Céline Guéguen

March 25th , 2013

Canada Research Chair in Aquatic Science and Biogeochemistry, Associate Professor, Department of Chemistry, Trent University, 1600 West Bank Drive, Peterborough, ON, K9J 7B8, Phone: (705)-748-1011 Ext 7859, e-mail: celinegueguen@trentu.ca

**Education**

2001 PhD Interdisciplinary, University of Geneva.

Role of colloids in trace metal complexation in contrasted aquatic ecosystems (lake, river and estuary) - Advisor: Prof J. Dominik

1996 MSc. Marine Chemistry, University of Western Brittany.

Detection of trace metals in seawater by fluorescence: example of tin - Advisors: Prof. S. Blain and Prof. P. Tréguer

**Professional Experience**

2012 Associate Professor, Trent University

2011 Visiting professor, Université de Bordeaux 1, France

2011- Collaborating Faculty, Trent Centre for Biomaterials Research, Trent University

2009- Collaborating Faculty, Centre of Environmental Modeling and Chemistry, Trent University

2007- Assistant Professor (tenure track), Trent University

2007- Faculty member, Environmental & Life Sciences Graduate Program, Trent University

2006-2007 Assistant Professor (limited term), Trent University

2004-2006 Postdoctoral Fellow, University of British Columbia

2001-2004 Postdoctoral Fellow, International Arctic Research Center, University of Alaska Fairbanks

**Award and Other Honours**

2013-2018 TierII Canada Research Chair, Trent University

2007-2012 Tier II Canada Research Chair, Trent University

2003 Faculty performance award, University of Alaska Fairbanks

2001-2003 Swiss National Science Foundation Postdoctoral Fellowship, University of Alaska Fairbanks

1996 Scholarship of Excellence, Ministère de la Recherche, France

**Teaching Experience**

Courses and Role

2012FA ENLS 5090H Reading Course. Instructor (1 student)

2013WI CHEM/ERSC 2620H Aquatic Environmental Chemistry. Instructor (36 students)

2013WI CHEM/ERSC 3610H Advanced Environmental Chemistry. Instructor (6 students)

2012WI CHEM/ERSC 2620H Aquatic Environmental Chemistry. Instructor (21 students)

2012WI CHEM/ERSC 3610H Advanced Environmental Chemistry. Instructor (21 students)

2011WI CHEM 2400H Analytical Chemistry. Instructor (33 students)

2011WI CHEM/ERSC 2620H Aquatic Environmental Chemistry. Instructor (21 students)

2010WI CHEM/ERSC 3902H Aquatic Chemical Processes. Instructor (2 students)

2010WI CHEM/ERSC 2620H Aquatic Environmental Chemistry. Instructor (30 students)

2009WI CHEM/ERSC 3610H Advanced Environmental Chemistry II. Instructor (6 students)

2009WI CHEM/ERSC 4410H Advanced Analytical Chemistry. Instructor (13 students)

2009FA CHEM 4901H Remote Sensing in Chemistry. Instructor (1 student)

2008WI CHEM/ERSC 442H Advanced Analytical Chemistry. Instructor (7 students)

2008WI CHEM 345H Advanced Environmental Chemistry II. Co-instructor (6 students)

2007WI CHEM/ERSC 442H Advanced Analytical Chemistry. Instructor (10 students)

2007FA CHEM 344H Advanced Environmental Chemistry I. Co-instructor (6 students)

Research supervision

* PhD thesis

2012- Chad Cuss (Environmental & Life Sciences Graduate Program, January 2012)

2012- Weibin Chen (Environmental & Life Sciences Graduate Program, September 2012)

* MSc thesis

2012- Jordan Balch (Environmental & Life Sciences Graduate Program)

2012- Paul Dainard (Environmental & Life Sciences Graduate Program)

2012- Caroline Wylie (Environmental & Life Sciences Graduate Program)

2010-2011 Chad Cuss (Environmental & Life Sciences Graduate Program, converted to the PhD program (Jan 2012))

2009-2012 Alexis McIntyre (Environmental & Life Sciences Graduate Program)

2009-2012 Weibin Chen (Environmental & Life Sciences Graduate Program)

2007-2011 Yasmin Kehret (Environmental & Life Sciences Graduate Program, withdrawn in Sept 2011)

* Honours theses

2012 Zhi Teng Deng (CHEM 4011H)

2012-2013 Tyler Jamieson (ERSC 4020D)

2012-2013 Daiqiang Liu (CHEM 4020D)

2012-2013 Xiaoyue Liu (CHEM 4020D)

2012-2013 Mark Mokhtar (CHEM 4020D)

2012-2013 Yong Xiang Shi (ERSC 4020D)

2012-2013 Yu Zhu (CHEM 4020D)

2011-2012 Paul Dainard (CHEM 4020D)

2011-2012 Izzatul Md Nor (CHEM 4020D)

2011-2012 Abdul Hadi Musalli (CHEM 4020D)

2011-2012 Asyraf Abd Rohman (CHEM 4020D; co-supervision Matthew Thompson)

2011-2012 Caroline Wylie (ERSC/ERST 4020D; co-supervision Eric Sager - ERS)

2009-2010 Emily Hill (CHEM 4020D)

2008-2009 Chad Cuss (CHEM 4010Y)

* Research Assistants

2012- Antoine Perroud

2011-2012 Baptiste Marcere

2009, 2010 Emily Hill (now Conservation Area officer)

2009-2010 Antoine Perroud

2008 Alison McDonald (accepted to Environmental & Life Sciences Graduate Program)

2008 Brooke Ring (accepted to Environmental & Life Sciences Graduate Program)

* USRA Students

2009, 2010 Chad Cuss (accepted to Environmental & Life Sciences Graduate Program)

2008 Ewa Golas (accepted to PhD program University of Toronto)

* NSTP Students

2012 Paul Dainard (now MSc student)

2010 Emily Hill (Conservation Area officer)

2009 Chase Cassels (now QA/QC technician at Superheat FGH, ON)

2008 Chad Cuss (accepted to Environmental & Life Sciences Graduate Program)

Graduate Committee

2010- Mark McInnes (committee member, MSc candidate)

2011- Paul Pennington (committee member, MSc candidate)

2011 Ghita Alaoui Mhammedi (external reviewer, MSc; Université de Moncton – New Brunswick)

2010 Anabelle Baya (external, PhD candidacy exam)

2009-2012 Kambiz Kosravi (committee member, PhD candidate)

2009- Tina Fridgen (committee member, PhD candidate)

2009-2011 Kate Tindale (committee member, MSc)

2009 Dario Acha Cordero (internal reviewer, PhD)

2008 Anurani Persaud (internal reviewer, PhD)

2008- Alan Lock (committee member, PhD candidate)

2007-2011 Muhammad Ayaz Alsam (committee member, PhD candidate, withdrawn in 2011)

2007 Nagmeddi Elwaer (internal reviewer, PhD)

2007 Colin Whitfield (external, PhD candidacy exam)

**Department and University Activities**

Chemistry Department

2011 Chemistry Chair Search committee, member

2011 Personnel committee, member (August 2011, October 2011)

2010- Curriculum committee, member

2009- Curriculum committee - Environmental Chemistry, chair

2009 Chemistry Chair Search committee, chair

2008, 2009 Chemistry Chair Search committee, member

2008-2010 Chemistry Seminar, coordinator

2008- 2010 Robert Stairs Lecture Series, coordinator

2008 Tenure committee, member

2007-2010 Scholarship committee, member

2007-2010 Personnel committee, member

2007- Curriculum committee, member

2007- Departmental committee, member

University Activities

# 2012- Graduate Studies Advisory Committee on Appointments

2012- Trent University Internal NSERC Committee

2012 Scholarship committee (Environmental & Life Sciences Graduate Program)

2011-2012 Trent University Research Policy Committee

2011-2012 Environmental & Life Sciences Graduate Program executive committee

2011- Environmental & Life Sciences Graduate Program executive committee

2009-2010 Trent University Internal NSERC Committee

2009, 2011 Scholarship committee (Environmental & Life Sciences Graduate Program)

2007- Board member, Water Quality Center – Trent University

Trent Open House

Spring 2007, 2008, 2009, 2010, 2011

Fall 2008

Honours and Major Day

Winter 2010, 2011

**Professional Services**

Journal Reviewer (number of requests in parenthesis): Analytical and Bioanalytical Chemistry (2), Applied Geochemistry (1), Chemosphere (2), Continental Shelf Research (1), Deep Sea Research Part II (1), Ecological Engineering (2), Environmental Pollution (2), Estuarine, Coastal and Shelf Science (1), Frontiers of Environmental Science and Engineering in China (2), Journal of Environmental Quality (1), Journal of Geophysical Research (3), Journal of Oceanography (1), Marine Chemistry (1), Ocean Science (1), Oceanologia (1), Polar Biology (1), The Science of the Total Environment (1), Water Science and Technology (4).

Grant Reviewer (number of requests in parenthesis): FRNTQ- Etablissement de Nouveaux Chercheurs (1), NSERC - Discovery Grant (2), NSERC - Strategic Grant (1), NSF- Arctic Natural Sciences (3), GeoMission Arctic (1).

Editor of Environmental Science and Pollution Research (2012-)

Editor of Frontiers in Chemistry (2013-)

Guest Editor of the special issue “Canada's Three Oceans Project, A Canada's International Polar Year Initiative”, Journal of Geophysical Research Oceans (2013-)

**Research and Infrastructure Grants**

NSERC-Discovery Grant $236,000 (2013-2018)

In situ measurements of metal speciation in the Canadian Arctic

Lead PI: Céline Guéguen (Trent University)

Natural Resources Canada $8,400 (2013)

Heavy metal in snow

Lead PI: Céline Guéguen (Trent University)

CFI-MRSIF $39,900 (2009)

Trent University Water Quality Centre

Lead PI: Holger Hintelmann

Co-PIs: Céline Guéguen and 8 co-PIs

NSERC- CCAR $5,038,128 (2013-2017)

The Canadian Arctic GEOTRACES program: biogeochemical and tracer study of a rapidly changing Arctic Ocean

Lead PI: Roger Francois (UBC)

Co-PIs: Céline Guéguen and 19 co-PIs

Canada Research Chair Program, $500,000 (2013-2018)

Tier II Canada Research Chair in Aquatic Science and Biogeochemistry

Lead PI: Céline Guéguen (Trent University)

Ministry of Natural Resources, $32,000 (2012-2014)

Assessment of invasive species in the Kawartha Lakes

Lead PI: Céline Guéguen (Trent University), Eric Sager (Fleming College)

Government of the Northwest Territories $18,740(2012-2013)

Monitoring of water quality in the Mackenzie watershed

Lead PI: Céline Guéguen (Trent University)

Canadian Geological Survey $125,000 (2012-2013)

Heavy metals in snow and lake sediments

Lead PI: Céline Guéguen (Trent University)

Department of Aboriginal Affairs and Northern Development Canada - Northern Scientific Training Award, $1,800 (2012)

DOM in the Beaufort Sea

Lead PI: Céline Guéguen (Trent University)

Student: Paul Dainard (Trent University Chemistry Undergraduate Student)

Department of Aboriginal Affairs and Northern Development Canada - Northern Scientific Training Award, $2,350 (2010)

Assessing the dynamics of dissolved organic matter in Canadian Archipelago

Lead PI: Céline Guéguen (Trent University)

Student: Emily Hill (Trent University Chemistry Undergraduate Student)

Department of Aboriginal Affairs and Northern Development Canada - Northern Scientific Training Award, $1,800 (2009)

Variability of coloured dissolved organic matter in surface waters of the Canadian Archipelago and Canadian Basin

Lead PI: Céline Guéguen (Trent University)

Student: Chase Cassels (Trent University Chemistry Undergraduate Student)

Early Research Award Program - Ministry of Research and Innovation, $150,000 (2009; Not successful)

Lead PI: Céline Guéguen (Trent University)

CFI-MRSIF, $39,900 (2009)

Trent University Worsfold Water Quality Centre

Lead PI: Peter Dillon

Co-PIs: Neil Emery, Doug Evans, David Ellis, Céline Guéguen, Holger Hintelmann, Ray March, Dirk Wallschläger, Shaun Watmough.

Department of Aboriginal Affairs and Northern Development Canada - Northern Scientific Training Award, $2,850 (2008)

Spatial Distribution of Carbohydrates in the Eastern Beaufort Sea

Lead PI: Céline Guéguen (Trent University)

Student: Chad Cuss (Trent University Chemistry Undergraduate Student)

NSERC-Strategic Project, $199,930 (March/2008-December/2011)

Metal Speciation and Bioavailability in Freshwaters Affected by Oil Sands Activities

Lead PI: Céline Guéguen (Trent University)

Co-PI: Peter Dillon (Trent University)

NSERC- Discovery Grants Program $75,000 (April/2008-April/2013)

Dissolved Organic Matter Characterization and Metal Speciation in Boreal Streams

Lead PI: Céline Guéguen (Trent University)

Trent University NSERC Operating Grant $3,200 (December/2007-June/2009)

Distribution of Dissolved Organic Carbon and Carbohydrates in the Arctic Ocean

Lead PI: Céline Guéguen (Trent University)

Canada Research Chair Program $500,000 (2007-2012)

Tier II Canada Research Chair in Aquatic Science and Biogeochemistry

Lead PI: Céline Guéguen (Trent University)

CFI/MRI-ORF $ 418,504 (2007)

Biogeochemical laboratory for trace metal speciation in aquatic environments: role of dissolved organic matter

Lead PI: Céline Guéguen (Trent University)

CFI/MRI-NIF $3,238,095 (2007)

The Microenvironment Laboratory at Trent University

Lead PI: Chris Metcalfe (Trent University)

Co-PIs: Julian Aherne, Jim Buttle, Peter Dillon, David Ellis, Céline Guéguen, Holger Hintelmann, Cheryl McKenna Neuman, Dirk Wallschläger, Shaun Watmough, Marguerite Xenopoulos.

**Professional membership**

American Chemical Society, American Geophysical Union, Association for the Sciences of Limnology and Oceanography, Canadian Society of Chemistry.

**Publications (peer-reviewed)**

1. **C. Guéguen**, P. Kowalczuk (2013) Dissolved organic matter in frontal zones. In: Belkin Igor, Chemical Oceanography of Frontal Zones. Springer Verlag (accepted)
2. W. Chen, D.S.Smith, **C. Guéguen** (2013). Influence of water chemistry and dissolved organic matter molecular size on copper and mercury binding determined by multiresponse fluorescence quenching. *Chemosphere* http://dx.doi.org/10.1016/j.chemosphere.2012.12.075.
3. **C. Guéguen**, C.W. Cuss, W. Chen (2013). Asymmetrical flow field-flow fractionation and excitation-emission matrix spectroscopy combined with parallel factor analyses of riverine dissolved organic matter isolated by tangential flow ultrafiltration. *Intern. J. Environ. Anal. Chem.* http://dx.doi.org/10.1080/03067319.2013.764415.
4. **C. Guéguen**, F.A. McLaughlin, E.C. Carmack, M. Itoh, H. Narita, S. Nishino (2012). The nature of colored dissolved organic matter in the southern Canada Basin and East Siberian Sea. *Deep Sea Res. II* 81-84, 102-113, doi:10.1016/j.dsr2.2011.05.004
5. A.M. McIntyre, **C. Guéguen** (2012). Binding interactions of algal-derived dissolved organic matter with metal ions. *Chemosphere* 10.1016/j.chemosphere.2012.08.057
6. C.W. Cuss, **C. Guéguen** (2012). Determination of relative molecular weights of fluorescent components in dissolved organic matter using asymmetrical flow field-flow fractionation and parallel factor analysis. *Anal. Chim. Acta* 10.1016/j.aca.2012.05.003.
7. C.W. Cuss, **C. Guéguen** (2012). Impacts of microbial activity on the optical and copper-binding properties of leaf-litter leachate. *Frontiers in Microbiology* doi:10.3389/fmicb.2012.00166
8. **C. Guéguen, D.C. Burns, A. McDonald, B. Ring** (2012). Structural and optical characterization of dissolved organic matter from the lower Athabasca River, Canada (Alberta, Canada). Chemosphere 87, 932-937,doi:10.1016/j.chemosphere.2012.01.047
9. I. Lavoie, **C. Guéguen, C. Fortin** (2011). Benthic diatom communities from rivers in close proximity to the Athabasca tar sands. (Alberta, Canada)Water Qual. Res. J. Can. ,46, 355-365, doi: 10.2166/wqrjc.2011.019
10. **C. Guéguen**, O. Clarisse, A. Perroud, A. McDonald (2011). Chemical speciation and partitioning of trace metals (Cd, Co, Cu, Ni, Pb) in the lower Athabasca River and its tributaries (Alberta, Canada). *J. Environ.* *Monit.* doi:10.1039/c1em10563a
11. P.D. Tortell,**C. Guéguen**, M.C. Long, C.D. Payne, P. Lee, G.R. DiTullio (2011). Spatial variability and temporal synamics of surface water pCO2, O2/Ar and dimethylsulfide in the Ross Sea, Antarctica. *Deep Sea Res. I* 58, 241-259
12. **C. Guéguen**, M.A. Granskog, G. McCullough, D.G. Barber (2011). Characterization of colored dissolved organic matter in Hudson Bay and Hudson Strait using Parallel Factor Analysis. *J. Mar. Systems* 88, 423-433
13. **C. Guéguen**, F.A. McLaughlin, E.C. Carmack, M. Itoh, H. Narita, S. Nishino (2011). The nature of colored dissolved organic matter in the southern Canada Basin and East Siberian Sea. *Deep Sea Res. II* doi:10.1016/j.dsr2.2011.05.004
14. **C. Guéguen**, C.W. Cuss (2011). Characterization of aquatic dissolved organic matter by asymmetrical flow field-flow fractionation coupled to UV-Visible diode array and excitation emission matrix fluorescence. *J. Chromat. A* 1218, 4188-4198
15. C.W. Cuss, **C. Guéguen**, E. Hill, P.J. Dillon (2010). Spatio-temporal variation in the characteristics of dissolved organic matter in the streams of boreal forests: impacts on modelled copper speciation. *Chemosphere* 80, 764-770
16. Y. Feng, C.E. Hare, K. Leblanc, J.M. Rose, Y. Zhang, G.R. DiTullio, P.A. Lee , S.W. Wilhelm, J.M. Rowe, J. Sun, N. Nemcek, **C. Guéguen**, U. Passow, I. Benner, C. Brown, D.A. Hutchins (2009). The Effects of Increased pCO2 and Temperature on the North Atlantic Spring Bloom: I. The Phytoplankton Community and Biogeochemical Response. Mar. Ecol. Prog. Ser. 388, 13-25  doi: 10.3354/meps08133
17. P.D. Tortell, C. Payne, **C. Guéguen**, Y. Li, B. Rost, K.-U. Richter, R. Strzepek, P. Boyd and G.R. DiTullio (2008). Uptake and assimilation of inorganic carbon by Southern Ocean phytoplankton. Limnol. Oceanogr. 53, 1266–1278
18. **C. Guéguen** and P.D. Tortell (2008). High resolution measurement of Southern Ocean CO2 and O2/Ar by membrane inlet mass spectrometry. *Mar. Chem.* 108, 184-194

**Submitted Publications**

1. W. Chen, B. Marcere, **C. Guéguen** (2013). Heterogeneity of copper and mercury binding characteristics for aquatic dissolved organic matter using excitation-emission matrix and parallel factor analysis (Submitted)
2. C.W. Cuss, **C. Guéguen** (2013). Piecewise-linear regression and parallel factor analysis of fluorescence quenching and enhancement for the determination of multi-site DOM-copper binding parameters at environmentally-relevant concentrations (Submitted)
3. C.W. Cuss, **C. Guéguen** (2013). Distinguishing dissolved organic matter at its origin: size and optical properties of leaf-litter leachates (Revised)

**Other reports, synthesis**

1. McLaughlin, F., Proshutinsky, A., Carmack, E.C., Shimada, K., Corkum, M., Forsland, V., Guay, C., **Guéguen, C.**, van Hardenberg, B., Hopcroft, R., Itoh, M., Krishfield, R., Miller, L., Nelson, J., Richardson, W., Sieberg, D., Smith, J., Steel, M., Tanaka, N., White, L., Zimmermann, S. (2010) Physical, chemical and zooplankton data from the Canada Basin, August 2003. Canada. Dept. of Fisheries and Oceans

**Conference Proceedings – Oral Presentations**

Presenting author underlined

* P. G. Dainard, **C. Guéguen** 2013. Distribution of PARAFAC modelled CDOM components in the North Pacific and western Arctic Ocean. 2013 ASLO Aquatic Sciences Meeting, New Orleans, February 2013.
* **C. Guéguen**, 2012. The estuarine mixing behaviour of terrestrially derived dissolved organic carbon and its relationship to colored dissolved organic matter in two Hudson Bay estuaries. ArcticNet Conferences, Vancouver, December 2012.
* **C. Guéguen**, A. Perroud, G. McCullough, D. Barber, 2011. Seasonal variation of colored dissolved organic matter in the Nelson River estuary, Hudson Bay, 2011. 4th IWA specialty conference on natural organic matter: from source to tap and beyond, Orange County – USA, July2011.
  + **C. Guéguen**, A. Perroud, G. McCullough, D. Barber, 2010. Fluorescence and absorption properties of colored dissolved organic matter in the Nelson River Estuary. ArcticNet conference, December 2010, Ottawa.
* **C. Guéguen**, A. Perroud, C.W. Cuss, E. Hill, C. Cassels, 2010. Tracking Terrestrially Derived Dissolved Organic Matter in the Arctic Ocean. C3O The Final Workshop, October 2010, Gabriola Island, BC.
* **C. Guéguen**, C.W. Cuss, A. McIntyre, W. Chen, Y. Kehret, 2010. Unraveling the sources and nature of DOM in marine and terrestrial waters. THINKING AHEAD FOR A STRONG FUTURE CANADA RESEARCH CHAIRS, November 2010, Toronto.
* E. Hill, **C. Guéguen**, 2010. Effect of naphthenic acids on the complexation of copper with dissolved organic matter in freshwater, CEMC conference, June 2010.
* W.Chen, **C. Guéguen**. Isolation of natural organic colloids by tangential flow filtration (TFF): application of the permeation model. Gananoque Environmental Science and Engineering Student Conference, Gananoque, Ontario, February 2010.
* **C. Guéguen**, M. Granskog, G. McCullough, D.Barber. Characterization of Dissolved Organic Matter Fluorescence in the Hudson Bay and Hudson Strait using PARAFAC Model. ArcticNet Meeting, Victoria BC, December 2009.
* **C. Guéguen**, C.W. Cuss, 2009. Optical properties of dissolved organic matter by asymmetrical flow field-flow fractionation. 238th American Chemical Society National Meeting, Washington, DC, August 2009.
* C.W. Cuss, **C. Guéguen**, P.J. Dillon, 2009. Spatio-temporal variation in the characteristics of dissolved organic matter in boreal lakes. 2009 General Assembly American Geophysical Union, Toronto, May 2009.
* **C. Guéguen**, F.A. McLaughlin, 2008. Characterizing dissolved organic matter in the Arctic Ocean using parallel factor analysis of fluorescence spectra. 2008 American Society of Limnology and Oceanography Summer Meeting, St. John’s, Newfoundland. June 2008.

**Conference Proceedings – Posters**

* C. Guéguen, Olivier Clarisse, 2012. Monitoring of heavy metals in mining affected ecosystem by passive samplers. ASLO Summer meeting, Lake Biwa, Japan, July 2012.
* C. Guéguen, E. Hill, C. Cassels, A. Perroud, 2012. Bioreactivity of fluorescent dissolved organic matter in Canada’s three oceans (C3O project). IPY Conference, Montreal, May 2012.

# C. Guéguen, G.McCullough, D. Barber, 2012. Hydrographic and biogeochemical controls on colored dissolved organic matter distribution in Hudson Bay, ALSO meeting, Salt Lake City, February 2012.

# W. Chen, C. Guéguen, 2011. Critical evaluation of tangential flow filtration (TFF): application to aquatic dissolved organic matter. Workshop on opportunities in Membrane-based Water Treatment Applications, Waterloo, September 2011.

## O. Clarisse, C. Guéguen, 2009. In situ Monitoring in Waters Affected by Oil Sand Development using Diffusive Gradients in Thin-films. Conference on DGT and the Environment, Santa Margherita di Pula, Sardinia, Italy, October 2009.

* **C. Guéguen**, O. Clarisse, A. Perroud, 2009. In situ measurement of labile heavy metal in the Athabasca River using diffusive gel in thin films. Northern Contaminants Program Workshop, Ottawa, Sept 2009
* Y. Kehret, **C. Guéguen**, 2009. Effects of pH on Dissolved Organic Matter From Freshwater Algal Species. 2009 General Assembly American Geophysical Union, Toronto, May 2009.
* D. Burns, **C. Guéguen**, 2009. Revealing aquatic dissolved organic matter composition using direct 1H NMR spectroscopy.2009 General Assembly American Geophysical Union, Toronto, May 2009.
* **C. Guéguen**, 2007. Dissolved organic matter in first year ice in Arctic shelves. ArcticNet 4th Annual Meeting, Collingwood, Ontario, December 2007.

**Invited Talks and Lectures**

* **C. Guéguen.** Trace Metal Speciation in Surface Waters Evaluated by Diffusive Gradients in Thin-films (DGT). Guest Speaker, Department of Chemistry, University of Toronto, February 2013.
* **C. Guéguen.** Application of Flow Field Flow Fractionation for the Characterization of Aquatic Dissolved Organic Matter. Guest Speaker, Department of Chemistry, Wilfrid Laurier University, November 2012.
* C. Guéguen. Dynamics of dissolved organic matter in Hudson Bay: relationship with hydrography, Japan Agency **for Marine-Earth Science and Technology (JAMSTEC), Yokohama, Japan, July 2012.**
* C. Guéguen. Dynamics of dissolved organic matter in Hudson Bay: relationship with hydrography, Tokyo University**, Japan, July 2012.**
* **C. Guéguen**, O. Clarisse, A. Perroud, B. Marcere. Assessing water quality in Athabasca River using passive samplers. Fall Technical Conference: Alberta's Oil Sands, Edmonton, November 2011.
* C.W. Cuss, **C. Guéguen**. Characterizing the DOM in leaf-litter leachates using AF4-UV/Vis-EEM: Is DOM 'source variability' evident at the source? 4th IWA specialty conference on natural organic matter: from source to tap and beyond. Orange County, USA, July 2011.
* **C. Guéguen**, A.M. McIntyre, W. Chen. Metal binding to dissolved organic matter: do molecular size and origin of DOM matter? 94th Canadian Chemical Conference and Exhibition, Montreal, June 2011
* **C. Guéguen**, 2011**.** Le devenir du carbone organique dissout terrestre dans l’Océan Arctique, UMR CNRS Environnements et Paléoenvironnements Océaniques et Continentaux, Talence, May 2011.
* **C. Guéguen**, 2011**.** L’impact de l’exploitation des sables bitumineux sur la mobilité et spéciation des polluants dans des rivières boréales. Institute of Molecular Sciences, University of Bordeaux, May 2011.

### C. Guéguen, 2009. Relationship between metal speciation and bioavailability: role of colloids. Institute of Mineralogy and Geochemistry, University of Lausanne, October 2009.

### C. Guéguen, 2009. Keynote: Assessing the variability of source and composition of dissolved organic matter in Arctic ecosystems. 238th American Chemical Society National Meeting, Washington, DC, August 2009.

* + - **C. Guéguen**, 2008. Modeling heavy metals in natural waters. 5th CEMN, Ontario, June 2008.