

Dr. Martina I. Gocke

List of conference contributions

2008

- Gocke M.I., Kuzyakov Y.: ^{14}C pulse labeling of plants applied for quantification of pedogenic carbonate recrystallization rate. BayCEER Workshop, 10 April 2008, Bayreuth, Germany.
- Gocke M.I., Pustovoytov K., Kuzyakov Y.: CO_2 concentration in soil air affects recrystallization rate of primary CaCO_3 . Geophysical Research Abstracts 10, 6005.
- Gocke M.I., Kuzyakov Y., Pustovoytov K.: Effect of wheat and ryegrass on the recrystallization rate of pedogenic carbonate (CaCO_3). Eurosoil, 25-29 August 2008, Vienna, Austria.
- Gocke M.I., Kuzyakov Y., Pustovoytov K.: Kohlenstoffisotopenaustausch durch Rekristallisation pedogener Karbonate – Vergleich verschiedener Tracermethoden. 4. Workshop Stabile Isotope in der Bodenkunde, 29-30 September 2008, Göttingen, Germany.

2009

- Gocke M.I., Wiesenberg G.L.B., Pustovoytov K., Kuzyakov Y.: Rhizoliths in loess – determination of the origin using organic geochemical methods. BayCEER Workshop, 2-3 April 2009, Bayreuth, Germany.
- Gocke M.I., Wiesenberg G.L.B., Löscher M., Pustovoytov K., Kuzyakov Y.: Rhizoliths in loess – determination of the origin using organic geochemical approaches. Geophysical Research Abstracts 11, 7861.
- Gocke M.I., Wiesenberg G.L.B., Pustovoytov K., Kuzyakov Y.: Paleoenvironmental implications for rhizoliths from a loess profile at Nussloch, SW Germany. Loessfest, 31 August-3 September 2009, Novi Sad, Serbia.
- Kuzyakov Y., Gocke M.I., Pustovoytov K.: Principles and potentials of ^{14}C labeling for studying recrystallization of loess carbonates by soil development. Loessfest, 31 August-3 September 2009, Novi Sad, Serbia.
- Gocke M.I., Kuzyakov Y., Pustovoytov K.: Bildungsraten sekundärer Karbonate in Abhängigkeit ihrer Position im Bodenprofil. Jahrestagung der Deutschen Bodenkundlichen Gesellschaft, 5-13 September 2009, Bonn, Germany.
- Gocke M.I., Wiesenberg G.L.B., Pustovoytov K., Kuzyakov Y.: Rhizoliths in loess – determination of the origin using organic geochemical methods. International Meeting on Organic Geochemistry, 6-11 September 2009, Bremen, Germany.
- Gocke M.I., Wiesenberg G.L.B.: Incorporation of root derived lipids into soil – evidence from the development of carboxylic acids and their ^{14}C content during a short term $^{14}\text{CO}_2$ pulse labelling experiment. International Meeting on Organic Geochemistry, 6-11 September 2009, Bremen, Germany.
- Gocke M.I., Wiesenberg G.L.B., Pustovoytov K., Kuzyakov Y.: Ecological implications for rhizoliths in loess as derived from organic geochemical analyses. Jahrestagung der Gesellschaft für Ökologie, 14-18 September 2009, Bayreuth, Germany.
- Gocke M.I., Wiesenberg G.L.B.: Incorporation of root derived lipids into soil – evidence from a short term $^{14}\text{CO}_2$ pulse labelling experiment. Jahrestagung der Gesellschaft für Ökologie, 14-18 September 2009, Bayreuth, Germany.

2010

- Wiesenberg G.L.B., Gocke M.I., Bol R., Dungait J.: Influence of soil water on plant growth under controlled conditions. BayCEER Workshop, 15 April 2010, Bayreuth, Germany.
- Gocke M.I., Wiesenberg G.L.B., Pustovoytov K., Kuzyakov Y.: Rhizoliths in loess – a new tool to estimate post-sedimentary incorporation of organic matter in terrestrial environments. Geophysical Research Abstracts 12, 12124.

- Gocke M.I., Pustovoytov K., Kuzyakov Y.: Depth and rate of secondary carbonate accumulation in loess - a ^{14}C pulse labeling column experiment. Geophysical Research Abstracts 12, 12002.
- Wiesenberg G.L.B., Gocke M.I., Kuzyakov Y., Dungait J., Dixon L., Bol R.: How is soil moisture influencing C incorporation and storage in soils for bulk C and at a molecular level? Organic Matter Stabilization and Ecosystem Functions, 19-23 September 2010, Presqu'île de Giens, France.
- Gocke M.I., Kuzyakov Y., Wiesenberg G.L.B.: Root-derived incorporation of C in deep subsoils – assessment using rhizoliths. Organic Matter Stabilization and Ecosystem Functions, 19-23 September 2010, Presqu'île de Giens, France.
- Gocke M.I., Wiesenberg G.L.B.: Rhizoliths demonstrate postsedimentary overprint of loess OM by deep-rooting plants. Workshop Palaeoclimate in the Danube basin, 19-21 November 2010, Bayreuth, Germany.

2011

- Gocke M.I., Kuzyakov Y.: Pedogenic carbonate recrystallization rates and periods are regulated by temperature-dependent rhizosphere processes: Relevance for paleoenvironmental applications. Geophysical Research Abstracts 13, 6751.
- Gocke M.I., Kuzyakov Y., Wiesenberg G.L.B.: Rhizoliths in the loess-paleosol sequence of Nussloch (SW Germany): Differentiation between ancient and modern vegetation using *n*-alkanes. Geophysical Research Abstracts 13, 6730.
- Huguet A., Wiesenberg G.L.B., Gocke M.I., Fosse C., Derenne S.: Rhizoliths in loess: evidence for the heterotrophic lifestyle of branched GDGT-producing bacteria. Geophysical Research Abstracts 13, 2961.
- Wiesenberg G.L.B., Majumder B., Gocke M.I., Kuzyakov Y., Dungait J., Dixon L., Bol R.: Influence of soil moisture on plant biosynthesis, C incorporation and storage in soils at a molecular level. Geophysical Research Abstracts 13, 5055.
- Gocke M.I., Liang W., Beyersdorf U., Sommer M., Kuzyakov Y.: Silicon uptake by wheat and rice: Effects of Si pools and pH. Geophysical Research Abstracts 13, 6774.
- Gocke M.I., Kuzyakov Y., Wiesenberg G.L.B.: Rhizoliths in loess: Quantification of postsedimentary incorporation of root-derived carbon using lipid molecular proxies. International Palaeopedology and Soil Geography Conference, 28 July-1 August 2011, Stuttgart-Hohenheim, Germany.
- Gocke M.I., Pustovoytov K., Kuzyakov Y.: Rhizosphere processes and temperature affect recrystallization rates of pedogenic carbonates: Relevance for paleoenvironmental studies. International Palaeopedology and Soil Geography Conference, 28 July-1 August 2011, Stuttgart-Hohenheim, Germany.
- Bol R., Neugebauer C., Dixon L., Gocke M.I., Dungait J., Hellerstroem C., Dhanoo D., Wiesenberg G.L.B.: Latin square sampling to determine long term effects of drainage and slope position on the C, N, ^{13}C , and ^{15}N content in grassland soils. Jahrestagung der Deutschen Bodenkundlichen Gesellschaft, 3-8 September 2011, Berlin, Germany.
- Gocke M.I., Kuzyakov Y., Wiesenberg G.L.B.: Quelledifferenzierung organischer Substanz im tiefen Unterboden basierend auf molekularen Proxies. Jahrestagung der Deutschen Bodenkundlichen Gesellschaft, 3-8 September 2011, Berlin, Germany.
- Gocke M.I., Wiesenberg G.L.B.: Rhizoliths at the Nussloch loess profile (SW Germany) – assessment of source vegetation using stable isotopes and *n*-alkane molecular proxies. 25. International Meeting on Organic Geochemistry, 18-23 September 2011, Interlaken, Switzerland.
- Gocke M.I., Wiesenberg G.L.B.: Differentiation of organic matter in soil, loess and rhizoliths at the Nussloch sedimentary sequence via *n*-alkane molecular proxies. 25. International Meeting on Organic Geochemistry, 18-23 September 2011, Interlaken, Switzerland.
- Huguet A., Wiesenberg G.L.B., Gocke M.I., Fosse C., Derenne S.: Rhizoliths in loess: evidence for the heterotrophic lifestyle of branched GDGT-producing bacteria. 25. International Meeting on Organic Geochemistry, 18-23 September 2011, Interlaken, Switzerland.

Wiesenberg G.L.B., Majumder B., Gocke M.I., Kuzyakov Y., Dungait J., Dixon L., Bol R.: The effect of soil moisture on biosynthesis of lipids in plants and their incorporation and preservation in soils. 25. International Meeting on Organic Geochemistry, 18-23 September 2011, Interlaken, Switzerland.

Bol R., Dixon L., Dungait J.A.J., Dhanoa D., Neugebauer C., Gocke M.I., Hellerstroem C., Wolf K., Wiesenberg G.L.B.: Latin square sampling to determine long term effects of drainage and slope position on the C, N, ¹³C and ¹⁵N content in grassland soils. SIMSUG, 23-24 November 2011, Lancaster, Great Britain.

2012

Gocke M.I., Wiesenberg G.L.B.: Postsedimentary incorporated root and rhizomicrobial remains influence composition of loess organic matter – an approach based on lipid molecular proxies. Geophysical Research Abstracts 14, 13598.

Majumder B., Gocke M.I., Kuzyakov Y., Wiesenberg G.L.B.: Influence of soil moisture on C incorporation and preservation in soil. Geophysical Research Abstracts 14, 12503.

Wiesenberg G.L.B., Gocke M.I.: Paleoenvironmental reconstructions via molecular proxies. From Process to Proxy & vice versa: Understanding (palaeo)environmental records, 10-11 May 2012, Berlin, Germany.

Gocke M.I., Pustovoytov K., Kuzyakov Y.: Pedogenic carbonate formation is enhanced by rhizosphere activity. Roots to the Future, 26-29 June 2012, Dundee, Great Britain.

Gocke M.I., Wiesenberg G.L.B.: Contribution of root and rhizomicrobial remains to subsoil organic matter – assessed in a loess-paleosol sequence. Roots to the Future, 26-29 June 2012, Dundee, Great Britain.

Wiesenberg G.L.B., Majumder B., Srivastava K., Gocke M.I.: High soil moisture can improve C incorporation and translocation in the plant-soil system, but can alter C preservation in soil. Eurosoil, 2-6 July 2012, Bari, Italy.

Gocke M.I., Kolb S., Wiesenberg G.L.B.: First results of microbial community differentiation in deep subsoil as a function of distance from calcified roots – assessed by 16S rRNA genes. Eurosoil, 2-6 July 2012, Bari, Italy.

Gocke M.I., Peth S., Wiesenberg G.L.B.: Postsedimentary overprint of terrestrial sedimentary archives by deep-rooting plants. Eurosoil, 2-6 July 2012, Bari, Italy.

Gocke M.I., Kuzyakov Y., Wiesenberg G.L.B.: Incorporation of root and rhizomicrobial organic matter in subsoil assessed by *n*-alkane molecular proxies. Eurosoil, 2-6 July 2012, Bari, Italy.

Gocke M.I., Eckmeier E., Fuchs M., Hambach U., Löscher M., Schwark L., Zöller L., Wiesenberg G.L.B.: Nussloch revised: high-resolution multi-proxy analyses of syn- and postsedimentary features in a new loess profile. Hauptversammlung der DeuQua, 16-20 September 2012, Bayreuth, Germany.

Wiesenberg G.L.B., Peth S., Gocke M.I.: Lateral and depth variation of loess organic matter overprint related to ancient and recent roots. Hauptversammlung der DeuQua, 16-20 September 2012, Bayreuth, Germany.

Wiesenberg G.L.B., Gocke M.I.: Organic chemical analyses of loess – is all what we measure of sedimentary origin? International Conference on Loess Research – Tribute to Edward Derbyshire. 27-29 September 2012, Novi Sad, Serbia.

Gocke M.I., Eckmeier E., Hambach U., Löscher M., Schwark L., Zöller L., Wiesenberg G.L.B.: Nussloch revised: high-resolution multi-proxy analyses of syn- and postsedimentary features in a new loess profile. International Conference on Loess Research – Tribute to Edward Derbyshire. 27-29 September 2012, Novi Sad, Serbia.

Wiesenberg G.L.B., Gocke M.I.: In the long term roots can lead to C loss in the deep subsoil. International Workshop on Soil and Sedimentary Organic Matter Stabilization and Destabilization, 7-11 October 2012, Ascona, Switzerland.

Wiesenberg G.L.B., Gocke M.I.: Organic chemical analyses of terrestrial archives – is all what we measure of sedimentary origin? AGU Fall Meeting, 3-7 December 2012, San Francisco, USA.

2013

- Wiesenberg G.L.B., Gocke M.I.: Speichern tief wurzelnde Pflanzen wirklich langfristig Kohlenstoff im tiefen Unterboden? Jahrestagung der Bodenkundlichen Gesellschaft der Schweiz, 7-8 February 2013, Zurich, Switzerland.
- Gocke M.I., Huguet A., Derenne S., Kolb S., Wiesenberg G.L.B.: Molecular multiproxy analysis of ancient root systems suggests strong alteration of deep subsoil organic matter by rhizomicrobial activity. *Geophysical Research Abstracts* 15, 12374.
- Wiesenberg G.L.B., Gocke M.I.: In the long term root-related priming can lead to carbon loss and chemical alterations in the deep subsoil. *Geophysical Research Abstracts* 15, 3594.
- Huguet A., Gocke M.I., Wiesenberg G.L.B., Fosse C., Derenne S.: Lifestyle assessment of branched tetraether source bacteria via root systems of different age and properties. *Geophysical Research Abstracts* 15, 3321.
- Gocke M.I., Wiesenberg G.L.B.: Abschätzung der Rhizosphärenausdehnung im tiefen Unterboden anhand molekularer Proxies. Jahrestagung der Deutschen Bodenkundlichen Gesellschaft, 7-12 September 2013, Rostock, Germany.
- Anquetil C., Gocke M.I., Dignac M.-F., Bardoux G., Huguet A., Rumpel C., Wiesenberg G.L.B., Derenne S.: Suberin markers enable tracing of root-derived sedimentary organic matter overprint. 26. International Meeting on Organic Geochemistry, 15-20 September 2013, Costa Adeje, Tenerife.
- Gocke M.I., Huguet A., Derenne S., Kolb S., Wiesenberg G.L.B.: Rhizomicrobial remains in terrestrial sediments can considerably affect the paleoenvironmental record – a molecular multi-proxy approach with ancient root systems. 26. International Meeting on Organic Geochemistry, 15-20 September 2013, Costa Adeje, Tenerife.
- Huguet A., Gocke M.I., Derenne S., Fosse C., Wiesenberg G.L.B.: Root-associated branched tetraether source microorganisms may reduce estimated paleotemperatures in subsoils. 26. International Meeting on Organic Geochemistry, 15-20 September 2013, Costa Adeje, Tenerife.
- Wiesenberg G.L.B., Hambach U., Eckmeier E., Peth S., Gocke M.I.: Combining Molecular proxies with cutting-edge techniques in Loess-Paleosol sequences: Challenges and opportunities. 26. International Meeting on Organic Geochemistry, 15-20 September 2013, Costa Adeje, Tenerife.
- Gocke M.I., Peth S., Wiesenberg G.L.B.: Reshuffling old paradigms: About the organic nature of secondary carbonate precipitates in terrestrial sediments. IUSS-Divisional Conference of all Commissions and Working Groups of Division I, 30 September-4 October 2013, Ulm, Germany.
- Kuzyakov Y., Gocke M.I., Pustovoytov K.: Pedogenic carbonates: Forms and formation mechanisms. IUSS-Divisional Conference of all Commissions and Working Groups of Division I, 30 September-4 October 2013, Ulm, Germany.
- Wiesenberg G.L.B., Gocke M.I.: Soil forming processes in the deep subsoil in temperate climate assessed via multiple organic and inorganic proxies. IUSS-Divisional Conference of all Commissions and Working Groups of Division I, 30 September-4 October 2013, Ulm, Germany.

2014

- El Kathib R., Bernard S., Huguet A., Deldicque D., Anquetil C., Gocke M.I., Wiesenberg G.L.B., Derenne S.: Plant root encrustation processes: insights from a multitechnique characterization strategy. Goldschmidt Conference, 8-13 June 2014, Sacramento, USA.
- Huguet A., Gocke M.I., Derenne S., Fosse C., Wiesenberg G.L.B.: Root-associated branched GDGTs in terrestrial archives: potential bias on temperature estimates. Goldschmidt Conference, 8-13 June 2014, Sacramento, USA.
- Gocke M.I., Huguet A., Derenne S., Fosse C., Dippold M., Kolb S., Wiesenberg G.L.B.: Ancient calcified roots reveal long-term rhizomicrobial activity in the deep subsoil. Goldschmidt Conference, 8-13 June 2014, Sacramento, USA.
- Gocke M.I., Peth S., Huguet A., Derenne S., Anquetil C., Dignac M.-F., Rumpel C., Bardoux G., Wiesenberg G.L.B.: The deep rhizosphere: an underestimated component of long-term organic

matter dynamics. Biogeomon 2014: 8th International Symposium on Ecosystem Behavior, 13-17 July 2014, Bayreuth, Germany.

Wiesenberg G.L.B., Huguet A., Derenne S., Kolb S., Gocke M.I.: Which role plays rhizomicrobial alteration of root-derived carbon in the deep subsoil for long-term carbon stabilization? Biogeomon 2014: 8th International Symposium on Ecosystem Behavior, 13-17 July 2014, Bayreuth, Germany.

Gocke M.I., Huguet A., Derenne S., Kolb S., Wiesenberg G.L.B.: Long-term fate of carbon in deeply rooted terrestrial sediment assessed by molecular proxies: sequestration vs. mineralization. AGU Fall Meeting, 15-19 December 2014, San Francisco, USA.

2015

Gocke M.I., Derenne S., Anquetil C., Huguet A., Dignac M.-F., Rumpel C., Wiesenberg G.L.B.: Change of soil organic matter quality and quantity by deep-rooting plants – a molecular approach. Geophysical Research Abstracts 17, 9953.

Gocke M.I., Kessler F., van Mourik J., Jansen B., Wiesenberg G.L.B.: Exploitation of nutrient- and C-rich paleosols by deep rooting plants in Dutch drift- and coversands. Geophysical Research Abstracts 17, 10928.

Wiesenberg G.L.B., Gocke M.I.: An interdisciplinary approach to decipher different phases of soil formation using root abundances and geochemical methods. Geophysical Research Abstracts 17, 4951.

Gocke M.I., Wiesenberg G.L.B.: Deep-rooting plants influence quality and quantity of deep subsoil organic matter in the long-term. SUBSOM Symposium 2015: Organic matter storage and turnover in subsoils. 28 April-1 May 2015, Raesfeld, Germany.

Wiesenberg G.L.B., Majumder B., Gocke M.I.: Drought promotes re-utilization of already assimilated C during biosynthesis of epicuticular and internal lipids in leaves, but not production of larger amounts of epicuticular waxes. Plant Waxes: From Biosynthesis to Burial, 16-20 June 2015, Ascona, Switzerland.

Gocke M.I., Anquetil C., Derenne S., Dignac M.-F., Huguet A., Rumpel C., Wiesenberg G.L.B.: Application of free lipids and suberin monomers for improved interpretation of paleoenvironmental records. Plant Waxes: From Biosynthesis to Burial, 16-20 June 2015, Ascona, Switzerland.

Gocke M.I., Kessler F., van Mourik J., Jansen B., Wiesenberg G.L.B.: Tief wurzelnde Pflanzen erschliessen fruchtbare begrabene Böden und nutzen diese als Nährstoffquelle in ehemaligen Plaggen-Esch-Standorten. Jahrestagung der Deutschen Bodenkundlichen Gesellschaft, 5-10 September 2015, München, Germany.

Wiesenberg G.L.B., Gocke M.I.: Durch Wurzeln geförderte Bodenbildung im tiefen Unterboden entschlüsselt mit einem interdisziplinären Ansatz. Jahrestagung der Deutschen Bodenkundlichen Gesellschaft, 5-10 September 2015, München, Germany.

Gocke M.I., Derenne S., Anquetil C., Huguet A., Dignac M.-F., Rumpel C., Wiesenberg G.L.B.: Changes in quality and quantity of deep subsoil organic matter assessed by a molecular approach. 27. International Meeting on Organic Geochemistry, 13-18 September 2015, Prague, Czech Republic.

Gocke M.I., Wiesenberg G.L.B.: Assessment of different phases of soil formation in terrestrial sediments: an interdisciplinary approach combining root abundances and geochemical methods. 27. International Meeting on Organic Geochemistry, 13-18 September 2015, Prague, Czech Republic.

Gocke M.I., Huguet A., Derenne S., Kolb S., Dippold M., Fosse C., Wiesenberg G.L.B.: Disentangling interactions between microbial communities and roots in terrestrial archives. 27. International Meeting on Organic Geochemistry, 13-18 September 2015, Prague, Czech Republic.

El Khatib R., Huguet A., Bernard S., Gocke M.I., Wiesenberg G.L.B., Derenne S.: Formation mechanism of calcified roots in terrestrial sediments: insights from a multitechnique and multiscale characterization strategy. 27. International Meeting on Organic Geochemistry, 13-18 September 2015, Prague, Czech Republic.