

Curriculum Vitae

Dr. Guangwei DING

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Education

PhD 2002. University of Massachusetts at Amherst, Environmental Chemistry

MSc. 1998. Imperial College of Science, Technology and Medicine, University of London, London, U.K., Environmental Technology

DIC. Imperial College. 1998. Environmental Technology. Imperial College of Science, Technology and Medicine, London, UK., Global Environmental Change and Policy

MSc. 1986. Beijing Agricultural University-Beijing, China, Environmental Soil Chemistry and Biochemistry

BSc. 1983. Shanxi Agricultural University, P. R. China, Environmental Soil Chemistry

Professional Experience

2011-Associate professor (Tenured). Department of Chemistry, Northern State University, Aberdeen, SD 57401

2005-2010, Assistant professor (Tenure track). Department of Chemistry, Northern State University, Aberdeen, SD 57401

2006-, Adjunct professor of Chinese Academy of Sciences

2002-2004 Postdoc. Research Associate, Department of Chemistry & Biochemistry, South Dakota State University, Brookings, SD

1998-2001 Research & Teaching Assistant, University of Massachusetts at Amherst, Amherst, MA

1997-1998 Research Assistant, Imperial College of Science, Technology, and Medicine (University of London), London, UK

1995-1997 **Associate Professor**, Chinese Academy of Sciences, Beijing, China

1988-1994 **Assistant Professor**, Chinese Academy of Sciences, Beijing, China

1986-1988 Research Assistant, Chinese Academy of Sciences, Beijing, China

1983-1986 Graduate Research & Teaching Assistant, Beijing Agricultural University, Beijing, China

Courses Taught

Chemistry Survey (CHEM 106 lecture and lab)

General Chemistry (CHEM 112 and 114, lecture and lab)

Analytical Chemistry (CHEM 332, lecture and lab)

Physical Chemistry I (CHEM 342-thermodynamics)

Physical Chemistry II (CHEM 344-quantum mechanics)

Inorganic Chemistry (CHEM 452)

Research summary:

- (a). Identifying the structure of Natural Organic Matter (NOM) by using solid-state C-13 nuclear magnetic resonance and Infrared spectroscopic techniques;
- (b). Studying the sorption/desorption behavior of hydrophobic organic compounds to natural organic matter;
- (c). Understanding the hysteresis and the sorption mechanisms by observing the conformation changes of NOM, and characterization of mechanism is critical for fate and risk assessment as sorption can be rate-limiting to biodegradation, bioavailability, and subsurface transport of contaminants;
- (d). Using radioactive material to identify the vertical distribution of soil erosion;
- (e). Carbon sequestration associated with global change and policy.

Selected Peer-Reviewed Articles and Monographs

Fanqiao MENG, Rattan Lal, Xing Kuang, Guangwei Ding, Wenliang Wu. Soil organic carbon dynamics within different density and particle-size fractions in an Aquic Cambisol under diverse land use and farming systems in northern China. [Geoderma Regional 1 \(2014\) 1–9](#)

Mei-chen FENG, Lu-jie XIAO, Mei-jun ZHANG, Wu-de YANG, Guang-wei DING, 2014. Integrating Remote Sensing and GIS for Prediction of Winter Wheat (*Triticum aestivum*) Protein Contents in Linfen (Shanxi), China. PLoS ONE 9(1): e80989. doi:10.1371/journal.pone.0080989

Yuefeng Shi, Wenliang Wu, Fanqiao Meng, Liang Zheng, Dapeng Wang, Guangwei Ding, 2014. Nitrous oxide and methane emissions during the maize season under optimized intensive farming systems in the North China Plain. [Pedosphere, Volume 24, Issue 4](#), August 2014, Pages 487–497

[Junxia Yan](#), [Hongjian Li](#), [Junjian Li](#), [Yitong Xue](#) & [Guangwei Ding](#) & [H. B. Shao](#), 2013. Response of soil respiration to temperature and soil moisture in different vegetation types on a small scale in the eastern Loess Plateau of China. *Plant Biosystems*. DOI:10.1080/11263504.2013.859182

Zhanjin Xue, Zuodong Qin, Hongjian Li, Guangwei Ding, Xianwen Meng, 2013. Evaluation of aeolian desertification from 1975 to 2010 and its causes in northwest Shanxi Province, China. [Global and Planetary Change Volume 107](#), August 2013, Pages 102–108. <http://dx.doi.org/10.1016/j.gloplacha.2013.05.001>, [How to Cite or Link Using DOI](#)

Junjian Li, Yuanming Zheng, Junxia Yan, Hongjian Li, Xiang Wang, Jizheng He, Guangwei Ding, 2013. Effects of Different Regeneration Scenarios and Fertilizer Treatments on Soil Microbial Ecology in Reclaimed Opencast Mining Areas on the Loess Plateau, China. PLoS ONE 8(5): e63275. doi:10.1371/journal.pone.0063275.

Ding, G., Rice, J.A., Black carbon evaluation in natural organic matter samples using recoupled long-range dipolar-dephasing solid-state ¹³C NMR, *Geoderma* (2012), doi:10.1016/j.geoderma.2012.04.020

Yueyu Sui, Xiaobing Liu, Xingyi Zhang, Guangwei Ding. 2012. Water stable aggregate and its organic carbon distribution after 5 annual soil amendments in the eroded farmland of Chinese Mollisols. *Canadian Journal of Soil Science*. 92:551-557.

Ding, G., Rice, J.A. Effect of lipids on sorption/desorption hysteresis in natural organic matter. *Chemosphere* (2011), doi:10.1016/j.chemosphere.2011.03.009; 84:519-526.

Xiaobing Liu, Shaoliang Zhang, Xingyi Zhang, **Guangwei Ding**, R.M. Cruse. 2011. Soil erosion control practices in Northeast China: A mini-review. *Soil & Tillage Research* 117 (2011) 44–48.

Liu, X.B., X.Y. Zhang, Y.X. Wang, Y.Y. Sui, S.L. Zhang, S.J. Herbert, **Ding, G.**, 2010. Soil degradation: a problem threatening the sustainable development of agriculture in Northeast China. *PLANT SOIL ENVIRON.*, 56, 2010 (2): 87–97.

Sui, Y.Y., Liu, X.B., Jin, J., Zhang, S.L., Zhang, X.Y., Herbert, S.J., **Ding, G.**, 2009. Differentiating the early impacts of topsoil removal and soil amendments on crop performance/productivity of corn and soybean in eroded farmland of Chinese Mollisols. *Field Crops Research*, 111:276-283.

Yang, W.D., Wang, Z.Q., Sui, G.P., **Ding, G.**, 2008. Quantitative determination of red-soil erosion by an Eyrer tracer method. *Soil & Tillage Research*. 101:52-56.

Liu, X., Herbert, S., Hashemi, A.M., Zhang, X., **Ding, G.**, 2006. Effects of agricultural management on soil organic matter and carbon transformation. *Plant Soil Environment*. 52:531-543.

Ding, G., Liu, X., Herbert, S., Amarasinghe, D., Novak, J., and Xing, B., 2006. Effect of cover crop management on soil organic matter. *Geoderma*, 130:229-239.

Services as the Editor or Reviewers

The Editorial Board for the following Journals

The Scientific World Journal

The Journal of Experimental Chemistry

Reviewers for the following Journals:

Geoderma

Chemosphere

Organic Geochemistry

Soil Tillage Research

Journal of Environmental Quality

Journal of Range Management

Canadian Journal of Soil Science

Journal of Colloid and Interface Science

Nanotechnology, Science and Applications

Acta Agriculturae Scandinavica, Section B - Plant Soil Science

African Journal of Agricultural Research

Journal of Public Health and Epidemiology

Journal of Catena