Curriculum vitae (January 2015)

# Anh Le-Tuan Pham, Ph.D.

Assistant Professor, Department of Civil and Environmental Engineering
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## Education

University of California, Berkeley **Ph.D. in Civil and Environmental Engineering (2012)**

Dissertation Supervisors: David L. Sedlak (Civil and Environmental Engineering), Fiona M. Doyle (Materials Science and Engineering)

Dissertation title: "Activation of hydrogen peroxide by iron-containing minerals and catalysts in circumneutral pH solutions: implications for *ex situ* and *in situ* treatment of contaminated waters and soils"

Minors: Surface and colloid chemistry, materials science and engineering

University of California, Berkeley **M.S. in Civil and Environmental Engineering (2007)**

Hanoi University of Technology **B.S. in Chemical Engineering (2005)**

## Appointments

Carleton University, Ottawa, ON, Canada **Assistant Professor (01/2015 – present)**

Department of Civil and Environmental Engineering

Duke University, Durham, NC, USA **Postdoctoral Associate (08/2012 – 12/2014)**

Prof. Heileen Hsu-Kim group, Department of Civil and Environmental Engineering

Research: (1) Biogeochemistry of mercury in anoxic settings; (2) Detection, speciation, and biotransformation of trace elements and nanoparticles

## Teaching

University of California, Berkeley

Graduate Student Instructor (CE115: Water Chemistry)

## Honors and awards

Graduate student award, Division of Environmental Chemistry, American Chemical Society (2012)

Vietnam Education Foundation Fellowship (2006 – 2008)

## Professional service

Reviewer for Environmental Science and Technology (American Chemical Society publication) and other Scientific Journals (approximately 30 reviews in past 5 years); Grant reviewer for American Association for the Advancement of Science (AAAS)

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## Peer reviewed publications

**Pham A.L.T.**, Johnson. C, Manley D., Hsu-Kim., Influence of nanoscale sulfide minerals on the performance of diffusive gradients in thin films (DGT) passive samplers: implications for monitoring for chalcogenic metals in sulfidic sediments. (*in preparation*).

**Pham A.L.T.**, Doyle F.M., Sedlak D.L., Size exclusion and oxidation of organic compounds in an iron oxide-containing SBA15 – hydrogen peroxide system: minimizing hydroxyl radical consumption by non-target compounds (*A chapter from PhD dissertation. To be submitted for journal publication*).

**Pham A.L.T.**, Morris A., Zhang T., Ticknor J., Levard C., Hsu-Kim H., Precipitation of nanoscale mercuric sulfides in the presence of natural organic matter: structural properties, aggregation, and biotransformation, *Geochim. Cosmochim. Acta*. 2014, 133, 204-215. DOI: 10.1016/j.gca.2014.02.027

**Pham A.L.T.**, Doyle F.M., Sedlak D.L., Kinetics and efficiency of $H_2O_2$ activation by iron-containing minerals and aquifer materials, *Water Research*. 2012, 6454-6462. DOI: 10.1016/j.watres.2012.09.020

**Pham A.L.T.**, Sedlak D.L., Doyle F.M., Dissolution of mesoporous silica supports in aqueous solutions: implications for mesoporous silica-based water treatment processes, *Appl. Catal.B: Environ.* 2012, 126, 258-264. DOI: 10.1016/j.apcatb.2012.07.018

**Pham A.L.T.**, Doyle F.M., Sedlak D.L., Inhibitory effect of dissolved silica on $H_2O_2$ decomposition by iron(III) and manganese(IV) oxides: implications for $H_2O_2$-based in situ chemical oxidation, *Environ. Sci. Technol.* 2012, 46, 1055-1062. DOI: 10.1021/es203612d

**Pham A.L.T.**, Sedlak D.L., Doyle F.M., Production of oxidizing intermediates during corrosion of iron: implications for remediation of contaminants from mineral and metal processing, *ECS Transactions*, 2010, 28, 117-127. DOI: 10.1149/1.3367907

**Pham A.L.T.**, Doyle F.M., Sedlak D.L., A silica-containing iron oxide catalyst capable of activating hydrogen peroxide at neutral pH values. *Environ. Sci. Technol.* 2009, 43, 8930-8935. DOI: 10.1021/es902296k

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## Selected conference presentations and posters

**Pham A.L.T.**, Morris A., Zhang T., Liu Y., Hsu-Kim H., Structural properties of nanoscale mercury sulfides: implications for microbial bioavailability and biotransformation, Association

of Environmental Engineering and Science Professor 50th anniversary conference, Colorado School of Mines, CO, US, July 2013. (platform)

**Pham A.L.T.**, Doyle F.M., Sedlak D.L., Hydrogen peroxide activation by iron minerals for soil and groundwater treatment, Gordon Research Conference on Environmental Sciences: Water. Holderness School, NH, US, June 2012. (poster)

**Pham A.L.T.**, Doyle F.M., Sedlak D.L., Dissolution and transformation of mesoporous silicas: kinetics and implications, International Water Association Conference: Nano and Water, Ascona, Switzerland, May 2011. (platform)

**Pham A.L.T.**, Doyle F.M., Sedlak D.L., Iron-containing clays as catalyst in heterogeneous Fenton reaction: role of structural and surface iron, American Chemical Society National Meeting, Anaheim, CA, US, March 2011. (platform)

**Pham A.L.T.**, Doyle F.M., Sedlak D.L., Size exclusion and oxidation of organic compounds in an iron oxide-containing SBA15 – hydrogen peroxide system: minimizing hydroxyl radical consumption by non-target compounds, Gordon Research Conference on Environmental Sciences: Water. Holderness School, NH, US, June 2010. (poster)

**Pham A.L.T.**, Doyle F.M., Sedlak D.L., Activation of hydrogen peroxide at neutral pH values by iron- and alumina-containing mesoporous SBA-15 silica, American Chemical Society National Meeting, San Francisco, CA, US, March 2010. (platform)

**Pham A.L.T.**, Lee C., Keenan C.R., Doyle F.M., Sedlak D.L., Development of an iron-containing catalyst for the remediation of recalcitrant organic contaminants, Superfund Research Program Annual Meeting, Pacific Grove, CA, US, December 2008. (poster)

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## Invited seminars (partial list)

Formation and dissolution of nanoscale mercuric sulfides: implications for microbial bioavailability and biotransformation, Virginia Tech, October 2014.

Iron and mercury: surface-water interfacial processes and contaminants transformation, University of Minnesota, March 2014.

Iron and mercury: surface-water interfacial processes and contaminants transformation, McMaster University, Ontario, Canada, February 2014.

Iron and mercury: surface-water interfacial processes and contaminants transformation, Carleton University, Ontario, Canada, November 2013.

Iron and mercury: surface-water interfacial processes and contaminants transformation, University of Missouri Columbia, May 2013.

Hydrogen peroxide activation by iron oxides for soil and water treatment, University of California, Riverside, March 2012.

Iron-containing catalysts for activation of hydrogen peroxide at circumneutral pH values. Department of Civil and Environmental Engineering, Rice University, November 2011.

Mesoporous silica materials for water remediation: The Good, the Bad and the Ugly. Swiss Federal Institute of Aquatic Science and Technology (Eawag), May 2011.