
Publications - Andreas Richter
(ORCID: 0000-0003-3282-4808, Researcher-ID: D-8483-2012)

Peer-reviewed publications**Accepted for publication / In press**

- 01 Walker, T.W.N., Kaiser, C., Strasser, F., Herbold, C.W., Leblans, N.I.W., Woebken, D., Janssens, I.A., Sigurdsson, B., Richter, A. (2018) Microbial temperature sensitivity and biomass change explain soil carbon loss with warming. **Nature Climate Change** (accepted for publication).
- 02 Čapek, P., Manzoni, S., Kaštovská, E., Wild, B., Diáková, K., Bárta, J., Schneckner, J., Biasi, C., Martikainen, P., Alves, R., Guggenberger, G., Gentsch, N., Hugelius, G., Palmtag, J., Mikutta, R., Shibistova, O., Urich, T., Schleper, C., Richter, A., Šantrůčková, H. (2018) A plant-microbe interaction framework explaining nutrient effects on primary production. **Nature Ecology and Evolution** (accepted for publication).
- 03 Courtois, E. A., Stahl, C., Van den Berge, J., Bréchet L., Van Langenhove, L., Richter, A., Urbina, I., Soong, J.L., Peñuelas, J., Janssens, I.A. (2018) Spatial variation of soil CO₂, CH₄ and N₂O fluxes across topographical positions in the tropical forests of the Guiana Shield. **Ecosystems** (in press; DOI:10.1007/s10021-018-0232-6).
- 04 Wild, B., Ambus, P., Reinisch, S., Richter, A. (2018) Resistance of soil protein depolymerization rates to eight years of elevated CO₂, warming, and summer drought in a temperate heathland. **Biogeochemistry** (accepted for publication)

Published papers (ISI *Journal Citation Reports* listed journals only)

- 05 Gentsch, N., Wild, B., Mikutta, R., Capek, P., Diáková, K., Schruppf, M., Turner, S., Minnich, C., Schaarschmidt, F., Shibistova, O., Schneckner, J., Urich, T., Gittel, A., Santruckova, H., Bárta, J., Lashchinskiy, N., Fuß, R., Richter, A., Guggenberger, G. (2018) Temperature response of permafrost soil carbon is attenuated by mineral protection. **Global Change Biology** 24: 3401 - 3415.
- 06 Soong, J., Marañón-Jimenez, S., Cotrufo, M.F., Boeckx, P., Bode, S., Guenet, B., Peñuelas, J., Richter, A., Stahl, C., Verbruggen, E., Janssens, I.A., (2018) Soil microbial CNP and respiration responses to organic matter and nutrient additions: evidence from a tropical soil incubation. **Soil Biology and Biochemistry** 122: 141-149.
- 07 Marañón-Jiménez, S., Soong, J.L., Leblans, N. I., Sigurdsson, B., Peñuelas, J., Richter, A., Asensio, D., Fransen, E., Janssens, I.A. (2018) Geothermally warmed soils reveal persistent increases in the respiratory costs of soil microbes contributing to substantial C losses. **Biogeochemistry** 138: 245–260.
- 08 Oburger, E., Vergara Cid, C., Preiner, J., Hu, J., Hann, S., Wanek, W., Richter, A. (2018) Bioavailability, speciation, and phytotoxicity of tungsten (W) in soil affecting growth and molybdoenzyme activity of nodulated soybean. **Environmental Science & Technology** 52: 6146-6156.
- 09 Takriti, M., Wild, B., Schneckner, J., Mooshammer, M., Knoltsch, A., Lashchinskiy, N., Alves, R.J.E., Gentsch, N., Gittel, A., Mikutta, R., Wanek, W., Richter, A. (2018) Soil organic matter quality exerts a stronger control than stoichiometry on microbial substrate use efficiency along a latitudinal transect. **Soil Biology and Biochemistry** 121: 212-220.
- 10 Wild, B., Alves, R., Barta, J., Capek, P., Gentsch, N., Guggenberger, G., Hugelius, G., Knoltsch, A., Kuhry, P., Lashchinskiy, N., Mikutta, R., Palmtag, J., Prommer, J., Schneckner, J., Shibistova, O., Takriti, M., Urich, T., Richter, A. (2018) Amino acid production exceeds plant nitrogen demand in Siberian tundra. **Environmental Research Letters** 13: 034002.
- 11 Angel, R., Panhölzl, C., Gabriel, R., Herbold, C., Wanek, W., Richter, A., Eichorst, S.A., Woebken, D. (2018) Application of stable-isotope labelling techniques for the detection of active diazotrophs. **Environmental Microbiology** 20: 44-61.
- 12 Santruckova, H., Kotas, P., Bárta, J., Urich, T., Čapek, P., Palmtag, J., Alves, R., Biasi, C., Diáková, K., Gentsch, N., Gittel, A., Guggenberger, G., Hugelius, G., Kuhry, P., Lashchinsky, N., Martikainen, P., Mikutta, R., Schleper, C., Schneckner, J., Schwab, C., Shibistova, O., Wild, B., Richter, A. (2018) Significance of dark CO₂ fixation in arctic soils. **Soil Biology and Biochemistry** 119: 11-21.
- 13 Braun, J., Mooshammer, M., Wanek, W., Prommer, J., Walker, T.W.N., Rütting, T., Richter, A. (2018) Full ¹⁵N tracer accounting to revisit major assumptions of ¹⁵N isotope pool dilution approaches for gross nitrogen mineralization. **Soil Biology and Biochemistry** 117:16-26.

- 14 Thao Thi Dao, T.T., Gentsch, N., Mikutta, R., Sauheitl, L., Shibistova, O., Wild, B., Schneckner, J., Bárta, J., Čapek, P., Gittel, A., Lashchinskiy, N., Urich, T., Šantrůčková, H., Richter, A., Guggenberger, G. (2018) Fate of carbohydrates and lignin in north-east Siberian permafrost soils. **Soil Biology and Biochemistry** 116: 311-322.
- 15 Dumschott, K., Richter, A., Loescher, W., Merchant, A. (2017) Post photosynthetic carbon partitioning to sugar alcohols and consequences for plant growth. **Phytochemistry** 144: 243-252.
- 16 Mazoni, S., Capek, P., Mooshammer, M., Lindahl, B.D., Richter, A., Santruckova, H. (2017) Optimal metabolic regulation along resource stoichiometry gradients. **Ecology Letters** 20: 1182–1191.
- 17 Mooshammer, M., Hofhansl, F., Frank, A.H., Wanek, W., Hämmerle, I., Leitner, S., Schneckner, J., Wild, B., Watzka, M., Keiblinger, K. M., Zechmeister-Boltenstern, S., Richter, A. (2017) Decoupling of microbial carbon, nitrogen and phosphorus cycling in response to extreme temperature events. **Science Advances** 3: e1602781.
- 18 Margalef, O., Sardans, J., Fernández-Martínez, M., Molowny-Horas, R., Janssens, I.A., Ciais, P., Goll, D., Richter, A., Obersteiner, M., Asensio, D., Peñuelas, J. (2017) Global patterns of phosphatase activity in natural soils. **Scientific Reports** 7: 1337.
- 19 Turner, S., Meyer-Stüve, S., Schippers, A., Guggenberger, G., Schaarschmidt, F., Wild, B., Richter, A., Dohrmann, R., Mikutta, R. (2017) Microbial utilization of mineral-associated nitrogen in soils. **Soil Biology and Biochemistry** 104: 185-196.
- 20 Cordero, I., Ruiz-Díez, B., Balaguer, L., Richter, A., Pueyoa, J., Rincón, A. (2017) Rhizospheric microbial community of *Caesalpinia spinosa* (Mol.) Kuntze in conserved and deforested zones of the Atiquipa fog forest in Peru. **Applied Soil Ecology** 114:132-141.
- 21 Wild, B., Gentsch, N., Čapek, P., Diáková, K., Alves, R., Bárta, J., Gittel, A., Hugelius, G., Knoltsch, A., Kuhry, P., Lashchinskiy, N., Mikutta, R., Palmtag, J., Schleper, C., Schneckner, J., Shibistova, O., Takriti, M., Torsvik, V., Urich, T., Watzka, M., Šantrůčková, H., Guggenberger, G., Richter, A. (2016) Plant-derived compounds stimulate the decomposition of organic matter in arctic permafrost soils. **Scientific Reports** 6: 25607.
- 22 Spohn, M., Klaus, K., Wanek, W., Richter, A. (2016) Microbial carbon use efficiency and biomass turnover times depending on soil depth - Implications for carbon cycling. **Soil Biology and Biochemistry** 96: 74-81.
- 23 Sigurdsson, B.D., Leblans, N.I.W., Dauwe, S., Guðmundsdóttir, E., Gundersen, P., Gunnarsdóttir, G.E., Holmstrup, M., Ilieva-Makulec, K., Kätterer, T., Marteinsdóttir, B., Maljanen, M., Oddsdóttir, E.S., Ostonen, I., Peñuelas, J., Poepflau, C., Richter, A., Sigurðsson, P., Van Bodegom, P., Wallander, H., Weedon, J., Janssens, I. (2016) Geothermal ecosystems as natural climate change experiments: The ForHot research site in Iceland as a case study. **Icelandic Agricultural Sciences** 29: 53-71.
- 24 Fuchslueger, L., Bahn, M., Hasibeder, R., Kienzl, S., Fritz, K., Schmitt, M., Watzka, M., Richter, A. (2016) Drought history affects grassland plant and microbial carbon turnover during and after a subsequent drought event. **Journal of Ecology** 104: 1453-1465.
- 25 Smith, M., Wild, B., Richter, A., Simonin, K., Merchant, A. (2016) Carbon isotope composition of carbohydrates and polyols in leaf and phloem sap of *Phaseolus vulgaris* L. influences predictions of plant water use efficiency. **Plant and Cell Physiology** 57:1756-1766.
- 26 Palmtag, J., Ramage, J., Hugelius, G., Gentsch, N., Lashchinskiy, N., Richter, A. and Kuhry, P. (2016) Controls on the storage of soil organic carbon in permafrost soil in northern Siberia. **European Journal of Soil Science** 67: 478-491.
- 27 Kohl L., Cumming, E., Cox, A., Rietze, A., Morrissey, L., Lang, S.Q., Richter, A., Suzuki, S., Nealson, K.H., Morrill, P.L. (2016) Exploring the metabolic potential of microbial communities in ultrabasic, reducing springs at The Cedars, CA, US: Evidence of microbial methanogenesis and heterotrophic acetogenesis. **Journal of Geophysical Research, Biogeosciences** 121, 1203–1220.
- 28 Spohn, M., Pötsch, E.M., Eichhorst, S.A., Woebken, D., Wanek, W., Richter, A. (2016) Soil microbial carbon use efficiency and biomass turnover in a long-term fertilization experiment in a temperate grassland. **Soil Biology and Biochemistry** 97: 168-175.
- 29 Graham, E.B., Knelman, J.E., Schindlbacher, A., Siciliano, S., Breulmann, M., Yannarell, A., Beman, J.M., Abell, J., Philippot, L., Prosser, J., Foulquier, A., Yuste, J.C., Glanville, H.C., Jones, D., Angel, R., Salminen, J., Newton, R.J., Bürgmann, H., Ingram, L.J., Hamer, U., Siljanen, H., Peltoniemi, K., Potthast, K., Bañeras, L., Hartmann, M., Banerjee, S., Yu, R., Nogaro, G., Richter, A., Koranda, M., Castle, S., Goberna, M., Song, B., Chatterjee, A. Nunes, O.C., Lopes, A.R., Cao, Y., Kaisermann, A., Hallin, S., Strickland, M.S., Garcia-Pausas, J., Barba, J., Kang, H., Isobe, K., Papaspyrou, S., Pastorelli, R., Lagomarsino, A., Lindström, E., Basiliko, N., Nemergut, D.R. (2016) Microbes as engines of ecosystem function: when does community structure enhance predictions of ecosystem processes? **Frontiers in Microbiology** 7: 214.

- 30 Lockhart, E., Wild, B., Richter, A., Simonin, K., Merchant, A. (2016) Stress-induced changes in carbon allocation among metabolite pools influence isotope-based predictions of water use efficiency in *Phaseolus vulgaris*. **Functional Plant Biology** 43: 1149-1158.
- 31 Kaiser, C., Franklin, O., Richter, A., Dieckmann, U. (2015) Social interactions within decomposer communities lead to N retention and organic matter build-up in soils. **Nature Communications** 6: 8960.
- 32 Quentin, A.G., Pinkard, E.A., Ryan, M.G., Tissue, D.T., Baggett, L.S., Adams, H.D., Maillard, P., Marchand, J., Landhäusser, S.M., Lacoite, A., Gibon, Y., Anderegg, W.R.L., Asao, S., Atkin, O.K., Bonhomme, M., Claye, C., Chow, P.S., Clément-Vidal, A., Davies, N.D., Dickman, L.T., Dumbur, R., Falk, K., Galiano, L., Grünzweig, J.M., Hartmann, H., Hoch, G., Jones, J.E., Koike, T., Kuhlmann, I., Lloret, F., Maestro, M., Mansfield, S.D., Martínez-Vilalta, J., Maucourt, M., McDowell, N.G., Moing, A., Muller, B., Nebauer, S.G., Niinemets, Ü., Palacio, S., Piper, F., Raveh, E., Richter, A., Rolland, G., Rosas, T., Saint Joanis, B., Sala, A., Smith, R.A., Sterck, F., Stinziano, J.R., Tobias, M., Unda, F., Watanabe, M., Way, D.A., Weerasinghe, L.K., Wild, B., Woodruff, D.R.. (2015) Non-structural carbohydrates in woody plants compared among laboratories. **Tree Physiology** 35: 1146–1165.
- 33 Zechmeister-Boltenstern, S., Keiblinger, K.M., Mooshammer, M., Peñuelas, J., Richter, A., Sardans, J., Wanek, W. (2015) The application of ecological stoichiometry to plant-microbial-soil organic matter transformations. **Ecological Monographs** 85: 135-155.
- 34 Capek, P., Diakova, K., Dickopp, J.-E., Barta, J., Wild, B., Schnecker, J., Aiglsdorfer, S., Guggenberg, G., Gentsch, N., Hugelius, G., Kuhry, P., Lashchinsky, N., Gittel, A., Schleper, C., Mikutta, R., Palmtag, J., Shibistova, O., Urich, T., Richter, A., Santruckova, H. (2015) The effect of warming on the vulnerability of subducted organic carbon in arctic soils. **Soil Biology and Biochemistry** 90: 19–29.
- 35 Wild, B., Schnecker, J., Knoltsch, J., Takriti, M., Mooshammer, M., Gentsch, N., Mikutta, R., Eloy Alves, R.J., Gittel, A., Lashchinskiy, N., Richter, A. (2015) Microbial nitrogen dynamics in organic and mineral soil horizons along a latitudinal transect in Western Siberia. **Global Biogeochemical Cycles** 29, 567–582.
- 36 Hasibeder, R., Fuchslueger, L., Richter, A., Bahn, M. (2015) Summer drought alters carbon allocation to roots and root respiration in mountain grassland. **New Phytologist** 3: 1117–1127.
- 37 Gentsch, N., Mikutta, R., Alves, R.J.E., Barta, J., Capek, P., Gittel, A., Hugelius, G., Kuhry, P., Lashchinskiy, N., Palmtag, J., Richter, A., Santruckova, H., Schnecker, J., Shibistova, O., Urich, T., Wild, B., Guggenberger, G. (2015) Storage and transformation of organic matter fractions in cryoturbated permafrost soils across the Siberian Arctic. **Biogeosciences** 12, 4525-4542.
- 38 Schnecker, J., Wild, B., Takriti, M., Eloy Alves, R.J., Gentsch, N., Gittel, A., Hofer, A., Klaus, K., Knoltsch, A., Lashchinskiy, N., Mikutta, R., Richter, A. (2015) Microbial community composition shapes enzyme patterns in topsoil and subsoil horizons along a latitudinal transect in Western Siberia. **Soil Biology and Biochemistry** 83: 106-115.
- 39 Treat, C., Natali, S., Ernakovich, J., Iversen, C., Lupascu, M., McGuire, A., Norby, R., Roy Chowdhury, T., Richter, A., Santruckova, H., Schädel, C., Schuur, E., Sloan, V., Turetsky, M., Waldrop, M., (2015) A pan-Arctic synthesis of CH₄ and CO₂ production from anoxic soil incubations. **Global Change Biology** 21: 2787-2803.
- 40 Craine, J. M., Elmore, A. J. , Wang, L., Augusto, L., Baisden, W. T., Brookshire, E. N. J., Cramer, M. D., Hasselquist, N. J., Hobbie, E. A., Kahmen, A.; Koba, K., Kranabetter, J. M., Mack, M. C., Marin-Spiotta, E., Mayor, J. R., McLauchlan, K. K., Michelsen, A., Nardoto, G. B., Oliveira, R. S., Perakis, S. S., Peri, P. L., Quesada, C. A., Richter, A., Schipper, L. A., Stevenson, B. A., Turner, B. L., Viani, R. A. G., Wanek, W., Zeller, B. (2015) Convergence of soil nitrogen isotopes across global climate gradients. **Scientific Reports** 5: 8280.
- 41 Geisen, S., Tveit, A.T., Clark, I.M., Richter, A., Svenning, M.M., Bonkowski, M., Urich, T. (2015) Metatranscriptomic census of active protists in soils. **The ISME Journal** 9: 2178-2190.
- 42 Palmtag, J., Hugelius, G., Lashchinskiy, N., Tamstorf, M. P., Richter, A., Elberling, B. and Kuhry, P. (2015) Storage, landscape distribution and burial history of soil organic matter in contrasting areas of continuous permafrost. **Arctic, Antarctic, and Alpine Research** 47: 71-88.
- 43 Gentsch, N., Mikutta, R., Shibistova, O., Wild, B., Schnecker, J., Richter, A., Urich, T., Gittel, A., Šantrůčková, H., Bárta, J., Lashchinskiy, N., Mueller, C.W., Fuß, R., Guggenberger, G. (2015) Properties and bioavailability of particulate and mineral-associated organic matter in Arctic permafrost soils, Lower Kolyma Region, Russia. **European Journal of Soil Science** 66: 722-734.
- 44 Kaiser, C., Franklin, O., Dieckmann, U., Richter, A. (2014) Microbial community dynamics alleviate stoichiometric constraints during litter decay. **Ecology Letters** 17: 680–690.
- 45 Mooshammer, M., Wanek, W., Hämmerle, I., Fuchslueger, L., Hofhansl, F., Knoltsch, A., Schnecker, J., Takriti, M., Watzka, M., Wild, B., Keiblinger, K.M., Zechmeister-Boltenstern, S., Richter, A. (2014) Adjustment of microbial nitrogen use efficiency to carbon:nitrogen imbalances regulates soil nitrogen cycling. **Nature Communications** 5: 3694.

- 46 Koch, H., Galushko, A., Albertsen, M., Schintlmeister, A., Gruber-Dorninger, C., Lücker, S., Pelletier, E., Le Paslier, D., Spieck, E., Richter, A., Nielsen, P.H., Wagner, M., Daims, H. (2014) Growth of Nitrite-Oxidizing Bacteria by Aerobic Hydrogen Oxidation. **Science** 345: 1052–1054.
- 47 Pester, M., Maixner, F., Berry, D., Rattei, T., Koch, H., Lücker, H., Nowka, B., Richter, A., Spieck, E., Lebedeva, E., Loy, A., Wagner, M., Daims, H. (2014) NxrB encoding the beta subunit of nitrite oxidoreductase as functional and phylogenetic marker for nitrite-oxidizing *Nitrospira*. **Environmental Microbiology** 16: 3055-3071.
- 48 Fuchslueger, L., Kas30/09/2014tl, E.-M., Bauer, F., Kienzl, S., Hasibeder, R., Ladreiter-Knauss, T., Schmitt, M., Bahn, M., Schloter, M., Richter, A., Szukics, U. (2014) Effects of drought on nitrogen turnover and ammonia-oxidizer abundances in mountain grassland. **Biogeosciences** 11: 6003–6015.
- 49 Gittel, A., Barta, J., Lacmanova, I., Schnecker, J., Wild, B., Capek, P., Kaiser, C., Torsvik, V., Richter, A., Schleper, C., Urich, T. (2014) Site- and horizon-specific patterns of microbial community structure and enzyme activities in permafrost-affected soils of Greenland. **Frontiers in Microbiology** 5: 541 (1-14).
- 50 Wild, B., Schnecker, J., Knoltsch, A., Takriti, M., Mooshammer, M., Gentsch, N., Mikutta, R., Eloy Alves, R.J., Gittel, A., Lashchinskiy, N., Richter, A. (2014) Input of easily available organic C and N stimulates microbial decomposition of soil organic matter in arctic permafrost soil. **Soil Biology and Biochemistry** 75: 143-151.
- 51 Gittel, A., Bárta, J., Kohoutová, I., Mikutta, R., Owens, S., Gilbert, J., Schnecker, J., Wild, B., Hannisdal, B., Maerz, J., Lashchinskiy, N., Čapek, P., Šantrůčková, H., Gentsch, N., Shibistova, O., Guggenberger, G., Richter, A., Torsvik, V., Schleper, C., Urich, T. (2014) Distinct microbial communities associated with buried soils in the Siberian tundra. **ISME Journal** 8: 841–853.
- 52 Schnecker, J., Wild, B., Hofhansl, F., Eloy Alves R.J., Bárta, J., Čapek, P., Fuchslueger, L., Gentsch, N., Gittel, A., Guggenberger, G., Hofer, A., Kienzl, K., Knoltsch, A., Lashchinskiy, N., Mikutta, R., Šantrůčková, H., Shibistova, O., Takriti, M., Urich, T., Weltin, G., Richter, A. (2014) Effects of soil organic matter properties and microbial community composition on enzyme activities in cryoturbated arctic soils. **PLoS ONE** 9: e94076.
- 53 Xu, X., Wanek, W., Zhou, C., Richter, A., Song, M., Cao, G., Ouyang, H., Kuzyakov, Y. (2014) Nutrient limitation of alpine plants: Implications from leaf N:P stoichiometry and leaf $\delta^{15}\text{N}$. **Journal of Plant Nutrition and Soil Science** 177: 378-387.
- 54 Stieglmeier, M., Mooshammer, M., Kitzler, B., Wanek, W., Zechmeister-Boltenstern, S., Richter, A., Schleper, C. (2014) Aerobic nitrous oxide production through N-nitrosating hybrid formation in ammonia oxidizing archaea. **ISME Journal** 8: 1135–1146.
- 55 Streit, K., Hagedorn, F., Hiltbrunner, D., Portmann, M., Saurer, M., Buchmann, N., Wild, B., Richter, A., Wipf, S., Siegwolf, R. (2014) Soil warming alters microbial substrate use in alpine soils. **Global Change Biology** 20: 1327–1338.
- 56 Mooshammer, M., Wanek, W., Zechmeister-Boltenstern, S., Richter, A. (2014) Stoichiometric imbalances between terrestrial decomposer communities and their resources: mechanisms and implications of microbial adaptations to their resources. **Frontiers in Microbiology** 5:22 (1-10).
- 57 Fuchslueger, L., Bahn, M., Fritz, K., Hasibeder, R., Richter, A. (2014) Experimental drought reduces the transfer of recently-fixed plant C to soil microbes and alters the bacterial community composition in a mountain meadow. **New Phytologist** 201: 916–927.
- 58 Koranda, M., Kaiser, C., Fuchslueger, L., Kitzler, B., Sessitsch, A., Zechmeister-Boltenstern, S., Richter, A. (2014) Fungal and bacterial utilization of organic substrates depends on substrate complexity and N availability. **FEMS Microbiology Ecology** 87: 142-152.
- 59 Sinsabaugh, R.L., Manzoni, S., Moorhead, D.L., Richter, A. (2013) Carbon use efficiency of microbial communities: Stoichiometry, methodology and modeling. **Ecology Letters** 16: 930–939.
- 60 Berry, D., Stecher, B., Schintlmeister, A., Reichert, J., Brugiroux, S., Wild, B., Wanek, W., Richter, A., Rauch, I., Decker, T., Loy, A., Wagner, M. (2013) Host compound foraging by intestinal microbiota revealed by single-cell stable isotope probing. **Proceedings of the National Academy of Sciences** 110: 4720-4725.
- 61 Wild, B., Schnecker, J., Bárta, J., Čapek, P., Guggenberger, G., Hofhansl, F., Kaiser, C., Lashchinsky, N., Mikutta, R., Mooshammer, M., Šantrůčková, H., Shibistova, O., Urich, T., Zimov, S.A., Richter, A. (2013) Nitrogen dynamics in Turbic Cryosols from Siberia and Greenland. **Soil Biology and Biochemistry** 67: 85-93.
- 62 Eloy Alves R.J., Wanek, W., Zappe, A., Richter, A., Svenning, M.M., Schleper, C., Urich, T. (2013) Nitrification rates in Arctic soils are associated with functionally distinct populations of ammonia-oxidizing archaea. **ISME Journal** 7, 1620–1631.
- 63 Bahn, M., Lattanzi, F.A., Hasibeder, R., Wild, B., Koranda, M., Danese, V., Brüggemann, N., Schmitt, M., Siegwolf, R., Richter, A. (2013) Responses of belowground carbon allocation dynamics to extended shading in mountain grassland. **New Phytologist** 198: 116–126.

- 64 Koranda, M., Kaiser, C., Fuchslueger, L., Kitzler, B., Sessitsch, A., Zechmeister-Boltenstern, S., Richter, A. (2013) Seasonal variation in functional properties of microbial communities in beech forest soil. **Soil Biology and Biochemistry** 60: 95-104.
- 65 Tavi, N., Martikainen, P.J., Lokko, K., Kontro, M., Wild, B., Richter, A., Biasi, C. (2013) Linking microbial community structure and allocation of plant-derived carbon in an organic agricultural soil using ^{13}C pulse-chase labelling combined with ^{13}C -PLFA profiling. **Soil Biology and Biochemistry** 58: 207-215.
- 66 Tahovská, K., Kana, J., Bárta, J., Oulehle, F., Richter, A., Santrucková, H. (2013) Microbial N immobilization is of great importance in acidified mountain spruce forest soils. **Soil Biology and Biochemistry** 59: 58-71.
- 67 Sixt B.S., Siegl A., Müller C., Watzka M., Wultsch A., Tziotis D., Montanaro J., Richter A., Schmitt-Kopplin P., Horn M. (2013) Metabolic Features of *Protochlamydia amoebophila* Elementary Bodies - a Link between Activity and Infectivity in *Chlamydiae*. **PLoS Pathology** 9: e1003553.
- 68 Manzoni, S., Taylor, P., Richter, A., Porporato, A., Ågren, G. (2012) Environmental and stoichiometric controls on microbial carbon use efficiency in soils. **New Phytologist** 196: 79-91.
- 69 Hashimoto, T., Perlot, T., Rehman, A., Trichereau, J., Ishiguro, H., Paolino, M., Sigl, V., Hanada, T., Hanada, R., Lipinski, S., Wild, B., Camargo, S., Singer, D., Richter, A., Kuba, K., Fukamizu, A., Schreiber, S., Clevers, H., Verrey, F., Rosenstiel, P., Penninger, J.P. (2012) ACE2 links amino acid malnutrition to microbial ecology and intestinal inflammation. **Nature** 487: 477-481.
- 70 Leitner, S., Wanek, W., Wild, B., Haemmerle, I., Kohl, L., Keiblinger, K.M., Zechmeister-Boltenstern, S., Richter, A. (2012) Influence of litter chemistry and stoichiometry on glucan depolymerization during decomposition of beech (*Fagus sylvatica* L.) litter. **Soil Biology and Biochemistry** 50: 174-187.
- 71 Shibistova, O., Yohannes, Y., Boy, J., Richter, A., Wild, B., Watzka, M., Guggenberger, G. (2012) Rate of belowground carbon allocation differs with successional habit of two Afri-montane trees. **PLoS ONE** 7: e45540.
- 72 Gegenbauer, C., Mayer, V., Zotz, G., Richter, A. (2012) Uptake of ant-derived nitrogen in the myrmecophytic orchid *Caularthron bilamellatum*. **Annals of Botany** 110: 757-766.
- 73 Pester, M., Rattei, T., Flechl, S., Gröngröft, A., Richter, A., Overmann, J., Reinhold-Hurek, B., Loy, A., Wagner, M. (2012) amoA-based consensus phylogeny of ammonia-oxidizing archaea and deep sequencing of amoA genes from soils of four different geographic regions. **Environmental Microbiology** 14: 525-539.
- 74 Mooshammer, M., Wanek, W., Schnecker, J., Wild, W., Leitner, S., Hofhansl, F., Blöchl, A., Hämmerle, I., Frank, A., Fuchslueger, L., Keiblinger K., Zechmeister-Boltenstern, S., Richter, A. (2012) Stoichiometric controls of nitrogen and phosphorus cycling in decomposing beech leaf litter. **Ecology** 93: 770-782.
- 75 Keel, S.G., Campbell, C.D., Högberg, M.N., Richter, A., Wild, B., Zhou, X., Hurry, V., Linder, S., Näsholm, T., Högberg, P. (2012) Allocation of carbon to fine root compounds and their residence times in a boreal forest depend on root size class and season. **New Phytologist** 194: 972-981.
- 76 Seeber, J., Rief, A., Richter, A., Traugott, M., Bahn, M. (2012) Drought-induced reduction in uptake of recently photosynthesized carbon by springtails and mites in alpine grassland. **Soil Biology and Biochemistry** 55: 37-39.
- 77 Hofhansl, F., Wanek, W., Drage, S., Huber, W., Weissenhofer, A., Richter, A. (2012) Controls of hydrochemical fluxes via stemflow in tropical lowland rainforests: Effects of meteorology and vegetation characteristics. **Journal of Hydrology** 452-453: 247-258.
- 78 Schnecker, J., Wild, B., Fuchslueger, L., Richter, A. (2012) A field method to store samples from temperate mountain grassland soils for analysis of phospholipid fatty acids. **Soil Biology and Biochemistry** 51: 81-83.
- 79 Keiblinger, K.M., Schneider, T., Roschitzki, B., Schmid, E., Eberl, L., Hämmerle, I., Leitner, S., Richter, A., Wanek, W., Riedel, K., Zechmeister-Boltenstern, S. (2012) Effects of stoichiometry and temperature perturbations on beech leaf litter decomposition, enzyme activities and protein expression. **Biogeosciences** 9: 4537-4551.
- 80 Schneider, T., Keiblinger, K.M., Schmid, E., Sterflinger-Gleixner, K., Ellersdorfer, G., Roschitzki, B., Richter, A., Eberl, L., Zechmeister-Boltenstern, S., Riedel, K. (2012) Who is who in litter decomposition?: metaproteomics reveals major microbial players and their biogeochemical functions. **ISME Journal** 6: 1749-1762.
- 81 Mußmann, M., Brito, I., Pitcher, A., Sinninghe Damsté, J.S., Hatzenpichler, R., Richter, A., Nielsen, J.L., Nielsen, P.H., Müller, A., Daims, H., Wagner, M., Head, I.A. (2011) Thaumarchaeotes abundant in refinery nitrifying sludges express amoA but are not obligate autotrophic ammonia oxidizers. **Proceedings of the National Academy of Sciences** 108: 16771-16776.
- 82 Franklin, O., Hall, E., Kaiser, C., Battin, T.J., Richter, A. (2011) Optimization of biomass composition explains microbial growth-stoichiometry relationships. **American Naturalist** 177, E29-E42.

- 83 Kaiser, C., Fuchslueger, L., Koranda, M., Gorfer, M., Stange, C.F., Kitzler, B., Rasche, F., Strauss, J., Sessitsch, A., Zechmeister-Boltenstern, S., Richter, A. (2011) Plants control the seasonal dynamic of microbial N cycling in a beech forest soil by belowground C allocation. **Ecology** 92: 1036–1051.
- 84 Koranda, M., Schnecker, J., Kaiser, C., Fuchslueger, L., Kitzler, B., Stange, C.F., Sessitsch, A., Zechmeister-Boltenstern, S., Richter, A. (2011) Microbial processes and community composition in the rhizosphere of European beech - The influence of plant C exudates **Soil Biology and Biochemistry** 43: 551-558.
- 85 Xu, X., Ouyang, H., Richter, A., Wanek, W., Cao, G., Kuzyakov, Y. (2011) Spatio-temporal variations determine plant-microbe competition for inorganic nitrogen in an alpine meadow. **Journal of Ecology** 99: 563-571.
- 86 Merchant A., Richter A. (2011) Polyols as biomarkers and bioindicators for 21st century plant breeding. **Functional Plant Biology** 38: 934–940.
- 87 Pröll, G., Dullinger, S., Dirnböck, T., Kaiser, C., Richter, A. (2011) Effects of nitrogen on tree recruitment in a temperate montane forest as analyzed by measured variables and Ellenberg indicator values. **Preslia** 83: 111-127.
- 88 Hofhansl, F., Wanek, W., Drage, S., Huber, W., Weissenhofer A., Richter, A. (2011) Topography strongly affects atmospheric deposition and canopy exchange processes in different types of wet lowland rainforest, SW Costa Rica. **Biogeochemistry** 106: 371-396.
- 89 Steger, D., Wentrup, C., Braunecker, C., Deevong, P., Hofer, M., Richter, A., Baranyi, C., Pester, M., Wagner, M., Loy, A. (2011) Microorganisms with novel dissimilatory (bi)sulfite reductase genes are widespread and core microbiota in low-sulfate peatlands. **Applied and Environmental Microbiology** 77: 1231–1242.
- 90 Tourna, M., Stieglmeier, M., Spang, A., Koenneke, M., Schintlmeister, A., Urich, T., Engel, M., Schloter, M., Wagner, M., Richter, A., Schleper, C. (2011) *Nitrososphaera viennensis*, an ammonia oxidizing archaeon from soil. **Proceedings of the National Academy of Sciences** 108: 8420-8425.
- 91 Merchant, A., Wild, B., Richter, A., Bellot, S., Adams, M., Dreyer, E. (2011) Compound-specific differences in ¹³C of soluble carbohydrates in leaves and phloem of 6 month old *Eucalyptus globulus* (Labill). **Plant, Cell and Environment** 34: 1599-1608.
- 92 Garnett, M., Bol, R., Bardgett, R.D., Wanek, W., Bäuml, R., Richter, A. (2011) Natural abundance radiocarbon in soil microbial biomass: results from a glacial foreland. **Soil Biology and Biochemistry** 43: 1356-1361.
- 93 Xu, X., Ouyang, H., Cao, G., Richter, A., Wanek, W., Kuzyakov, Y. (2011) Dominant plant species shift their nitrogen uptake patterns in response to nutrient enrichment caused by a fungal fairy in an alpine meadow. **Plant and Soil** 341: 495-504.
- 94 Hall, E., Maixner, F., Franklin, O., Daims, H., Richter, A., Battin, T. (2011) Linking microbial and ecosystem ecology using ecological stoichiometry: a synthesis of conceptual and empirical approaches. **Ecosystems** 14: 261–273.
- 95 Rasche, F., Knapp, D., Kaiser, C., Koranda, M., Kitzler, B., Zechmeister-Boltenstern, S., Richter, A., Sessitsch, A. (2011) Seasonality and resource availability control archaeal and bacterial communities in soils of a temperate beech forest. **ISME Journal** 5: 389-402.
- 96 Wanek, W., Mooshammer, M., Blöchl, A., Hanreich, A., Keiblinger, K., Zechmeister-Boltenstern, S., Richter, A. (2010) Determination of gross rates of amino acid production and immobilization in decomposing leaf litter by a novel ¹⁵N isotope pool dilution technique. **Soil Biology and Biochemistry** 42: 1293-1302 (doi:10.1016/j.soilbio.2010.04.001).
- 97 Kaiser, C., Koranda, M., Kitzler, B., Schnecker, J., Schweiger, P., Fuchslueger, L., Rasche, F., Zechmeister-Boltenstern, S., Sessitsch, A., Richter, A. (2010) Belowground carbon allocation by trees drive seasonal pattern of extracellular enzyme activities by altering microbial community composition in a beech forest soil. **New Phytologist** 187: 843-858 (doi: 10.1111/j.1469-8137.2010.03321.x).
- 98 Kaiser, C., Frank, A., Wild, B., Koranda, M., Richter, A. (2010) Negligible contribution from roots to soil-borne phospholipid fatty acid fungal biomarkers 18:2w6,9 and 18:1w9. **Soil Biology and Biochemistry** (doi:10.1016/j.soilbio.2010.05.019).
- 99 Wild, B., Wanek, W., Postl, W., Richter, A. (2010) Contribution of carbon fixed by Rubisco and PEPC to phloem export in the Crassulacean acid metabolism plant *Kalanchoe daigremontiana*. **Journal of Experimental Botany** 61: 1375-1383.
- 100 Keiblinger, K., Hall, E., Wanek, W., Szukics, U., Hämmerle, I., Ellersdorfer, G., Böck, S., Strauss, J., Sterflinger, K., Richter, A., Zechmeister-Boltenstern, S. (2010) The effect of resource quantity and resource stoichiometry on microbial carbon use efficiency. **FEMS Microbiology Ecology** 73: 430-440.
- 101 Schädel, C., Blöchl, A., Richter, A., Hoch G. (2010) Quantification and monosaccharide composition of hemicelluloses from different plant functional types. **Plant Physiology and Biochemistry** 48: 1-8.

- 102 Schneider, T., Gerrits, B., Gassmann, R., Schmid, E., Gessner, M.O., Richter, A., Battin, T., Eberl, L., Riedel, K. (2010) Proteome analysis of fungal and bacterial involvement in leaf litter decomposition. **Proteomics** 10, 1819–1830 (doi: 10.1002/pmic.200900691)
- 103 Schädel, C., Richter, A., Blöchl, A., Hoch G. (2010) Hemicellulose concentration and composition in plant cell walls under extreme carbon source-sink imbalances. **Physiologia Plantarum** 139:241-257 (doi:10.1111/j.1399-3054.2010.01360.x).
- 104 Patra, B., Ray, S., Richter, A., Majumder, A.L. (2010) Enhanced salt tolerance of transgenic tobacco plants by co-expression of PciNO1 and MclMT1 is accompanied by increased level of *myo*-inositol and methylated inositol. **Protoplasma** 245:143–152.
- 105 Richter, A., Wanek, W., Werner, R.A., Ghashghaie, J., Jäggi, M., Gessler, A., Brugnoli, E., Hettmann, E., Göttlicher, S., Salmon, Y., Bathellier, C., Kodama, N., Nogués, S., Sørensen, A., Volders, F., Sörgel, K., Blöchl, A., Siegwolf, R., Buchmann, N., Gleixner, G. (2009) Preparation of starch and soluble sugars of plant material for analysis of carbon isotope composition: a comparison of methods. **Rapid Communications in Mass Spectrometry** 23: 2476-2488.
- 106 Battin, T.J., Luysaert, S., Kaplan, L.A., Aufdenkampe, A.K., Richter, A., Tranvik, L.J. (2009) The boundless carbon cycle (commentary). **Nature Geoscience** 2: 598-600.
- 107 Bahn, M., Schmitt, M., Siegwolf, R., Richter, A., Brüggemann, N. (2009) Does photosynthesis affect grassland soil respired CO₂ and its carbon isotope composition at a diurnal timescale? **New Phytologist** 182: 451–460.
- 108 Schädel, C., Blöchl, A., Richter, A., Hoch G. (2009) Short-term dynamics of nonstructural carbohydrates and hemicelluloses in young branches of temperate forest trees during bud break. **Tree Physiology** 29: 901 - 911.
- 109 Gaube, V., Kaiser, C., Wildenberg, M., Adensam, H., Fleissner, P., Kobler, J., Lutz, J., Schaumberger, A., Schaumberger, J., Smetschka, B., Wolf, A., Richter, A., Haberl, H. (2009) Combining agent-based and stock-flow modelling approaches in a participative analysis of the integrated land system in Reichraming, Austria. **Landscape Ecology** 24: 1149-1165.
- 110 Blöchl, A., Peterbauer, T., Hofmann, J., Richter, A. Enzymatic breakdown of raffinose oligosaccharides in pea seeds. **Planta** 228: 99-110.
- 111 Zechmeister, H.G., Richter, A., Smidt, S., Hohenwallner, D., Roder, I., Maringer, S., Wanek, W. (2008) Total nitrogen content and $\delta^{15}\text{N}$ signatures in moss tissue: Indicative value for nitrogen deposition patterns and source allocation on a nationwide scale. **Environmental Science & Technology** 42: 8661–8667
- 112 Xu, X., Kuzyakov, Wanek, W., Richter, A. (2008) Root-derived respiration and non-structural carbon of rice seedlings. **European Journal of Soil Biology** 44: 22-29.
- 113 Biasi, C., Meyer, H., Rusalimova, O., Hämmerle, R., Kaiser, C., Baryani, C., Daims, H., Lashchinsky, N., Barsukov, P., Richter, A. (2008) Initial effects of experimental warming on carbon exchange rates, plant growth and microbial dynamics of a lichen-rich dwarf shrub tundra in Siberia. **Plant and Soil** 307:191–205. 10.1007/s11104-008-9596-2
- 114 Fischer, R., Richter, A., Hadacek, F., Mayer, V. (2008) Chemical differences between seeds and elaiosomes indicate an adaptation to nutritional needs of ants. **Oecologia** 155: 539-547. doi:10.1007/s00442-007-0931-8
- 115 Reigstad, L.J., Richter, A., Daims, H., Urich, T., Schwark, L., Schleper, C. (2008) Nitrification in terrestrial hot springs of Iceland and Kamchatka **FEMS Microbiology Ecology** 64: 167-174.
- 116 Hatzenpichler, R., Lebedeva, E.V., Spieck, E., Stoecker, K., Richter, A., Daims, H., Wagner, M. (2008) A moderately thermophilic ammonia-oxidizing crenarchaeote from a hot spring. **Proceedings of the National Academy of Sciences** 105: 2134-2139.
- 117 Zeller, B., Liu, J., Buchmann, N., Richter, A. (2008) Tree girdling increases soil N mineralisation in two spruce stands. **Soil Biology and Biochemistry** 40: 1155-1166. doi:10.1016/j.soilbio.2007.12.009
- 118 Fürnkranz, M., Wanek, W., Richter, A., Abell, G., Rasche, F., Sessitsch, A. (2008) Nitrogen fixation by phyllosphere bacteria associated with plants of a tropical lowland rainforest of Costa Rica. **ISME Journal** 2: 561-570
- 119 Xu, X., Stange, C.F., Richter, A., Wanek, W., Kuzyakov, Y., (2008) Light effects competition for inorganic and organic nitrogen between maize and rhizosphere microorganisms. **Plant and Soil** 304: 59-72. doi: 10.1007/s11104-007-9519-7
- 120 Kaiser, C., Meyer, H., Biasi, C., Rusalimova, O., Barsukov, P., Richter, A. (2007) Conservation of soil organic matter through cryoturbation in arctic soils in Siberia, **Journal of Geophysical Research – Biogeosciences** 112, G02017, doi:10.1029/2006JG000258.
- 121 Huber, E., Wanek, W., Gottfried, M., Pauli, H., Schweiger, P., Arndt, S.K., Reiter, K., Richter, A. (2007) Shift in soil-plant nitrogen dynamics of an alpine-nival ecotone, **Plant and Soil** 301:65-76.

- 122 Bardgett, R.D., Richter, A., Bol, R., Garnett, M., Bäuml, R., Xu, X., Lopez-Capel, E., Manning, D., Hobbs, P.J., Hartley, I., Wanek, W. (2007) Heterotrophic microbial communities use ancient carbon following glacial retreat. **Biological Letters** 3: 487-490. doi: 10.1098/rsbl.2007.0242
- 123 Inselsbacher, E., Cambui, C.A., Richter, A., Stange, C.F., Mercier, H., Wanek, W. (2007) Microbial activities and foliar uptake of nitrogen in the epiphytic bromeliad *Vriesea gigantea*. **New Phytologist** 175: 311–320. doi: 10.1111/j.1469-8137.2007.02098.x
- 124 Giesler, R., Högberg, M.N., Strobel, B.W., Richter, A., Nordgren, A., Högberg, P. (2007) Production of dissolved organic carbon and low-molecular weight organic acids in soil solution driven by recent tree photosynthate. **Biogeochemistry** 84: 1-12. doi: 10.1007/s10533-007-9069-3.
- 125 Koranda, M., Kerschbaum, S., Wanek, W., Zechmeister, H., Richter, A. (2007) Physiological Responses of Bryophytes *Thuidium tamariscinum* and *Hylocomium splendens* to Increased Nitrogen Deposition. **Annals of Botany** 99: 161 – 169. doi: 10.1093/aob/mcl239.
- 126 Betson, N., Göttlicher, S.G., Hall, M., Wallin, G., Richter, A., Högberg, P. (2007) No diurnal variation in rate or carbon isotope composition of soil respiration in a boreal forest. **Tree Physiology** 27: 749–756.
- 127 Radchuk, R., Radchuk, V., Götz, K.-P., Weichert, H., Richter, A., Emery, R.J.N., Weschke, W., Weber, H. (2007) Ectopic expression of phosphoenolpyruvate carboxylase in *Vicia narbonensis* seeds: effects of improved nutrient status on seed maturation and transcription regulatory networks. **The Plant Journal** 51:819-839. doi:10.1111/j.1365-313X.2007.03196.x
- 128 Ribarits, A., Abdullaev, A., Tashpulatov, A., Richter, A., Heberle-Bors, A., Touraev, A. (2007) Two tobacco proline dehydrogenases are differentially regulated and play a role in early plant development. **Planta** 225: 1313-1324. doi: 10.1007/s00425-006-0429-3.
- 129 Blöchl, A., Peterbauer, T., Richter, A. (2007) Inhibition of raffinose oligosaccharide breakdown delays germination of pea seeds. **Journal of Plant Physiology** 164: 1093–1096. doi:10.1016/j.jplph.2006.10.010.
- 130 da Silva, C.A., Bacellar Monteiro, M.B., Brazolin, S., Carballeira Lopez, G.A., Richter, A., and Braga, M.R. (2007) Biodeterioration of brazil wood *Caesalpinia echinata* Lam. (Leguminosae – Caesalpinioideae) by rot fungi and termites. **International Biodeterioration & Biodegradation** 60: 285–292 doi:10.1016/j.ibiod.2007.05.003
- 131 Danilczyk, U., Sarao, R., Remy, C., Benabbas, C., Stange, G., Richter, A., Arya, S., Pospisilik, J.A., Singer, D., Camargo, S.M.R., Makrides, V., Ramadan, T., Verrey, F., Wagner, C.A., and Penninger, J.M. (2006) Essential role for collectrin in renal amino acid transport. **Nature** 444:1088-1091.
- 132 Meyer, H., Kaiser, C., Biasi, C., Hämmerle, R., Rusalimova, O., Lashinsky, N., Baranyi, C., Daims, H., Barsukov, P., Richter, A. (2006) Soil carbon and nitrogen dynamics along a latitudinal transect in Western Siberia, Russia **Biogeochemistry** 81: 239–252.
- 133 Xu, X., Ouyang, H., Kuzyakov, Y., Richter, A., Wanek, W. (2006) Significance of organic nitrogen acquisition for dominant plant species in an alpine meadow on the Tibet plateau, China. **Plant and Soil** 285: 221–231.
- 134 Zott, G. and Richter, A. (2006) Changes in carbohydrate and nutrient contents throughout a reproductive cycle indicate that phosphorus is a limiting nutrient in the epiphytic bromeliad, *Werauhia sanguinolenta*. **Annals of Botany** 97: 745-754.
- 135 Göttlicher, S., Knohl, A., Wanek, W., Buchmann, N. and Richter, A. (2006) Short term changes in carbon isotope composition of soluble carbohydrates and starch: from canopy leaves to the root system. **Rapid Communications in Mass Spectrometry** 20: 653-660.
- 136 Merchant, A., Richter, A., Popp, M., Adams, M.A. (2006) Targeted metabolite profiling provides a functional link among eucalypt taxonomy, physiology and evolution. **Phytochemistry** 67: 402-408.
- 137 Obroucheva, N., Lityagina, S.V. and Richter A. (2006) Dynamics of carbohydrates in the embryo axes of horsechestnut seeds during their transition from dormancy to germination. **Russian Journal of Plant Physiology** 53: 768-778.
- 138 Biasi, C., Rusalimova, O., Meyer, H., Kaiser, C., Wanek, W., Barsukov, P., Junger, H., Richter, A. (2005) Temperature-dependent shift from labile to recalcitrant carbon sources of arctic heterotrophs. **Rapid Communications in Mass Spectrometry** 19: 1-8.
- 139 Adams, M.A., Richter, A., Hill, A.K., Colmer, T.D. (2005) Salt tolerance in *Eucalyptus* spp.: identity and response of putative osmolytes. **Plant Cell and Environment** 28: 772-787
- 140 Blöchl, A., Grenier-de March, G., Sourdoux, M., Peterbauer, P., Richter A. (2005) Induction of raffinose oligosaccharide biosynthesis by abscisic acid in somatic embryos of alfalfa (*Medicago sativa* L.). **Plant Science** 168: 1075-1082.

- 141 Kaiser, C., Meyer, H., Biasi, C., Rusalimova, O., Barsukov, P., Richter, A. (2005) Storage and mineralization of carbon and nitrogen in soils of a frost-boil tundra ecosystem in Siberia. **Applied Soil Ecology** 29: 173-183.
- 142 Biasi, C., Wanek, W., Rusalimova, O., Kaiser, C., Meyer, H., Barsukov, P., Richter, A. (2005) Microtopography and Plant Cover Controls on Nitrogen Dynamics in Hummock Tundra Ecosystems in Siberia. **Arctic, Antarctic, and Alpine Research** 37: 435-443.
- 143 Battin, T.J., Wille, A., Psenner, R., Richter, A. (2004) Regional hydrology controls stream microbial biofilms: evidence from a glacial catchment. **Biogeosciences** 1: 159-171.
- 144 Karner, U., Peterbauer, T., Raboy, V., Jones, D.A., Hedley, C.L., Richter, A. (2004) *myo*-Inositol and sucrose concentrations affect the accumulation of raffinose family oligosaccharides in seeds. **Journal of Experimental Botany** 55: 1981-1987.
- 145 Klein, M., Geisler, M., Jeoung Suh, S., Kolukisaoglu, H.Ü., Azevedo, L., Plaza, S., Curtis, M., Richter, A., Weder, B., Schulz, B., Martinoia, E. (2004) Disruption of *AtMRP4*, a guard cell plasma membrane ABC-type ABC transporter, leads to deregulation of stomatal opening and increased drought susceptibility. **The Plant Journal** 39: 219-236.
- 146 Tscherko, D., Rustemeier, J., Richter, A., Wanek, W., Kandeler, E. (2003) Functional diversity of the soil microflora in primary succession along two glacier forelands in the Central Alps. **European Journal of Soil Science** 54: 685-696.
- 147 Peterbauer, T., Brereton, I., Richter, A. (2003) Identification of a digalactosyl ononitol from seeds of adzuki bean (*Vigna angularis*). **Carbohydrate Research** 338: 2017-2019.
- 148 Smith-Espinoza, C., Richter, A., Salamini, F., Bartels, D. (2003) Dissecting the response to dehydration and salt in the resurrection plant *Craterostigma plantagineum*. **Plant Cell and Environment** 26:1307-1315.
- 149 Norwood, M., Richter, A., Scott, P. (2003) Investigation into the ability of roots of the poikilohydric plant *Craterostigma plantagineum* to survive dehydration stress. **Journal of Experimental Botany** 54: 2313-2321.
- 150 Peterbauer, T., Karner, U., Mucha, J., Mach, L., Jones, D., Hedley, C., Richter, A. (2003) Enzymatic control of the accumulation of raffinose in pea seeds. **Plant Cell and Environment** 26:1385-1391.
- 151 Fischer, R., Wanek, W., Richter, A., Mayer, V. (2003) Do ants feed plants? A ¹⁵N labelling study of nitrogen fluxes from ants to plants in the mutualism of *Pheidole* and *Piper*. **Journal of Ecology** 91: 126-134.
- 152 Hoch, G., Richter, A., Körner, C. (2003) Non-structural carbon compounds in temperate forest trees. **Plant, Cell and Environment** 26: 1067-1081.
- 153 Peterbauer, T., Mach, L., Mucha, J. & Richter, A. (2002) Functional expression of a cDNA encoding pea (*Pisum sativum* L.) raffinose synthase, partial purification of the enzyme from maturing seeds, and steady-state kinetic analysis of raffinose synthesis. **Planta** 215: 839-846.
- 154 Fischer, R., Richter, A., Wanek, W., Mayer, V. (2002) Plants feed ants: Food bodies of myrmecophytic *Piper* and their significance for the interaction with *Pheidole bicornis* ants. **Oecologia** 133: 186-192.
- 155 Peterbauer, T., Mucha, J., Mach, L., Richter, A. (2002) Chain Elongation of Raffinose in Pea Seeds. Isolation, Characterization, and Molecular Cloning of a Multifunctional Enzyme Catalyzing the Synthesis of Stachyose and Verbascose. **Journal of Biological Chemistry** 277, 194-200.
- 156 Arndt, S.K., Wanek, W., Hoch, G., Richter, A., Popp, M. (2002) Flexibility of Nitrogen Metabolism in the Tropical CAM-C₃ Tree Species *Clusia minor*. **Functional Plant Biology** 29, 741-747.
- 157 Peterbauer, T., Lahuta, L.B., Blöchl, A., Mucha, J., Jones, D.A., Hedley, C.L., Gorecki, R.J., Richter, A. (2001) Analysis of the raffinose family oligosaccharide pathway in pea seeds with contrasting carbohydrate composition. **Plant Physiology** 127, 1764-1772.
- 158 Peterbauer, T., Richter, A. (2001) Biochemistry and physiology of raffinose family oligosaccharides and galactosyl cyclitols in seeds. **Seed Science Research** 11, 185-197.
- 159 Wanek, W., Heintel, S., Richter, A. (2001) Preparation of starch and other carbon fractions from higher plant leaves for stable carbon isotope analysis. **Rapid Communications in Mass Spectrometry** 15, 1136-1140.
- 160 Norwood M., Truesdale M.R., Richter A. & Scott P. (2000) Photosynthetic carbohydrate metabolism in the resurrection plant *Craterostigma plantagineum* (Hochst). **Journal of Experimental Botany** 51, 159-165.
- 161 Hoch G., Peterbauer T. & Richter A. (1999) Purification and characterization of stachyose synthase from lentil (*Lens culinaris*) seeds. Galactopinitol and stachyose synthesis. **Archives of Biochemistry and Biophysics** 366, 75-81.
- 162 Peterbauer T., Mucha J., Mayer U., Popp M., Glössl J. & Richter A. (1999) Synthesis of stachyose in seeds of adzuki bean (*Vigna angularis*): molecular cloning and functional expression of stachyose synthase. **Plant Journal** 20, 509-518.
- 163 Norwood M., Truesdale M.R., Richter A. & Scott P. (1999) Metabolic changes in leaves and roots during dehydration of the resurrection plant *Craterostigma plantagineum* (Hochst). **South African Journal of Botany** 65, 421-427.

- 164 Peterbauer T. & Richter A. (1998) Galactosylononitol and stachyose synthesis in seeds of *Vigna angularis*. Purification and characterization of stachyose synthase. **Plant Physiology** 117, 165-172.
- 165 Peterbauer T., Puschenreiter & Richter A. (1998) Metabolism of galactosylononitol in seeds of *Vigna angularis*. **Plant and Cell Physiology** 39, 334-341.
- 166 Richter A., Peterbauer T. & Brereton I. (1997) Structure of galactosyl ononitol. **Journal of Natural Products** 60, 749-751.
- 167 Winter K., Richter A., Engelbrecht B., Posada J., Virgo A. & Popp M. (1997) Effect of elevated CO₂ on growth and crassulacean-acid-metabolism-activity of *Kalanchoe pinnata* under tropical conditions. **Planta** 201, 389-396.
- 168 Wanek W. & Richter A. (1997) Biosynthesis and accumulation of D-ononitol in *Vigna umbellata* in response to drought stress. **Physiologia Plantarum** 101: 416-424.
- 169 Popp M., Lied W., Meyer A.J., Richter A., Schiller, P. & Schwitte H. (1996) Sample preservation for determination of organic compounds: microwave versus freeze-drying. **Journal of Experimental Botany** 47, 1469-1473.
- 170 Wanek W. & Richter A. (1995) Purification and characterization of myo-inositol 6-O-methyltransferase from *Vigna umbellata* Ohwi et Ohashi. **Planta** 197, 427-434.
- 171 Richter A., Popp M., Mensen R., Stewart G.R. & vonWillert D.J. (1995) Heterotrophic carbon gain of the parasitic angiosperm *Tapinanthus oleifolius*. **Australian Journal of Plant Physiology** 22, 537-544.
- 172 Popp M., Mensen R., Richter A., Buschmann H. & von Willert D.J. (1995) Solutes and succulence in Southern African mistletoes. **Trees**, 9, 303-310.
- 173 Wanek W. & Richter A. (1993) L-Iditol:NAD⁺ 5-oxidoreductase in *Viscum album* L.: Utilization of host-derived sorbitol. **Plant Physiology and Biochemistry** 31, 205-211.
- 174 Richter A. & Popp M. (1992) The physiological importance of accumulation of cyclitols in *Viscum album* L. **New Phytologist** 121, 431-438.
- 175 Richter A. (1992) Viscumitol, a dimethyl-ether of muco-inositol from *Viscum album* L. **Phytochemistry** 31, 3925-3927.
- 176 Richter A., Thonke B. & Popp M. (1992) 1D-1-O-Methyl-muco-inositol in *Viscum album* and members of the Rhizophoraceae. **Phytochemistry** 29, 1785-1786.

Other peer-reviewed publications (not listed in WoS)

- 177 Mirtl, M., Bahn, M., Battin, T., Borsdorf, A., Englisch, M., Gaube, V., Grabherr, G., Gratzer, G., Haberl, H., Kreiner, D., Richter, A., Schindler, S., Tappeiner, U., Winiwarter, V., Zink, R., (2010): „Next Generation LTER“ in Österreich - Zu Lage und Ausrichtung von prozessorientierter Ökosystemforschung, Biodiversitäts- und Naturschutzforschung sowie sozio-ökologischer Forschung in Österreich. LTER-Austria Schriftenreihe, Vol. 1, ISBN 978-3-901347-94-8.
- 178 Gaube, V., Kaiser, C., Wildenberg, M., Adensam, H., Fleissner, P., Kobler, J., Lutz, J., Smetschka, B., Wolf, A., Richter, A., Haberl, H. (2008) Ein integriertes Modell für Reichraming. Partizipative Entwicklung von Szenarien für die Gemeinde Reichraming (Eisenwurz) mit Hilfe eines agentenbasierten Landnutzungsmodells. **Social Ecology Working Paper** 106, 118 p., ISSN 1726-3816.
- 179 Barbedo, C.J., De Cássia Figueiredo-Ribeiro, R. Duarte Moraes, M.H., Richter, A. (2008) A Semente: Desenvolvimento Maturação Armazenamento Sanidade e Germinação. In: Pau-Brasil, da semente para conservar (R. De Cássia Leone Figueiredo Ribeiro, C.J. Barbedo, E.S. Alves, M. Domingos, M.R. Braga, eds), Governo do Estado de São Paulo.
- 180 Borges, I.F., Barbedo, C.J., Richter, A., De Cássia Figueiredo-Ribeiro, R. (2007) Variations in sugars and cyclitols during development and maturation of seeds of brazilwood (*Caesalpinia echinata* Lam., Leguminosae) **Brazilian Journal of Plant Physiology** 18: 475-482.
- 181 Fischer R., Mayer V., Richter A. & Wanek W. (2000) Interactions between species of Piper and Pheidole-ants. **Linzer Biologische Beiträge** 32: 626-627.
- 182 Richter A., Hoch G., Puschenreiter M., Mayer U. & Peterbauer T. (1999) The role of stachyose synthase in the oligosaccharide metabolism of legume seeds. In: Seed Biology: Advances and Applications (M. Black, K. J. Bradford and J. M. Vázquez Ramos, eds), CAB International.
- 183 Popp M. & Richter A. (1998) Ecophysiology of xylem-tapping mistletoes. **Progress in Botany**, Vol. 59, Springer Verlag, Berlin Heidelberg, 659-674.
- 184 Gunatilaka A., Dreher J. & Richter A. (1994) Dissolved organic carbon dynamics in a ground-water environment. **Verhandlungen der Internationalen Vereinigung für Theoretische und Angewandte Limnologie** 25, 1420-1425.