

# Christina Kaiser - Publications

## Publications

### Peer-reviewed journals:

1. **Kaiser C**, Franklin O, Richter A, Dieckmann U. (2015) Social dynamics within decomposer communities lead to nitrogen retention and organic matter build-up in soils. *Nature communications*, in press
2. Evans S, Dieckmann U, Franklin O, **Kaiser C**. (2015) Synergistic effects of diffusion and microbial physiology reproduce the Birch effect in a micro-scale model. *Soil Biology and Biochemistry*, in press
3. **Kaiser C**, Kilburn MR, Clode PL, Fuchslueger L, Koranda M, Cliff JB, Solaiman ZM, Murphy D V. (2015) Exploring the transfer of recent plant photosynthates to soil microbes: mycorrhizal pathway versus direct root exudation. *New Phytologist* 205(4): 1537-1551.
4. Gittel A, Barta J, Kohoutova I, Schneckner J, Wild B, Capek P, **Kaiser C**, Torsvik VL, Richter A, Schleper C, et al. (2014). Site- and horizon-specific patterns of microbial community structure and enzyme activities in permafrost-affected soils of Greenland. *Frontiers in Microbiology* 5: 1–14.
5. **Kaiser C.**, Franklin O., Dieckmann, U., Richter A., (2014) Microbial community dynamics alleviate stoichiometric constraints during litter decay. *Ecology Letters*, 17: 680-690. *Altmetric Score of 50 (article is amongst the highest ever scored in this journal and in the top 5% of all articles ever tracked with this metric)*
6. 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(1) : 142-152.
7. Wild B., Schneckner 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.
8. 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.
9. **Kaiser C.**, Fuchslueger L., Koranda M., Kitzler B., Gorfer M., Stange F., Rasche F., Strauss J., Zechmeister-Boltenstern S., Sessitsch A., Richter A. (2011). Plants control the seasonal dynamic of microbial N cycling in a beech forest soil by belowground allocation of recently fixed photosynthates, *Ecology*, 92 (5): 1036-1051. *Faculty of 1000 (F1000) Biology: Rated "Must Read" (<http://f1000.com/prime/13371009>)*
10. Franklin O., Hall E., **Kaiser C.**, Battin T., Richter A. (2011) Optimization of Biomass Composition Explains Microbial Growth-Stoichiometry Relationships. *The American Naturalist*, 177 (2), E29-E42.

11. Rasche F., Knapp D., **Kaiser C.**, Koranda M., Kitzler B., Zechmeister-Boltenstern S., Richter A., Sessitsch A. (2011) Seasonality and resource availability control bacterial and archaeal communities in soils of a temperate beech forest. *The ISME Journal*, 5 (3): 389-402.
12. Pröll, G., Dullinger S., Dirnböck T., **Kaiser C.**, Richter A. (2011) Nitrogen effects on tree recruitment in a temperate montane forest as analyzed by measured variables and Ellenberg indicator values. *Preslia*, 83 (1): 111-127.
13. Koranda M., Schneckner J., **Kaiser C.**, Fuchslueger L., Kitzler B., Zechmeister-Boltenstern S., Sessitsch A., 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 (3): 551-558.
14. **Kaiser C.**, Koranda M., Kitzler B., Fuchslueger L., Schneckner J., Schweiger P., Rasche F., Zechmeister-Boltenstern S., Sessitsch A., Richter A. (2010) Belowground carbon allocation by trees drives seasonal patterns of extracellular enzyme activities by altering microbial community composition in a beech forest soil, *New Phytologist* 187: 843-858.
15. **Kaiser C.**, Frank A., Wild B., Koranda M., Richter A. (2010) Negligible contribution from roots to soil-borne phospholipid fatty acid fungal biomarkers 18:2 $\omega$ 6,9 and 18:1 $\omega$ 9. *Soil Biology and Biochemistry*, 42 (9): 1650-1652.
16. Gaube V., **Kaiser C.**, Wildenberg M., Adensam H., Fleissner P., Kobler J., Lutz J., Schaumberger A., Schaumberger J., Smetschka B., Wolf A., Richter A. and H. Haberl (2009) Combining agent-based and stock-flow modelling approaches in a participative analysis of the integrated land system in Reichraming, Austria. *Landscape Ecology*, 24 (9): 1149-1165
17. Biasi C., Meyer H., Rusalimova O., Hämmerle R., **Kaiser C.**, Daims H., Lashchinsky N., Barsukov, P. and 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.
18. **Kaiser, C.**, H. Meyer, C. Biasi, O. Rusalimova, P. Barsukov, A. Richter (2007) Conservation of soil organic matter through cryoturbation in arctic soils in Siberia. *Journal of Geophysical Research*, 112: G02017.
19. Meyer, H., **Kaiser, C.**, Biasi, C., Hämmerle, R., Rusalimova, O., Lashchinsky, N., Baranyi, C., Daims, H., Barsukov, P., and Richter A. (2006) Soil carbon and nitrogen dynamics along a latitudinal transect in Western Siberia, Russia. *Biogeochemistry* 81 (2): 239-252.
20. **Kaiser, C.**, Meyer, H., Biasi, C., Rusalimova, O., Barsukov, P., Richter, A. (2005) Storage and Mineralization of C and N in soils of a frost-boil tundra ecosystem in Siberia. *Applied Soil Ecology* 29 (2): 173-183.
21. Biasi, C., Rusalimova, O., Meyer, H., **Kaiser, C.**, Wanek, W., Barsukov, P., Högne, J. and Richter, A. (2005) Temperature-dependent shift from labile to recalcitrant carbon sources of arctic heterotrophs. *Rapid Communications in Mass Spectrometry* 19 (11): 1401-1408.
22. 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 (4): 435-443.

h-index: 13. Total citations: 507 (ISI web of science, 23.10.2015)

Other publications:

23. Gaube, V., Kaiser, C., Wildenberg, M., Adensam, H., Fleissner, P., Kobler, J., Lutz, J., Smetschka, B., Wolf, A., Richter, A. and Haberl, H. (2008). Ein integriertes Modell für Reichraming. Partizipative Entwicklung von Szenarien für die Gemeinde Reichraming (Eisenwurzen) mit Hilfe eines agentenbasierten Landnutzungsmodells. Social Ecology Working Paper Nr. 106, Wien, ISSN 1726-3816, Institute of Social Ecology, IFF – Faculty for Interdisciplinary Studies.