

Scientific Publications 2013 (last update September 17 2013)

(1) Papers

Markus Puschenreiter, Florian Wittstock, Wolfgang Friesl-Hanl and Walter W. Wenzel (2013) Predictability of the Zn and Cd phytoextraction efficiency of a *Salix smithiana* clone by DGT and conventional bioavailability assays. **Plant and Soil**. 369:531–541. DOI:10.1007/s11104-013-1597-0

C. Becerra-Castro, P. Kidd, B. Rodríguez-Garrido, P. Santos Ucha, C. Monterroso, Á. Prieto-Fernández., 2013. Phytoremediation of hexachlorocyclohexane (HCH)-contaminated soils using *Cytisus striatus* and bacterial inoculants in soils with distinct organic matter content. **Environmental Pollution**. 178:202-210.DOI: 10.1016/j.envpol.2013.03.027

Cristina Becerra-Castro, Petra Kidd, Melanie Kuffner, Ángeles Prieto-Fernández, Stephan Hann, Carmela Monterroso, Angela Sessitsch, Walter Wenzel, Markus Puschenreiter., 2013. Bacterial-induced weathering of ultramafic rock: implications in phytoextraction. **Applied and Environmental Microbiology**. 79(17):5094-103.DOI: 10.1128/AEM.00402-13

Monterroso, C., Rodríguez, F., Chaves, R., Diez, J., Becerra-Castro, C., Kidd, P.S., Macías, F., 2013. Heavy metal distribution in mine-soils and plants growing in a Pb/Zn-mining area in NW Spain. **Applied Geochemistry**. (accepted).

Baum, C., Eckhardt, K.-U., Hahn, J., Weih, M., Dimitriou, I., Leinweber, P., 2013. Impact of poplar on soil organic matter quality and microbial communities in arable soils. **Plant Soil Environ**. 59(3): 95–100.

BES CM, JAUNATRE R, MENCH M 2013 Seed bank of Cu-contaminated topsoils at a wood preservation site: impacts of copper and compost on seed germination. **Environmental Monitoring and Assessment** 185, 2039–2053. DOI: 10.1007/s10661-012-2686-x

NSANGAWIMANA F., MARCHAND L., DOUAY F., MENCH M. 2013. *Arundo donax* L., a candidate for phytomanaging water and soils contaminated by trace elements and producing plant-based feedstock. **International Journal of Phytoremediation** (in press).

Van Slycken, S., Witters, N., Meiresonne, L., Meers, E., Ruttens, A., Van Peteghem, P., Weyens, N., Tack, FMG, Vangronsveld, J. (2013) Field evaluation of willow under short rotation coppice for phytomanagement of metal-polluted agricultural soils. **International Journal of Phytoremediation**, 15, 7, 677-689. DOI: 10.1080/15226514.2012.723070

Truyens S., Weyens N., Cuypers A. and Vangronsveld J. (2013) *Arabidopsis thaliana* seeds as sources of beneficial bacteria. **Plant Biology**, doi: 10.1111/j.1438-8677.2012.00711.x.

Puschenreiter, M, Wittstock F, Friesl-Hanl W, Wenzel WW (2013) Predictability of the phytoextraction efficiency of a *Salix smithiana* clone by DGT and conventional bioavailability assays. **Plant Soil**. 369:531–541. DOI 10.1007/s11104-013-1597-0

Weyens, N., Schellingen, K., Beckers, B., Janssen, J., Ceulemans, R., van der Lelie, D., Taghavi, S., Carleer, R., Vangronsveld, J. (2013) Potential of willow and its genetically engineered associated bacteria to remediate mixed Cd and toluene contamination. **Journal of Soils and Sediments**. 13, 176-188. DOI: 10.1007/s11368-012-0582-.

Becerra-Castro C., Kidd PS, Rodríguez-Garrido B., Touceda-González M., Prieto-Fernández A., Weyens N., Vangronsveld J. 2013. Improving plant growth on substrates contaminated with hexachlorocyclohexane isomers. **Plant and soil** 362, 247-260. DOI: 10.1007/S11104-012-1276-6

Cabello-Conejo M.I., Centofanti T., Kidd P.S., Prieto-Fernández A., Chaney R.L. 2013. Evaluation of plant growth regulators to increase Ni phytoextraction by *Alyssum* species. **International Journal of Phytoremediation**. 15: 365-375. DOI: 10.1080/15226514.2012.702806

Smeets, K., Opdenakker, K., Remans, T., Forzani, C., Hirt, H., Vangronsveld, J., Cuypers, A. (2013). The role of the kinase OX11 in cadmium and copper induced molecular responses in *Arabidopsis thaliana*. **Plant, Cell & Environment**. 36(6):1228–1238. DOI: 10.1111/pce.12056.

Keunen, E., Remans, T., Opdenakker, K., Jozefczak, M., Gielen, H., Guisez, Y., Vangronsveld, J., Cuypers, A. (2013) A mutant of the *Arabidopsis thaliana* LIPOXYGENASE1 gene shows altered signalling and oxidative stress related response after cadmium exposure. **Plant Physiology and Biochemistry**. 63: 272-280. DOI: 10.1016/j.plaphy.2012.12.005

Keunen, E., Peshev, D., Vangronsveld, J., Van den Ende, W., Cuypers, A., (2013) Plant sugars are crucial players in the oxidative challenge during abiotic stress. Extending the traditional concept. **Plant, Cell & Environment**. 36(7):1242-1255. DOI: 10.1111/pce.12061.

Weyens, N., Beckers, B., Schellingen, K., Ceulemans, R., Croes, S., Janssen, J., Haenen, S., Vangronsveld, J. (2013) Plant-associated bacteria and their role in the success or failure of metal phytoextraction projects: first observations of a field-related experiment. **Microbial Biotechnology**. 6 (3):288-299. DOI: 10.1111/1751-7915.12038

Cundy A., Witter N, Mench M., Friesl W., Müller I., Neu S. 2013. Developing principles of sustainability and stakeholder engagement for "gentle" remediation approaches: the European context. **Journal of Environmental Management**. 129: 283-291. DOI: 10.1016/j.jenvman.2013.07.032

Sessitsch, A., Kuffner, M., Kidd, P., Vangronsveld, J., Wenzel, W., Fallmann, K., Puschenreiter, M. (2013) The role of plant-associated bacteria in the mobilization and phytoextraction of trace elements in contaminated soils. **Soil Biology and Biochemistry**, 60, 182-194. DOI: 10.1016/j.soilbio.2013.01.012

Keunen, E., Jozefczak, M., Remans, T., Vangronsveld, J., Cuypers, A. (2013) Alternative respiration as a primary defence during cadmium-induced mitochondrial oxidative challenge in *Arabidopsis thaliana*. **Environmental and Experimental Botany**. 91, 63-73. DOI: 10.1016/j.envexpbot.2013.02.008

Vitti, A., Nuzzaci, M., Scopa, A., Tataranni, G., Remans, T., Vangronsveld, J. Sofo, A. (2013) Auxin and cytokinin metabolism and root morphological modifications in *Arabidopsis thaliana* seedlings infected with cucumber mosaic virus (CMV) or exposed to cadmium. **International Journal of Molecular Sciences**, 14, 6889-6902. DOI: 10.3390/ijms14046889.

Croes, S., Weyens, N., Janssen, J., Vercampt, H., Colpaert, J.V., Carleer, R., Vangronsveld J. (2013) Bacterial communities associated with *Brassica napus* L. grown on trace element-contaminated and non-contaminated fields: a genotypic and phenotypic comparison. **Microbial Biotechnology**. 6(4):371-84. DOI: 10.1111/1751-7915.12057.

Van Slycken, S., Witters, N., Meers, E., Peene, A., Michels E., Adriaensen, K., Ruttens, A., Vangronsveld, J., Du Laing, G., Thewys, T., Tack, F.M.G. (2013) Safe use of metal contaminated agricultural land by cultivation of energy maize (*Zea mays*). **Environmental Pollution**. 178: 375-380. DOI: 10.1016/j.envpol.2013.03.032.

Bielen, A., Remans, T., Vangronsveld, J., Cuypers, A. (2013) The influence of metal stress on the availability and redox state of ascorbate, and possible interference with its cellular functions. **International Journal of Molecular Sciences**, 14, 6382-6413. DOI: 10.3390/ijms14036382.

Tiziana Centofanti, Zehra Sayers, Maria Isabel Cabello-Conejo, Petra Kidd, Naoko K. Nishizawa, Yusuke Kakei, Allen P. Davis, Richard C. Sicher, Rufus L. Chaney., 2013. Xylem exudate composition and root-to-shoot nickel translocation in *Alyssum* species. **Plant Soil**. (Published online: DOI 10.1007/s11104-013-1782-1).

DELPLANQUE M, COLLET S, DEL GRATTA F, SCHNURIGER B, GAUCHER R, ROBINSON B, BERT V. 2013. Bioenergy production by *Salix* used for phytoextraction: field study and process viability. **Biomass and Bioenergy**.49: 160-170.

(2) Book Chapters

Weyens N, van der Lelie D, Taghavi S, Vangronsveld J. (2013) The poplar endophyte *Pseudomonas putida* W619 as a key to a succesfull phytoremediation of volatile organic contaminants. In: *Molecular Microbial Ecology of The Rhizosphere*; Section 5: Endophytes. Chapter 40. Frans J. de Bruijn, Ed.; **Wiley/Blackwell**; DOI: 10.1002/9781118297674.ch40

Schröder P, Mench M, Schwitzguebel J.P. (2013). *Remediation of Environmental Contaminants (Forward II)*. In: *Phytotechnologies*; Naser A. Amjum et.al, Ed.; CRC Press Taylor & Francis Group.

Cuypers, A., Remans, T., Vangronsveld, J., Smeets, K. (2013) Cadmium and Oxidative Stress. In: *Encyclopedia of Metalloproteins*. Kretsinger, R. H., Permyakov, E. A., Uversky, V. N. (eds). Springer Science+Business Media, LLC, New York. ISBN 978-1-4614-1532-9.

(3) Books:

Valerie Bert (2013): *Les phytotechnologies appliquées aux sites et sols pollués : Etat de l'art et guide de mise en oeuvre*. EDP Sciences, ISBN: 978-2-7598-0805-2.