PUBLICATIONS

For more details go to www.mariemuehe.com

H-index 12, 642 citations

*corresponding author, (OA=open access, number of citations are given)

Peer-Reviewed Journal Publications

1. E. J. Tomaszewski, L. Olson, M. Obst, J. M. Byrne, A. Kappler, **E. M. Muehe**, Environmental Science: Processes & Impacts **2020**; 22, 1877-1887; *Complexation and mineral adsorption limit cadmium mobility during metabolic activity of Geobacter sulfurreducens*. ***(0 citations)***
2. Z. Zhou, **E. M. Muehe**, E. J. Tomaszewski, J. Lezama-Pacheco, A. Kappler, J. M. Byrne, under revision in Environmental Science and Technology **2020**, 54(15); 9445-9453; *Effect of Natural Organic Matter on the Fate of Cadmium During Microbial Ferrihydrite Reduction*. ***(0 citations)***
3. **E. M. Muehe***, T. Wang, C. Kerl, B. Planer-Friedrich, S. Fendorf*, Nature Communcations **2019**; 10(1), 1-10; *Rice production threats from coupled stresses of climate and soil arsenic*. ***(OA, 11 citations)***
4. S. Abramova, J He, D. Wimmer, M.-L. Lemloh, **E. M. Muehe**, B. Gann, E. Roehm, R. Kirchhof, M. G. Babechuk, R. Schoenberg, H. Thorwarth, T. Helle, A. Kappler, Waste Management **2018**; 79, 735-743; *Heavy metal mobility and valuable contents of processed municipal solid waste incineration residues from Southwestern Germany*. ***(14 citations)***
5. R. Yan, A. Kappler, **E. M. Muehe**, K.-H. Knorr, M. A. Horn, A. Poser, R. Lohmayer, S. Peiffer, Geomicrobiology Journal **2018**; *The effect of reduced sulfur speciation on the chemoautotrophic pyrite oxidation with nitrate*. ***(9 citations)***
6. J. E. Forsyth, M. S. Islam, S. M. Parvez, R. Raqib, M. S. Rahman, **E. M. Muehe**, S. Fendorf, S. P. Luby; Environmental Research **2018**; 166, 1-9; *Prevalence of elevated blood lead levels among pregnant women and sources of lead exposure in rural Bangladesh*. ***(OA, 14 citations)***
7. **E. M. Muehe***, G. Morin, L. Scheer, P Le Pape, I. Esteve, B. Daus, A. Kappler; Environmental Science and Technology **2016**; 50(5), 2281-2291; *Arsenic(V) incorporation in vivianite during microbial reduction of arsenic(V)-bearing biogenic Fe(III) (oxyhydr)oxides*. ***(46 citations)***
8. **E. M. Muehe***, C. Schmidt, J. He, T. Helle, A. Kappler; Advanced Materials Research, **2015**, 1130, 652-655; *Microbially supported recovery of precious metals and rare earth elements from urban household waste incineration slag*. ***(3 citations)***
9. **E. M. Muehe**, P. Weigold, I. J. Adaktylou, B. Planer-Friedrich, U. Krämer, A. Kappler, S. Behrens; Applied and Environmental Microbiology **2015**; 81(6), 2173-2181; *Rhizosphere microbial community composition affects cadmium and zinc uptake of the metal-hyperaccumulating plant Arabidopsis halleri*. ***(OA, 66 citations)***
10. **E. M. Muehe***, A. Kappler, C. Chaban, B. Daus, Bio-protocol **2015**; 5(8), e1445. http://www.bio-protocol.org/e1445; *Measuring the arsenic content and speciation in different rice tissues*.
11. **E. M. Muehe** and A. Kappler; invited review for the research front on arsenic for Environmental Chemistry **2014**; 11, 483–495; *Arsenic mobility and toxicity in South and Southeast Asia – a review on biogeochemistry, health and socio-economic effects, remediation and risk predictions*. ***(25 citations)***
12. **E. M. Muehe**, J. Eisele, B. Daus, A. Kappler, K. Harter, C. Chaban; Plant Molecular Biology **2014**; 85(3), 301-316; *Are rice (Oryza sativa L.) phosphate transporters regulated similarly by phosphate and arsenate? – a comprehensive study*. ***(25 citations)***
13. **E. M. Muehe**, M. Obst, A. Hitchcock, T. Tylsizczak, S. Behrens, C. Schroeder, J. M. Byrne, M. Michel, U. Kraemer, A. Kappler; Environmental Science and Technology **2013**; 47, 14099-14109; *Fate of Cd during microbial Fe(III) mineral reduction by a novel and Cd-tolerant Geobacter species*. ***(51 citations)***
14. **E. M. Muehe**, I. J. Adaktylou, M. Obst, F. Zeitvogel, S. Behrens, B. Planer-Friedrich, U. Kraemer, A. Kappler; Environmental Science and Technology **2013**; 47, 13430−13439; *Organic carbon and reducing conditions lead to cadmium immobilization by secondary Fe mineral formation in a pH-neutral soil*. ***(46 citations)***

15. **E. M. Muehe**, L. Scheer, B. Daus, A. Kappler; Environmental Science and Technology **2013**; 47, 8297−8307; *Fate of arsenic during microbial reduction of biogenic vs. abiogenic As-Fe(III)-mineral co-precipitates.* ***(76 citations)***
16. S. Kleinert, **E. M. Muehe**, N. Posth, U. Dippon, B. Daus, A. Kappler; Environmental Science and Technology **2011**; 45(17), 7533–7541; *Biogenic Fe(III) minerals lower the efficiency of iron mineral-based commercial filter systems for arsenic removal*. ***(33 citations)***
17. **E. M. Muehe**, S. Gerhardt, B. Schink, A. Kappler; FEMS Microbiology Ecology **2009**; 70(3), 335–343; *Ecophysiology and the energetic benefit of mixotrophic Fe(II) oxidation by various strains of nitrate-reducing bacteria*. ***(OA, 136 citations)***

Book Chapters

1. Kappler, D. Emerson, J. A. Gralnick, E. E. Roden, **E. M. Muehe**; invited revisions for the Iron Geomicrobiology Chapter in Ehrlich's Geomicrobiology **2015**, 6th edition, editors: D. K. Newman, A. Kappler and H. L. Ehrlich. ***(87 citations)***

Manuscripts under Review

1. S. M. Abramov, J. He, D. Wimmer, **E. M. Muehe**, T. Helle, H. Thorwarth, A. Kappler, submitted to the Journal of Material Cycles and Waste Management; *Thiourea leaching of gold from processed municipal solid waste incineration residues.*
2. H. Joss, **E. M. Muehe**, A. Kappler, submitted to Biospektrum; *Arsen im Grundwasser und Reis – Ursachen und Konsequenzen*.

Manuscripts in Preparation

1. **E. M. Muehe***, S. Fendorf, commentary in preparation for Nature Geoscience; *Pursuing climate change impacts on metal contaminant bioavailability and mobility in soils.*
2. A. Glöckle, Y. S. Drabesch, J. M. L. Ninin, B. Planer-Friedrich, A. Kappler, **E. M. Muehe***: for submission to Soil Biology and Biogeochemistry; *Complexes of cadmium with nitrogen species affect microbial greenhouse gas emission from agricultural soil*.
3. A. M. Lopez, S. Fendorf, **E. M. Muehe***, in preparation for Nature Climate Change; *Altered greenhouse gas emission from paddy soils due to combined climate and soil arsenic stress*.
4. **E. M. Muehe***, J. Lezama-Pacheco, C. Francis, S. Fendorf, in preparation for Environmental Science and Technology; *Shifts in climatic conditions affect iron(III)- and arsenic(V)-reducing microbial community dynamics in arsenic-contaminated rice paddies*.
5. **E. M. Muehe***, T. Wang, S. Bone, N. Edwards, S. Webb, S. Fendorf, in preparation for Plant and Soil; *Nutrient dynamics from soil to grain in rice grown under coupled stresses of climate and soil arsenic*.
6. **E. M. Muehe***, J. He, D. Wimmer, A. Sundman, B. Planer-Friedrich, K. Konhauser, A. Kappler, in preparation for Waste Management; *Acidic extraction of economically important metals from bottom ash of a waste incineration plant*.

Popular Science Publications (not peer-reviewed)

1. **E. M. Muehe,** A. Kappler; invited by BIOspektrum **2016**; 20(3), 316-318; *Biogene Eisenminerale kontrollieren das Umweltverhalten toxischer Metalle. (Biogenic Iron minerals control the environmental fate of toxic metals).*