may reduce estimated paleotemperatures in subsoil. Chemical Geology 356, 1-10.
- Gocke M.I., Liang W., Sommer M., Kuzyakov Y. 2013. Silicon uptake by wheat: Effects of Si pools and pH. Journal of Plant Nutrition and Soil Science 176, 551-560.

2014

- Gocke M.I., Peth S., Wiesenberg G.L.B. 2014. Lateral and depth variation of loess organic matter overprint related to rhizoliths. Catena 112, 72-85.
- Gocke M.I., Gulyás S., Hambach U., Jovanović M., Kovács G., Marković S.B., Wiesenberg G.L.B. 2014. Biopores and root features as new tools for improving paleoecological understanding of terrestrial sediment-paleosol sequences. Palaeogeography, Palaeoclimatology, Palaeoecology 394, 42-58.
- Gocke M.I., Hambach U., Eckmeier E., Schwark L., Zöller L., Fuchs M., Löscher M., Wiesenberg G.L.B. 2014. Introducing an improved multi-proxy approach for paleoenvironmental reconstruction of loess-paleosol archives applied on the Late Pleistocene Nussloch sequence (SW Germany). Palaeogeography, Palaeoclimatology, Palaeoecology 410, 300-315.

2015

- Újvári G., Stevens T., Svensson A., Klötzli U.S., Manning C., Németh T., Kovács J., Sweeney M.R., Gocke M.I., Wiesenberg G.L.B. 2015. Two possible source regions for central Greenland last glacial dust. Geophysical Research Letters 42, 10399-10408.
- Gocke M.I., Kessler F., van Mourik J.M., Jansen B., Wiesenberg G.L.B. 2015. Paleosols can promote root growth of the recent vegetation – a case study from the sandy soil-sediment sequence Rakt, the Netherlands. Soil Discussions 2, 1273-1308.

Publications in non-peer-reviewed journals

- Buggle B., Zech M., Hambach U., Zöller L., Fuchs M., Kreutzer S., Gocke M., Wiesenberg G., Glaser B., Markovic S., Sümegi P.: Tracing ancient forests via biomarkers. Spektrum Ausgabe 1/2011, Universität Bayreuth.
- Gocke M., Wiesenberg G.L.B.: Rhizolithe: Zeitzeugen einer früheren Waldvegetation. Spektrum Ausgabe 1/2011, Universität Bayreuth.

Book chapters

- Wiesenberg G.L.B., Gocke M.I. 2016. Analysis of lipids and polycyclic aromatic hydrocarbons as indicators of past and present (micro)biological activity. In: McGenity T.J. et al. (Eds.) Hydrocarbon and Lipid Microbiology: Cultivation. Springer Protocol Handbooks. Accepted and in press.

Doctoral Dissertation

Gocke M.I. 2011. Pedogenic carbonates in loess – formation rates, formation conditions and source apportionment assessed by isotopes and molecular proxies. University of Bayreuth, 199 p. Online available under: <http://opus.ub.uni-bayreuth.de/volltexte/2011/760>

Unpublished literature

Gocke M.I. 2006. Der Lau-Event (Ludlow, Silur) in den mittleren Paläobreiten: Faziesentwicklung, Kohlenstoff-Isotopie und Palynologie im Požáry-Steinbruch / Tschechien. Diploma thesis. Friedrich-Alexander-University Erlangen-Nürnberg.

Gocke M.I. 2006. Fazieskartierung im Burgsandstein, Feuerletten, Rhät und Lias α am Rathsberg bei Erlangen auf Blatt 6332 Erlangen Nord. Diploma mapping. Friedrich-Alexander-University Erlangen-Nürnberg.