

Alfonso Mucci

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EDUCATION

- 1981 Ph.D. Rosenstiel School of Marine and Atmospheric Sciences (RSMAS)
University of Miami, Florida, U.S.A. (Marine and Atmospheric Chemistry)
"The Solubility of Calcite and Aragonite and the Composition of Calcite
Overgrowths in Seawater and Related Solutions"
- 1978 M.Sc. Université de Montréal (Chemistry – physical organic chemistry)
"Effet de Solvant sur la Basicité d'une Série d'Alkylamines"
- 1976 B.Sc. Université de Montréal (Chemistry)

PROFESSIONAL EXPERIENCE

Sept. 2020-	present	Professor Emeritus, Dept. Earth & Planetary Sciences, McGill University
Sept. 2018-	June 2019	Visiting Professor, Université de Bordeaux, France
June 2013-	June 2016	Chair, Department of Earth and Planetary Sciences, McGill University
Dec 2010-	present	Guest Professor, Ocean University of China, Qingdao
June 2000-	Sept. 2003	Chair, Department of Earth and Planetary Sciences, McGill University
& Sept. 2004-	June 2006	
April 2004-	Aug. 2004	Invited Researcher, Institute of Ocean Sciences, Fisheries and Oceans Canada, Sidney B.C.
April 1997-	Aug 2020	Full Professor, McGill University
Sept 1994-	Aug 1997	National Chair, Canadian Joint Global Ocean Flux Study (CJGOFS)
Nov 1993-	July 1994	Professeur Invité, Laboratoire de Géochimie, Université Paul Sabatier Toulouse, France
June 1989-	April 1997	Associate Professor, McGill University
April 1988-	June 1989	Assistant Professor, McGill University
Aug 1985-	March 1993	NSERC University Research Fellow
March 1983-	Aug 1985	NSERC "Attaché de recherches", Département d'Océanographie Université du Québec à Rimouski (UQAR)
Sept 1981-	Feb 1983	Post-doctoral fellow, Dept. Oceanography, Texas A&M University and Physics Division, Argonne National Laboratory, Illinois

RESEARCH INTERESTS

- Application of chemical thermodynamics, kinetics and surface chemistry to the characterization of equilibrium mineral phases in natural aquatic environments.
- The carbon cycle in the Arctic Oceans and the St. Lawrence Estuary.
- Ocean/estuarine acidification and de-oxygenation.
- Early diagenesis of marine, coastal and estuarine sediments.
- Trace metal geochemistry in freshwater and marine environments

HONORS AND AWARDS

- 1975 - American Chemical Society Undergraduate Award of Excellence
- 1976 - Merit Award from the Institute of Chemical Industries
- 1976-1977 - Post-graduate fellowship: National Research Council of Canada
- Higher education scholarship: Ministry of Education of Quebec
- 1977-1980 - Post-graduate fellowship: National Research Council of Canada
- Higher education scholarship: Ministry of Education of Quebec
- University of Miami Graduate School scholarships
- 1980-1981 - RSMAS/University of Miami KOCZY Award (best Ph.D. research project)
- 1981 - RSMAS/University of Miami SMITH Award (best Ph.D. Thesis)
- 1983-1985 - NSERC "Attaché de recherche", Université du Québec à Rimouski
- 1985-1993 - NSERC University Research Fellow, McGill University
- 1989-1992 - NSERC Environmental Earth Sciences Grant Selection Committee (EESGSC)
- 1993-1994 - France-Québec fellowship in support of professors on sabbatical leave
- 1994-1997 - National Chair, Canadian Joint Global Ocean Flux Study (CJGOFS)
- 1999-2003 - Scientific Program Advisor to ISMER (Institut des Sciences de la Mer de Rimouski)
- 2001-2021 - Associate Editor, *Geochimica et Cosmochimica Acta*
- 2001 - Past President's (Hutchison) Medal of the Geological Association of Canada
- 2001 - Recipient of the Leo Yaffe award for Excellence in Undergraduate teaching and education in the Faculty of Science, McGill University
- 2007-2016 -Member, Canadian National Committee of the Scientific Committee on Ocean Research
- 2008-present -Fellow of the Royal Society of Canada (Academy of Sciences)
- 2009-present - Adjunct Faculty, Dept. Chemistry and Biochemistry, Concordia University
- 2010-present - Associate Editor, *Marine Chemistry*
- 2010-2011 - Guest Editor, *Aquatic Geochemistry*
- 2010-2012 - Chair, Science Program Committee for the Goldschmidt 2012 Conference
- 2010-present - Guest Professor, Ocean University of China
- 2011 - Michael J. Keen Medal from the Marine Geosciences Division of the Geological Association of Canada
- 2017 -Adrian Smith Lecturer in Environmental Geochemistry, University of Waterloo
- 2017 -Canadian Meteorological and Oceanographic Society 2016 François J. Saucier Prize in Applied Oceanography
- 2018 -Michel-Jurdant ACFAS (Association Francophone pour le Savoir) Award in Environmental Sciences
- 2020 -Willet G. Miller Medal in Marine Sciences from the Royal Society of Canada
- 2022 -Fellow of the American Geophysical Union

PROFESSIONAL ACTIVITIES AND MEMBERSHIPS

GEOTOP (Laboratoire de Géochimie et Géodynamique, UQAM/McGill) Research Center: member (1995-present), Executive Committee member (1995-2003, 2004-2011), Interim Director (2010). Québec-Océan Research Center, collaborating/Emeritus member (2011-present), ArcticNet, American Chemical Society, Geochemical Society, American Geophysical Union, Ordre des Chimistes du Québec, Canadian Meteorological and Oceanographic Society

SCIENTIFIC CONTRIBUTIONS

1. REFEREED JOURNAL PUBLICATIONS

(Please note: **bold** names are those of students I have supervised or co-supervised

(196) NESBITT, W.A., MUCCI, A.O., TANHUA, T., GÉLINAS, Y., TREMBLAY, J.-É., CHAILLOU, G., PASCAL, L., FRADETTE, C., GERKE, L., STEVENS, S.W., JUTRAS, M., BLAIS, M., LIZOTTE, M., STARR, M., and WALLACE, D.W.R. (2026) Gulf of St. Lawrence and Estuary Dataset (GOSLED): A 20-year compilation of quality-controlled biogeochemical observations (2003-2023). Earth System Science Data (accepted for preprint online posting on January 24, 2026). Earth Syst. Sci. Data Discuss. [preprint], <https://doi.org/10.5194/essd-2026-7>, in review, 2026.

(195) SONG L., MUCCI, A., TENG, Y., POITRASSON, F., DILLON, P., XIAO, S., ZHENG, X., SONG, Y., WANG, Z., LIU, C. and BAO, H. (2025) Large non-mass-dependent iron-isotope signatures in an oxic-anoxic transition zone of lake sediments. Communications Earth & Environment **6**: 973, pp. 1-9. <https://doi.org/10.1038/s43247-025-02931-9>

(194) LIN, C.Y., MUSTA, B., ABDULLAH, M.H., ISIDORE, F., CLEOPHAS, F., ROSELLEE, M.H., MUCCI, A.O. (2025) Seawater intrusion and mud volcanism impact the groundwater geochemistry of Bornean small islands. Chemical Geology **695**: 123064, pp. 1-16. <https://doi.org/10.1016/j.chemgeo.2025.123064>

(193) NESBITT, W.A., STEVENS, S.W., MUCCI, A.O., GERKE, L., TANHUA, T., CHAILLOU, G., and WALLACE D.W.R. (2025) The coupled oxygen and carbon dynamics in the subsurface waters of the Gulf and Lower St. Lawrence Estuary and implications for artificial oxygenation. EGU sphere Ocean Sci., **21**: 2179–2195. <https://doi.org/10.5194/os-21-2179-2025>

(192) WANG Y., AHAD J.M.E., MUCCI A.O., GÉLINAS Y., DOUGLAS P.M.J. (2025) Large burial flux of modern organic carbon in the St. Lawrence estuarine system indicates a substantial atmospheric carbon sink. Earth and Planetary Science Letters **652**: 119204, <https://doi.org/10.1016/j.epsl.2025.119204>

(191) GUINEY H. and MUCCI A.O. (2024) Competitive dissolution of mixed carbonate solids under simulated ocean acidification. Geochim. Cosmochim. Acta **385**: 156-168. <https://doi.org/10.1016/j.gca.2024.09.014>.

(190) DANG H., WANG W., OMANOVIC D., MUCCI A. (2024) Mixing behaviour and sources of Ag, Pd, and other trace elements in the Estuary and Gulf of St. Lawrence under winter conditions. Chemosphere **363**: 142935, pp. 1-13. <https://doi.org/10.1016/j.chemosphere.2024.142935>

(189) WANG Y., GÉLINAS Y., DE VERNAL A., MUCCI A.O., ALLAN E., SEIDENKRANTZ M.-S., DOUGLAS P.M.J. (2024) High rates of marine organic carbon burial on the southwest Greenland margin induced by Neoglacial advances. Communications Earth & Environment **5-335**, pp. 1-10. <https://doi.org/10.1038/s43247-024-01508-2>

(188) CHAILLOU G., TOMMI-MORIN G. and MUCCI A. (2024) Production and fluxes of inorganic carbon and alkalinity in a subarctic subterranean estuary. Frontiers in Marine Science **11**: 1323463, pp. 1-14. doi: 10.3389/fmars.2024.1323463

(187) QUDSI Z., MUCCI A.O., DANG H., GÉLINAS Y. and CHAILLOU G. (2024) Contrasting rare earth element concentrations and mixing behaviours in the St. Lawrence Estuary and Saguenay Fjord. Marine Chemistry **258**: 104336. pp. 1-13. <https://doi.org/10.1016/j.marchem.2023.104336>

1. REFEREED JOURNAL PUBLICATIONS (continued)

(186) PASCAL, L., **COOL, J.**, ARCHAMBAULT, P., CALOSI, P., CUENCA, A., MUCCI, A.O. and CHAILLOU, G. (2024) Ocean deoxygenation caused non-linear responses in the structure and functioning of benthic ecosystems. *Global Change Biology* **30**(1): e16994, pp. 1-15. <https://doi.org/10.1111/gcb.16994>.

(185) ALLAN, E., DOUGLAS P., DE VERNAL A., GÉLINAS Y. and MUCCI A.O. (2023) Palmitic acid is not a proper salinity proxy in Baffin Bay and the Labrador Sea but reflects the variability in organic matter sources modulated by sea ice coverage. *Geochemistry, Geophysics, Geosystems* **24**: e2022GC010837. <https://doi.org/10.1029/2022GC010837>

(184) **JUTRAS M.**, DUFOUR C., MUCCI A. and TALBOT L. (2023) Large-scale control of the retroflexion of the Labrador Current. *Nature Communications* **14**: 2623, pp. 1-9, 2023. <https://doi.org/10.1038/s41467-023-38321-y>. *Chosen by the Quebec-Science magazine as one of the ten most important discoveries of 2023 by Quebec researchers.*

(183) **JUTRAS M.**, MUCCI A., CHAILLOU G., NESBITT W. and WALLACE D. (2023) Temporal and spatial evolution of bottom-water hypoxia in the Estuary and Gulf of St. Lawrence. *Biogeosciences*, Special Issue: Low-oxygen environments and deoxygenation in open and coastal marine waters. **20**: 839-849. <https://doi.org/10.5194/bg-20-839-2023>

(182) AUDET T., DE VERNAL A., MUCCI A., SEIDENKRANT M.-S., HIILLAIRE-MARCEL C., CARNERO-BRAVO V. and GÉLINAS Y. (2023) Benthic foraminifer assemblages from the Laurentian Channel in the Lower Estuary and Gulf of St. Lawrence, eastern Canada: tracers of bottom water hypoxia. *Journal of Foraminifera Research* **53**(1): 55-77. <https://doi.org/10.2113/gsjfr.53.1.57>

(181) CUI X., MUCCI A., BIANCHI, T.S., HE, D., VAUGHN, D., WILLIAMS, E.K., WANG, C., SMEATON, C., KOZIOROWSKA-MAKUCH, K., FAUSR, J.C., PLANTE, A.F. and ROSENHEIM, B.E. (2022) Global fjords as transitory reservoirs of labile organic carbon. *Science Advances* **8**: eadd0610, pp. 1-11. <https://www.science.org/doi/10.1126/sciadv.add0610>

(180) BRUYANT F., AMIRAUX R., AMYOT M.-P., ARCHAMBAULT P., ARTIGUE L., BARDEDO de FREITAS L., BÉCU G., BÉLANGER S., BOURGAIN P., BRICAUD A., BROUARD E., BRUNET C., BURGERS T., CALEB D., CHALUT K., CLAUTRE H., CORNET-BARTHAUX V., COUPEL P., CUSA M., CUSSET F., DADAGLIO L., DAVELAAR M., DESLONGCHAMPS G., DIMIER C., DINASQUET J., DUMONT D., ELSE B., EULAERS I., FERLAND J., FILTEAU G., FORGET M.-H., FORT J., FORTIER L., GALI-TAPPAIS M., GALLINARI M., GARBUS S.-E., GARCIA N., GÉRIKAS RIBEIRO C., GOMBAULT C., GOURVIL P., GOYENS C., GRANT C., GRONDIN P.-L., HULLOT P., HILLION S., HUSSHER R., JOUX F., JOY-WARREN H., JOYAL G., KIEBER D., LAFOND A., LAGUNAS J., LAJEUNESSE P., LALANDE C., LARIVIÈRE J., Le GALL F., LEBLANC K., LEBLANC M., LEGRAS J., LEVESQUE K., LEWIS K.-M., LEYMARIE E., LEYNAERT A., LINKOWSKI T., Lizotte, M., LOPES dos SANTOS, A., MAREC C., MARIE D., MASSÉ G., MASSICOTTE P., MATSUOKA A., MILLER L., MIRSHAK S., MORATA N., MORICEAU B., MORIN P.-I., MORISSET S., MOSBECH A., MUCCI A., NADAÏ G., NOZAIS C., OBERNOSTERER I., PAIRE T., PANAGIOTOPOULOS C., PARENTEAU M., PELLETIER N., PICHERAL M., QUÉGUINER B., RAIMBAULT P., RAS J., REHM E., RIBOT LACOSTA L., RONTANI J.-F., SAINT-BÉAT B., SANSOULET J., SARDET N., SCHMECHTIG C., SCIANDRA A., SEMPÉRÉ R., SÉVIGNY C., TOULLEC J., TAGRIN M., TREMBLAY J.-E., TROTTIER A.-P., VAULOT D., VLADOIU A., XUE L., YUNDA-GUARIN G., and BABIN M. (2022) The Green Edge cruise: Understanding the onset, life and fate of the Arctic phytoplankton spring bloom, *Earth System Science Data* **14**: 4607-4642. <https://doi.org/10.5194/essd-14-4607-2022>.

1. REFEREED JOURNAL PUBLICATIONS (continued)

(179) DANG H., OMANOVIC D., MUCCI A., WANG W., SIGMA A. and CHATZIS A. (2022) The winter estuarine geochemistry of platinum in the Estuary and Gulf of St. Lawrence. *Marine Chemistry* **242**: 104123, pp. 1-12. <https://doi.org/10.1016/j.marchem.2022.104123>.

(178) ZOD N., MUCCI A., BAHN O., PROVENÇAL R. and SHAO Y. (2022) Steel Slag-Bonded Strand Board as a Carbon-Negative Building Product. *Journal of Construction and Building Materials* **340**: 127695, pp. 1-12. <https://doi.org/10.1016/j.conbuildmat.2022.127695>

(177) ZHANG S., GHOULEH Z., MUCCI A., BAHN O., PROVENÇAL R. and SHAO Y. (2022) Production of cleaner high-strength cementing material using steel slag under elevated-temperature carbonation. *Journal of Cleaner Production*, **342**: 130948, 12 pp., <https://doi.org/10.1016/j.jclepro.2022.130948>

(176) SUNDBY B., ANSCHUTZ P., LECROART P. and MUCCI A. (2022) Ideas and Perspectives: Sea-level change, anaerobic methane oxidation, and the glacial-interglacial phosphorus cycle. *Biogeosciences* **19**: 1421-1434. <https://doi.org/10.5194/bg-19-1421-2022>.

(175) DANG H., WANG W., SIKMA A., CHATZIS A. and MUCCI A. (2022) The contrasting estuarine geochemistry of rare earth elements between ice-covered and ice-free conditions. *Geochim. Cosmochim. Acta* **317**: 488-506. <https://doi.org/10.1016/j.gca.2021.10.025>.

(174) CHARBONNIER C., ANSCHUTZ P., ABRIL G., MUCCI A., DEIRMENDJIAN L., POIRIER D., BUJANS S. and LECROART P. (2022) Carbon dynamics driven by seawater recirculation and groundwater discharge along a forest-dune-beach continuum of a high-energy meso-macro-tidal sandy coast. *Geochim. Cosmochim. Acta* **317**: 18-38, <https://doi.org/10.1016/j.gca.2021.10.021>

(173) MARSHALL N.R., DE VERNAL A., MUCCI A., KIENAST M., FILIPPOVA A. and HILLAIRES-MARCEL C. (2021) Carbonate dissolution and environmental parameters govern coccolith vs. alkenone abundances in surface sediments from the northwest North Atlantic. *Marine Micropaleontology* **169**: 102032, pp. 1-22.

(172) COSSA D., MUCCI A., GUÉDRON S., COQUERY M., RADOKOVICH O., ESCOUBE R., CAMPILLO, S., HEUSSNER, S. (2021) Mercury deposition and preservation in the Western Mediterranean abyssal plain: The reliability of sediment archives for a late Holocene Hg reconstruction. *Geochim. Cosmochim. Acta* **309**: 1-15, doi: [10.1016/j.gca.2021.06.014](https://doi.org/10.1016/j.gca.2021.06.014)

(171) MARSHALL R. N., DE VERNAL A., MUCCI A., FILIPPOVA A., KIENAST M., GIBB O. and HILLAIRES-MARCEL C. (2021) Biogenic carbonate fluxes and preservation in the northwest Labrador Sea since the Last Glacial Maximum. *Palaeogeography, Palaeoclimatology, Palaeoecology* **576**: 110498, pp. 1-13.

(170) LANGE B.A., HAAS C., MUCCI A., JUSTIN F. BECKERS J.F., CASEY J.A., DUERKSE S., GRANSKOG M.A., HATAM I., NIEMI A., REPPCHEN A. and MICHEL C. (2021) Contribution of snow to Arctic first-year and multi-year sea ice mass balance within the Last Ice Area. *JGR-Oceans* **126**: e10.1029/2020JC016971, pp. 1-14, 2021. <https://doi.org/10.1029/2020JC016971>

1. REFEREED JOURNAL PUBLICATIONS (continued)

- (169) MASSICOTTE P., AMON R., ANOINE D., ARCHAMBAULT P., BALZANO S., BÉLANGER S., BENNER R., BOEUF D., BRICAUD A., BRUYANT F., CHAILLOU G., CHAMI M., CHARRIÈRE B., CHEN J., CLAUSTRE H., COUPEL P., DELSAUT N., DOXARAN D., EHN J., FICHOT C., FORGET M.-H., FU P., GAGNON J., GARCIA N., GASSER B., GHIGLIONE J.-F., GORSKY G., GOSSELIN M., GOURVIL P., GRATTON Y., GUILLOT P., HEIPIEPER H.J., HEUSSNER S., HOOKER S.B., HUOT Y., JACQ V., JEANTHON C., JEFFREY W., JOUX F., KAWAMURA K., **LANSARD B.**, LEYMARIE E., LINK H., LOVEJOY C., MAREC C., MARIE D., MARTIN J., MASSÉ G., MATSUOKA A., MCKAGUE V., MIGNOT A., MILLER W.L., MIQUEL J.-C., MUCCI A., ONO K., ORTEGA E., PANAGIOTOPOULOS C., PAPAPKYRIAKOU T., PARA J., PHERAL M.P., PIEPENBURG D., PRIEUR L., RAIMBAULT P., RAS J., REYNOLDS R.A., ROCHON A., ROTANI J.-F., SCHMECHTIG C., SCHMIIDT S., SEMPÉRÉ R., SHEN Y., SONG G., STRAMSKI D., STROUD D., TACHIBANA E., THIROUARD A., TOLOSA I. TRAEMBLAY J.-É., VAÏTILINGOM M., VAULOT D., VAULTIER F., VOLKMAN J.K., VONK J.O., XIE H., ZHENG G., and MARCEL B. (2021) The Malina oceanographic expedition: How do changes in ice cover, permafrost and UV radiation impact biodiversity and biogeochemical fluxes in the Arctic Ocean? *Earth System Science Data* **13**: 1561–1592, 2021. <https://doi.org/10.5194/essd-13-1561-2021>.
- (168) **NESBITT W.A.S.** and MUCCI A. (2021) The impact of oxygen depletion and the concomitant acidification of bottom waters on the preservation of detrital carbonates in the Gulf of St. Lawrence. *Canadian Journal of Earth Sciences* **58**: 85-92. <https://doi.org/10.1139/cjes-2020-0020>
- (167) RICHARD, D., MUCCI A., NECULITA C.-M. and ZAGURY G.J. (2020) Comparison of organic materials for the passive treatment of synthetic neutral mine drainage contaminated by nickel: Adsorption and desorption kinetics and isotherms. *Water, Air and Soil Pollution*, **231**: 556, pp. 1-15. <https://doi.org/10.1007/s11270-020-04917-z>
- (166) **JUTRAS M.**, DUFOUR C., MUCCI A., CYR F. and GILBERT D. (2020) Temporal changes in the causes of observed oxygen decline in the St. Lawrence Estuary. *Journal of Geophysical Research-Oceans* **125**: e2020JC016577, pp. 1-20. <https://doi.org/10.1029/2020JC016577>.
- (165) RICHARD, D., MUCCI A., NECULITA C.-M. and ZAGURY G.J. (2020) Comparison of organic materials for the passive treatment of synthetic neutral mine drainage contaminated by nickel: Short- and medium-term batch experiments. *Applied Geochemistry* **123**: 104772, pp. 1-11. <https://doi.org/10.1016/j.apgeochem.2020.104772>
- (164) MEARS C., THOMAS H., HENDERSON P.B., CHARETTE M.A., MACINTYRE H., DEHAIRS F., MONNIN C., and MUCCI A. (2020) Using ²²⁶Ra and ²²⁸Ra isotopes to distinguish water mass distribution in the Canadian Arctic Archipelago. *Biogeosciences* **17**: 4937-4959. <https://doi.org/10.5194/bg-17-4937-2020>
- (163) **BEAUPRÉ-LAPERRIÈRE A.**, MUCCI A. and THOMAS H. (2020) The recent state and variability of the carbonate system of the Canadian Arctic in the context of ocean acidification. *Biogeosciences* **17**: 3923–3942. <https://doi.org/10.5194/bg-17-3923-2020>.

1. REFEREED JOURNAL PUBLICATIONS (continued)

(162) BEAUCHESNE D., DAIGLE R.M, VISSAULT S., GRAVAL D., BASTIEN A., BÉLANGER S., BERNATCHEZ P., BOURDAGES H., CHION C., GALBRAITH P.S., HALPERN B., LAVOIE C., MCKINDSEY C.W., MUCCI A., PINEAULT S., STARR M., STE-MARIE A.-S and ARCHAMBAULT P. (2020) Next Generation Planning - Structuring and Sharing Environmental Drivers Data for the St. Lawrence System. *Frontiers in Marine Science* **7**: 383. doi: 10.3389/fmars.2020.00383

(161) JUTRAS M., MUCCI A., SUNDBY B., GRATTON Y. and KATSEV S. (2020) Nutrient cycling in the Lower St. Lawrence Estuary: response to environmental perturbations. *Estuaries, Coastal and Shelf Science* **239**: 106715 (pp. 1–12). <https://doi.org/10.1016/j.ecss.2020.106715>

(160) DELAIGUE L., MUCCI A. and THOMAS H. (2020) Spatial variations of the CO₂ fluxes in the Saguenay Fjord (Québec, Canada) and results of a water mixing model. *Biogeosciences* **17**: 547-566. doi.org/10.5194/bg-17-547-2020.

(159) BOUDREAU B.P., SULPIS O. and MUCCI A. (2020) Control of CaCO₃ dissolution at the deep seafloor and its consequences. *Geochim. Cosmochim. Acta* **268**: 90-106. doi.org/10.1016/j.gca.2019.09.037

(158) SULPIS O., DUFOUR C. TROSSMAN D.S., FASSBENDER A.S., ARBIC S.K., BOUDREAU B.P., DUNNE J.P. and MUCCI A. (2019) Reduced CaCO₃ flux to the seafloor and weaker bottom current speeds curtail benthic CaCO₃ dissolution over the 21st century. *Global Biogeochemical Cycles* **33**: 1654-1673. doi.org/10.1029/2019GB006230.

(157) OLDHAM V.E., SIEBECKER M., JONES M.R., MUCCI A., TEBO B. and LUTHER G.W. III. (2019) The speciation and mobility of Mn and Fe in estuarine sediments. *Aquatic Geochemistry* **25**: 3-26. doi.org/10.1007/s10498-019-09351-0

(156) JONES M.R., LUTHER III G.W, MUCCI A. and TEBO B.M. (2019) Concentrations of reactive Mn(III)-L and MnO₂ in estuarine and marine waters. *Talanta* **200**: 91-99. doi.org/10.1016/j.talanta.2019.03.026

(155) SULPIS O., MUCCI A., BOUDREAU B.P., BARRY M. and JOHNSON B. (2019) Controlling the diffusive boundary layer thickness above the sediment-water interface in a thermostated, rotating-disk reactor. *Limnology and Oceanography: Methods* **17**: 241-253. doi: 10.1002/lom3.10309.

(154) BÉNARD R., LEVASSEUR M., SCARRATT M., MICHAUD S., STARR M., MUCCI A., FERREYRA G., GOSSELIN M., TREMBLAY J-É., LIZOTTE M. and YANG G.-P. (2019) Contrasting effects of acidification and warming on dimethylsulfide concentrations during a temperate estuarine fall bloom mesocosm experiment. *Biogeosciences* **16**: 1167-1185. doi.org/10.5194/bg_16-1167-2019.

(153) JONES M.R., OLDHAM V.E., LUTHER III G.W, MUCCI A., TEBO B.M. (2018) Distribution of desferrioxamine-B-extractable soluble manganese(III) and particulate MnO₂ in the St. Lawrence Estuary, Canada. *Marine Chemistry* **208**: 70-82. doi:10.1016/j.marchem.2018.11.005.

(152) SULPIS O., BOUDREAU B.P., MUCCI A., JENKINS C., TROSSMAN D.S. ARBIC B.K. and KEY R. (2017) Current CaCO₃ dissolution at the seafloor caused by anthropogenic CO₂. *Proceedings of the National Academic of Science* **115(45)**: 11700-11705. doi:10.1073/pnas.1811488115.

1. REFEREED JOURNAL PUBLICATIONS (continued)

(151) WANG K., MUNSON K.M., **BEAUPRÉ-LAPERRIÈRE A.**, MUCCI A., MACDONALD R.W. and WANG F. (2018) Subsurface methylmercury maximum explains biotic mercury levels in the Canadian Arctic. *Nature Scientific Reports* **8**: 14465, pp. 1-5. doi.org/10.1038/s41598-018-32760-0.

(150) BÉNARD R., LEVASSEUR M., SCARRATT M.G., BLAIS M.-A., MUCCI A., FERREYRA G., STARR M., GOSSELIN M., TREMBLAY J.-É. and LIZOTTE M. (2018) Experimental assessment of the sensitivity of an estuarine phytoplankton fall bloom to acidification and warming. *Biogeosciences* **15**: 4883-4904. doi.org/10.5194/bg-15-4883-2018.

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(R3) MANN K., HARGRAVE B., MUCCI A. et al. (1989) Report of the benthic processes working group of JGOFS. In: Canadian National Program for Joint Ocean Flux Study, (Platt T., Ed.), 61pp.

(R2) MUCCI A. and PAGÉ P. (1987) The water chemistry of cruise 85-036 Bras d'Or Lake, Cape Breton Island, Nova Scotia. Current Research, Part A, Geological Survey of Canada, Paper 87-1A, p. 17-24.

(R1) MORSE J. W., HUNT M., ZULLIG J. J., MUCCI A. and MENDEZ T. (1982) A comparison of techniques for preserving dissolved nutrients in open ocean seawater samples. Technical report to Lawrence Berkeley Laboratory under subcontract #4984002, 33 pp.

1c. COMPLETED GRADUATE THESES UNDER MY SUPERVISION/CO-SUPERVISION

ZHONG S. (1988) An experimental investigation of "calcite and aragonite precipitation rates in seawater as a function of salinity and its applications to some geological problems. M.Sc. Thesis, McGill University, Montreal, Quebec, 122p.

ZHONG S. (1993) Precipitation kinetics and partitioning of rare earth elements (REE) between calcite and seawater. Ph.D. Thesis, McGill University, Montreal, Quebec, 163p.
Federal Regulator, Government of Canada, Iqaluit.

HARTLEY, G. (1994) The influence of the partial pressure of carbon dioxide and substrate on the composition and mineralogy of carbonate overgrowths precipitated from seawater. M.Sc. thesis, McGill University, 105 pp.
Income coordinator, Scotia Capital, Toronto, ON.

DMYTRIW, R. (1994) The partitioning of mercury in the solid components of forest soils and flooded forest soils in a hydroelectric reservoir, Québec. M.Sc. thesis, McGill University, 87 pp.
Director of Research at the Offshore Energy Research Association of Nova Scotia

MONTGOMERY, S. (1994) Total dissolved mercury in the water column and interstitial waters of aquatic systems and hydroelectric reservoirs of northern Québec (Canada). M.Sc. thesis, McGill University, 86 pp.
Executive Director at Mackenzie Valley Land and Water Board, Northwest Territories.

GAGNON, C. (1994/UQÀR) Comportement diagénétique du mercure anthropique et du soufre enfouis dans les sédiments du Fjord du Saguenay. Ph.D. thesis, Université du Québec à Rimouski, 192 pp.
Research Scientist, Program Manager (Water & Sediments), Centre Saint-Laurent, Environment Canada.

BOIRIDY, M. (1996) Potential chemical remediation of mercury in recently impounded reservoirs. M.Sc. thesis, McGill University, 133 pp.
Investor Relations: Red Pine Exploration Inc. Honey badger Exploration Inc., Macdonald Mines Ltd.

RICHARD, L-F. (1996/UQÀM) Comparaison des comportements géochimiques du phosphore et de l'arsenic dans le fjord du Saguenay et l'estuaire du St-Laurent. M.Sc. thesis, Université du Québec à Montréal, 57 pp.
(co-supervisor: Dr. Marc Lucotte/UQÀM-GEOTOP).
Hydrogeologist, Ministère du Développement durable, de l'Environnement et des Parcs du Québec.

BONO A. (1997) Partitioning of mercury between the various solid components of the sediments of the Saguenay Fjord. M.Sc. thesis, McGill University, 183 pp.
Administrator, Monterey Bay Credit Union

SAULNIER I. (1997) Trace metal remobilization following the resuspension of Saguenay Fjord sediments. M.Sc. thesis, McGill University, 157 pp.
Professeure, CEGEP Édouard-Montpetit

FITZPATRICK A. (1999) Adsorption of arsenate and phosphate on gibbsite from artificial seawater. M.Sc. thesis, McGill University, 110 pp.
Geochemist at Klohn Crippen Berger, South Brisbane, Australia

A. Mucci

1c. COMPLETED GRADUATE THESES UNDER MY SUPERVISION/CO-SUPERVISION
(continued)

ZHANG D. (1999/UQÀM) Fluxes of short-lived radioisotopes in the marginal marine basins of Eastern Canada. Ph.D. thesis, Université du Québec à Montréal, 191 pp. (co-supervisor: Dr. Claude Hillaire-Marcel/UQÀM-GEOTOP).

PINHEIRO F. (2000) Effects of forest fires and clear-cutting on mercury loading to boreal lakes. M.Sc. thesis, McGill University, 119 pp.

LEDUC J. (2001/UQÀM) Etude des populations de foraminifères benthiques dans les sédiments du fjord du Saguenay. M.Sc. thesis, Université du Québec à Montréal, 63 pp. (co-supervision with Dr. A. deVernal/Earth Sciences/GEOTOP-UQÀM).
Chargée de projets MKT & Communications.

GAO Y. (2001) Surface electrical properties of goethite and adsorption of phosphate and arsenate on iron oxyhydroxides in high ionic strength solutions. Ph.D. Thesis, McGill University, Montreal, Quebec, 273p.

POULIN P. (2002/UQÀM) Les isotopes du thorium et les flux particulières à la hauteur de la pycnocline dans le Fjord du Saguenay. M.Sc. thesis, Université du Québec à Montréal, 74 pp. (co-supervision with C. Hillaire-Marcel/GEOTOP-UQÀM).
Conseiller scientifique spécialisé à l'Institut national de santé publique.

DAVIS T. (2002) Cadmium biosorption and selectivity of *Sargassum spp.* and their alginates in relation to their guluronic acid content. Ph.D. Thesis, McGill University, Montreal, Quebec, 233p. (co-supervision with B. Volesky/McGill). NATEQ PDF, Wageningen University, The Netherlands.
Associate Director, Science Policy Branch, Innovation Canada

GARAND A. (2002) Influence of ionic strength and fluoride ion concentration on the adsorption properties of gibbsite: Phosphate and arsenate adsorption. M.Sc. thesis, McGill University, 99 pp.
Regional manager and technical director, Pario Environmental, Montreal.

CHIEN Y.-C. (2002) The influence of ionic strength, magnesium ions and reactive surface area on calcite crystal growth morphology and surface microtopography. M.Sc. thesis, McGill University, 150 pp. (co-supervisor: H. Vali/McGill).

RAHMAN S. (2004) Oxidation of arsenite by dissolved oxygen, manganese and iron oxyhydroxides in aqueous solutions. M.Sc. thesis, McGill University, 102 pp. (co-supervisor: B. Sundby/ISMER-McGill).
Research Associate, University of South Florida

DESROSIERS M. (2004/UQÀM) Influence des coupes forestières sur la zone littorale des lacs boréaux et évaluation du rôle du biofilm périphytique dans l'accumulation et la production de méthylmercure. Ph.D. thesis, Université du Québec à Montréal, 148 pp. (co-supervision with Dolores Planas/Département de Biologie/GEOTOP-UQÀM).
Écotoxicologue, Centre d'expertise en analyse environnemental du Québec, MDDELCC

1c. COMPLETED GRADUATE THESES UNDER MY SUPERVISION/CO-SUPERVISION (continued)

BENOIT P. (2004) Modeling of dissolved oxygen levels in the bottom waters of the Lower St. Lawrence Estuary: coupling of benthic and pelagic processes. M.Sc. thesis, McGill University, 100 pp. (co-supervisor: Y. Gratton/INRS-ETE).
Environmental Scientist/Consultant at WSP Global Inc., Montréal

THIBODEAU B. (2005/UQÀM) Augmentation récente de la productivité primaire dans l'estuaire maritime du St. Laurent: évidences micropaléontologiques et géochimiques. M.Sc. thesis, Université du Québec à Montréal, 51 pp. (co-supervision with Anne de Vernal/Département des sciences de la terre et de l'atmosphère/GEOTOP-UQÀM).
Research Assistant Professor, Department of Earth Sciences & Swire Institute for Marine Science, University of Hong Kong, China.

MUSCLOW S. (2005) Impact of salmon aquaculture on sediment chemistry and mercury loading. M.Sc. thesis, McGill University, 92 pp.
Doctor of Naturopathy, Madawaska Valley/Hastings Highlands, ON

BARAZZUOL L. (2006) The relationship between the diagenetic cycles of reducible iron and manganese oxides and dissolved organic carbon (DOC). M.Sc. thesis, McGill University, 101 pp. (co-supervisor: Y. Gélinas/Concordia).
Senior Environmental Consultant at SRK Consulting, Vancouver

LUSSIER A. (2006) The influence of parent-solution chemistry on the precipitation of Pb-carbonates at 25°C, 1 bar total pressure. M.Sc. thesis, McGill University, 134 pp. (co-supervisor: J. Paquette/McGill).
Research Scientist in Mineralogy, Canadian Museum of Nature

BERNIER G. (2006) Mercury diagenesis in the Saguenay Fjord. M.Sc. thesis, McGill University, 85 pp.
Spectrometry Specialist, Agilent technologies, Montreal

KIM S.-T. (2006) Oxygen isotope systematics in carbonate-water systems: influence of temperature, solution chemistry, and kinetic isotope fractionation. Ph.D. thesis, McGill University, 156 pp. (co-supervisor: C. Hillaire-Marcel/UQÀM, GEOTOP-McGill-UQÀM)
Full Professor, McMaster University

MAGEN C. (2007) Origin, sedimentation and diagenesis of organic matter in coastal sediments of the Southern Beaufort Sea region, Canadian Arctic. Ph.D. thesis, McGill University, 133 pp. (co-supervision with Dr. Bjorn Sundby/ISMER-UQÀR & McGill).
Research Associate, Chesapeake Bay Institute

CROWE S. (2008) Biogeochemical cycling in Fe-rich Lake Matano, Indonesia: An early ocean analogue. Ph.D. thesis, McGill University, 165 pp. (co-supervised w/B. Sundby/UQÀR-ISMER and D. Fowle-Kansas).
Canada Research Chair Tier II of Geomicrobiology and Full Professor, University of British Columbia.

VILLEGAS-JIMENEZ A. (2009) On the surface chemistry of some rhombohedral carbonate minerals in aqueous solutions. Ph.D. thesis, McGill University, 400 pp. (co-supervised w/J. Paquette).
Environmental Scientist and CEO of Whiterock Consulting

LAMANA T. (2010) Nickel sorption on the calcite surface: a macroscopic experimental study. M.Sc. thesis, McGill University, 93 pp.
Senior Scientist, Elk Valley Resources

1c. COMPLETED GRADUATE THESES UNDER MY SUPERVISION/CO-SUPERVISION (continued)

RICHARD D. (2011): Kinetics of manganese adsorption, desorption and oxidation in coastal marine sediments. M.Sc. thesis, 84 pp., McGill University, (co-supervision with Bjorn Sundby/UQAR-ISMER-McGill).

Ph.D. from l'École Polytechnique de Montréal.

Associée de recherche. École Polytechnique de Montréal

SULU-GAMBARI F. (2012) Bacterially-induced dissolution of calcite: The role of bacteria in limestone weathering. M.Sc. thesis, 116 pp., McGill University, (co-supervision with Dominic Frigon/Civil Engineering-McGill). Ph.D. from Utrecht University, The Netherlands
Researcher, The Ocean Cleanup Foundation, Rotterdam, The Netherlands

LEFORT S. (2012) Multidisciplinary study of hypoxia in the deep water of the Estuary and Gulf of St. Lawrence: Is this ecosystem on borrowed time? Ph.D. thesis, 149 pp., McGill University, (co-supervision with Bjorn Sundby/ISMER-McGill and Yves Gratton/INRS-ETE).
Freelance Environmental Consultant, Bordeaux, France

WANG T. (2012) Breakdown of the Ostwald Step Rule--The Precipitation of calcite and dolomite from seawater at 25 and 40°C. M.Sc. thesis, 97 pp., McGill University.
Real estate agent and property manager-- RE/MAX Realtor Toronto

PRATTE S. (2012) History of atmospheric trace metal deposition along the St. Lawrence Valley (Quebec) using peat bog records. M.Sc. thesis, 97 pp., McGill University, (co-supervision with Michèle Garneau/Géographie, UQÀM-GEOTOP).
Assistant Professor, School of Earth Sciences, Zhejiang University, China.

STRUGSTAD M. (2013) Individual and competitive adsorption of phosphate and arsenate on hydrous amorphous manganese oxide. M.Sc. thesis, 112 pp., McGill University, (co-supervision with Bjorn Sundby/ISMER-McGill).
Environmental Scientist, PwC, Norway

LALONDE K. (2014/Concordia) Intertwining the elemental cycles of iron and carbon: Iron's influence on the fate and dynamics of organic carbon in the environment. Ph.D. thesis, 172 pp. Concordia University, (co-supervision with Yves Gélinas/Chemistry & Biochemistry, Concordia).
Co-director, Laboratoire Anti-Dopage, Institut National de la Recherche Scientifique.

LIX C. (2015) Calcite dissolution kinetics at the sediment-water interface: An experimental study in natural seawater at 25°C. M.Sc. thesis, 108 pp. McGill University.
Obtained a Ph.D. at l'Institut Français du Pétrole/Sorbonne. Research Associate, Université de Limoges

DINAUER A. (2017) Inorganic carbon dynamics in the Estuary and Gulf of St. Lawrence: A source or sink of atmospheric carbon dioxide and factors that control the spatial variability in gas exchange. M.Sc. thesis, 131 pp. McGill University. Ph.D. from University of Bern, Switzerland

DELAIGUE L. (2018) Inorganic carbon dynamics and CO₂ fluxes in the Saguenay Fjord (Québec, Canada). M.Sc. thesis, 68 pp. McGill University.
Ph.D. from Netherlands Institute of Oceanographic Research (NIOZ), Texel, The Netherlands,
Post-doctoral Research Fellow at Villefranche-sur-Mer, France

1c. COMPLETED GRADUATE THESES UNDER MY SUPERVISION/CO-SUPERVISION (continued)

NESBITT W. (2018) The impact of oxygen depletion and the concomitant acidification of bottom waters on the preservation of detrital carbonates in the St. Lawrence Estuary sediments. M.Sc. thesis, 89 pp. McGill University.
Science Coordinator of TReX, and Ph.D. candidate, Dalhousie University

SULPIS O. (2019) Calcite dissolution kinetics at the sediment-water interface in an acidifying ocean. Ph.D. thesis, 248 pp. McGill University
Researcher, CNRS-CEREGE, Aix-en-Provence, France

BEAUPRÉ-LAPERRIÈRE A. (2019) The state and variability of the carbonate system in the Canadian Arctic in the context of ocean acidification. M.Sc. thesis, 104 pp., McGill University.
Gestionnaire de projets à l'Agence d'évaluation d'impact du Canada

MARSHALL N. (2020/UQÀM) Distribution des coccolithes et alcénones dans les sédiments récents et quaternaires supérieurs du nord-ouest de l'Atlantique Nord - proxies paléocéanographiques et indicateurs de paléoproduktivité. Ph.D. thesis, 226 pp., GEOTOP-UQÀM. (co-supervision with Anne de Vernal/GEOTOP-UQÀM).
Student Outreach, NASA Langley Visitor Center/Virginia Air & Space Science Center, Hampton, Virginia, U.S.A.

COOL J. (2022/UQÀR) Étude de la dynamique de l'oxygène dans les sédiments du chenal laurentien. M.Sc. thesis, 70 pp., ISMER-UQAR (co-supervision with Gwenaëlle Chaillou/Institut des Sciences de la Mer-Université du Québec à Rimouski)

AUDET T. (2023/UQÀM) Assemblages de foraminifères benthiques du chenal laurentien de l'estuaire maritime et du golfe du Saint-Laurent, est du Canada : Traceurs d'hypoxie des eaux de fond. M.Sc. thesis, 86 pp., GEOTOP-UQÀM. (co-supervision with Anne de Vernal/GEOTOP-UQÀM).
Ph.D. candidate at GEOTOP-UQÀM.

JUTRAS M. (2023) Physical and biogeochemical drivers of deoxygenation in the Gulf and Lower St. Lawrence Estuary. Ph.D. thesis, 298 pp. McGill University (co-supervision with Carolina Dufour/McGill).
PDF, University of Hawaii, Mauna Loa.
Assistant Professor and Chair of Ocean Modeling at ISMER-UQAR

GUINEY H. (2023) Competitive dissolution of mixed carbonate solids under simulated ocean acidification. M.Sc. thesis, 67 pp., McGill University.

DAOUST P. (2024) Ocean acidification: Insights from the behaviour of ancient and modern carbonates. Ph.D. thesis, 222 pp., McGill University. (co-supervision with Galen Halverson/McGill).
Project Manager for UNESCO Chair on Anticosti Island

TURCOTTE O. (2025) Étude de la chimie des carbonates le long d'un petit continuum rivière - océan côtier. M.Sc. thesis, 63 pp., ISMER-UQAR (co-supervision with Gwenaëlle Chaillou and Fanny Noisette/Institut des Sciences de la Mer-Université du Québec à Rimouski).

DUVAL G. (2025) Étude de la répartition des espèces soufrées dans les sédiments de l'estuaire maritime du Saint-Laurent. M.Sc. thesis, 76 pp., ISMER-UQAR (co-supervision with André Pellerin and Gwenaëlle Chaillou /Institut des Sciences de la Mer-Université du Québec à Rimouski).

GUAY C. (2025) Caractérisation de la chimie des carbonates et composition de la matière organique dissoute des eaux suprapergélisol dans le continuum terre-à-océan côtier (Cambridge Bay, NU). M.Sc. thesis, 100 pp., ISMER-UQAR (co-supervision with Gwenaëlle Chaillou and Stephanie Kusch/Institut des Sciences de la Mer-Université du Québec à Rimouski).

1d. POST-DOCTORAL FELLOWS UNDER MY SUPERVISION OR CO-SUPERVISION

Dr. Takeshi Arakaki (1993-1995)

Professor, Okinawa International University, Japan. - Retired

Dr. Pierpaolo Zuddas (1995-1996)

Professor of Geochemistry at Université Pierre et Marie Curie, Paris-Sorbonne

Dr. Marion Gehlen (1997-1999)

Researcher, Laboratoire des Sciences du Climat et de l'Environnement, CEA, Gif-sur-Yvette, France

Dr. Key-Young Choe (2002-2003)

Research Associate, Texas A&M University, Galveston Campus.

Dr. Gwenaëlle Chaillou (2003-2006) (co-supervised by Prof. B. Sundby/ISMER-McGill)

Professeur Associé et Chaire du Canada, Département de Géographie, Université du Québec à Rimouski

Dr. Laure Gerbert-Gaillard (2006-2007)

Cadre Sécurité et Exploitation – NICOL ENVIRONNEMENT (COLAS), France

Dr. Sergei Katsev (2004-2007) (co-supervised by Prof. B. Sundby/ISMER-McGill)

Full Professor, Department of Physics and Limnology Institute, University of Minnesota, Duluth.

Dr. Suzanne Dufour (2005- 2006) (co-supervised by Profs. B. Sundby and G. Desrosiers/ISMER)

Professor, Department of Biology, Memorial University

Dr. Bruno Lansard (2008-2010) (co-supervised by Prof. B. Sundby/ISMER-McGill)

Assistant Professor, Université de Versailles and Researcher at LSCE, Gif-sur-Yvette, France.

Dr. Sanoopkumar Puthya Veetil (2015-2016)

Research Manager, CalciCrete, Montreal, Canada

1e. ONGOING GRADUATE STUDENTS/THESES UNDER MY (CO)-SUPERVISION

- **Tiffany Audet**, Ph.D. IV (UQAM, Sept. 2022) Eutrophication in the St. Lawrence Estuary: Geochemical and micropaleontological evidence (co-supervision with Anne de Vernal/GEOTOP-UQAM).

- **Yeganeh Mirzaei**, Ph.D. III (Concordia, Sept. 2023) Organic carbon preservation and iron geochemistry in marine sediments (co-supervision with Yves Gélinas/Concordia).

1f. UNDERGRADUATE THESES UNDER MY SUPERVISION

DOIG F. (1992) The evolution of mercury and lead concentrations in the sediments of Lusignan Lake throughout the Holocene. B.Sc. Thesis, McGill University, Montreal, Quebec, 24 pp.

BOIRIDY M. (1993) Potential chemical attenuation procedures of mercury remobilization from an inundated soils. B.Sc. Thesis, McGill University, Montreal, Quebec

FAGNAN N. (1993) The reactivity of Saguenay fjord sediments: Trace metal (Hg, As) remobilization following exposure to oxygenated waters. B.Sc. Thesis, McGill University, Montreal, Quebec.

WEARY G. (1994) The vertical distribution of mercury and lead in sediments of Lac De La Blache near Manicouagan, Quebec. B.Sc. Thesis, McGill University, Montreal, Quebec, 30pp.

HARRIS S. (1996) Adsorption of arsenic and phosphate on oxic sediments of the Saguenay Fjord. B.Sc. Thesis, McGill University, Montreal, Quebec, 50 pp.

ESPINOSA M. (1996) Effect of elemental iron on the adsorption and methylation of mercury in an inundated soil from a hydroelectric reservoir. B.Sc. Thesis, McGill University, Montreal, Quebec, 42 pp.

SHAW A. (1996) The diagenetic phosphorus cycle in marine sediments and the importance of adsorption onto goethite (γ -FeOOH) surface. B.Sc. Thesis, McGill University, Montreal, Quebec, 45 pp.

CRANE G. (1998) The reactivity of gibbsite in seawater. McGill University, Montreal, Quebec, 45 pp.

SHEK Y. (1999) The determination of physical mixing using black carbon as a physical tracer, Saguenay Fjord, Quebec, Canada. McGill University, Montreal, Quebec, 46pp.

RINGUET S. (2000) Reactive iron and manganese in sediments: characterization and diagenetic evolution following the July 1996 floods in the Saguenay Fjord. 50pp.

FRIIS A. (2001) The influence of EDTA and *Bacillus subtilis* on calcite dissolution rates and crystal surface features imaged by atomic force microscopy. 54pp.

BELLIS A. (2002) Spectrophotometric determination of pH in estuarine waters using Phenol Red. 53pp.

BERNIER G. (2002) The 1996 Saguenay flood: mercury diagenesis after a sudden sedimentation event. 41pp.

MUSCLOW S. (2003) Environmental impact of salmon aquaculture on the sediment geochemistry of Passamaquaddy Bay, Bay of Fundy, New Brunswick. 29pp.

DUCHESNE D. (2003) Spectrophotometric determination of pH in estuarine waters using Phenol Red at 0°C.

GILBERT C. (2006) Sediment geochemistry in the Canadian Arctic: Beaufort Sea. McGill University, Montreal, Quebec, 25 pp. (co-supervised w/B. Sundby-ISMER/UQAR)

HELIAS E. (2006) Étude des traceurs sensibles aux conditions d'oxido-réduction dans une carotte du Saint-Laurent. McGill University, Montreal, Quebec, 64 pp. (co-supervised w/B. Sundby-ISMER/UQAR)

A. Mucci

1f. UNDERGRADUATE THESES UNDER MY SUPERVISION (continued)

ROUGH M. (2007) Stable isotopic composition of S in dissolved sulfate from Mangrove Lake, Bermuda. (co-supervised w/B. Wing)

KARIMI B. (2007) Remediation of hypoxia in the bottom waters of the Lower St.-Lawrence Estuary. (co-supervised w/B. Sundby-ISMER/UQAR)

MOLNAR N. (2008) Metal remobilization and sediment response as a result of increasing hypoxia in the St. Lawrence Estuary. (co-supervised w/B. Sundby-ISMER/UQAR).

MAISONNEUVE M. (2009) Origin of sedimentary organic matter in Baffin Bay, Davis Strait and the Canadian Archipelago: an elemental and isotopic study. McGill University, Montreal, Quebec. NSERC USRA

BOURGAULT M.-A. (2009) Isotopic fractionation and calibration of the $\Delta 47(\text{CO}_2)$ paleothermometer in calcite and aragonite as a function of salinity and temperature. McGill University, Montreal, Quebec.

MAISONNEUVE M. (2010) Trophic status of the St. Lawrence Estuary. McGill University, Montreal, Quebec.

LAMER, K. (2012) Reactivity of steel slag to carbonatation. McGill University, Montreal, Quebec.

UVEGES B. (2013) Influence of temperature on the adsorption and adsorption kinetics of phosphate on gibbsite. McGill University, Montreal, Quebec.

PIHA-GOSSACK J. (2013) Refined method for the determination of the free lime content of steel slag and cements. McGill University, Montreal, Quebec.

MARTIAS C. (2013) Trophic status of the St. Lawrence Estuary. McGill University, Montreal, Quebec.

BEAUPRÉ-LAPERRIÈRE A. (2016) Spatial and temporal variation of the aragonite saturation level in the Canadian Arctic Archipelago and Eastern Beaufort Sea from 2003 to 2015. McGill University, Montreal, Quebec.

BEAUPRÉ-LAPERRIÈRE A. (2017) Water-mass deconvolution in the Canadian Arctic Archipelago and Eastern Beaufort Sea. McGill University, Montreal, Quebec.

WHITE D. (2019) Solubility and reactivity of magnesian calcites in seawater-like solutions: A test of the concept of stoichiometric saturation. McGill University, Montreal, Quebec.

QUDSI Z. (2022) Estuarine behaviour of REE in the St. Lawrence Estuary and Saguenay Fjord. McGill University, Montreal, Quebec. In progress.

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (national and international conferences only)

2024

- (A326) NESBITT A., CHAILLOU G., MUCCI A., TANHUA T., WALLACE D.W.R. (2024) Navigating a Continuum: The transport and transformation of dissolved inorganic carbon in the bottom waters of the St. Lawrence Estuary and Gulf. Contributed oral presentation, Ocean Sciences Meeting, February 18-25 2024, New Orleans, Louisiana, U.S.A.

2023

- (A325) AUDET., DE VERNAL A., MUCCI A., SEIDENKRANTZ M.S., CHAILLOU G. (2023) Benthic foraminiferal assemblages from the Laurentian Channel in the Lower Estuary and Gulf of St. Lawrence, eastern Canada: Tracers of bottom-water hypoxia. Contributed oral presentation. GSC Connects Cushman Foundation for Foraminiferal Research Symposium, 15-18 October 2023, Pittsburgh, PA, USA.
- (A324) JUTRAS M., MUCCI A., CHAILLOU G., NESBITT W., WALLACE D., DUFOUR C. (2023) Sudden oxygen decline in the recently hypoxic, waters of the St. Lawrence Estuary. Contributed oral presentation. CMOS-SCMO Annual Congress, May 28-June 1, 2023, St-John's, Newfoundland, Canada.
- (A323) NESBITT A., NORMANDEAU C., HÉRARD O., CHAILLOU G., WALLACE D., MUCCI A. (2023) Dynamics and sources of inorganic carbon in the bottom-waters of the Gulf of St. Lawrence, Canada. Contributed oral presentation. CMOS-SCMO Annual Congress, May 28-June 1, 2023, St-John's, Newfoundland, Canada.
- (A322) DANG H., MUCCI A., WANG W., OMANOVIC D. (2023) The winter geochemistry of trace elements. Contributed oral presentation. International Estuarine Biogeochemistry Symposium, May 23-26, 2023. Sibenik, Croatia.
- (A321) JUTRAS M., MUCCI A., CHAILLOU G., NESBITT W., WALLACE D. (2023) Chute marquée des concentrations d'oxygène dans les eaux profondes de l'estuaire maritime du Saint-Laurent entre 2019 et 2022. Contributed oral presentation. 90^{ième} Congrès de l'ACFAS, 8-12 mai, 2023. Université de Montréal, QC.
- (A320) MUCCI A. (2023) Variations saisonnières des gradients et des flux de CO₂ le long de l'estuaire et du golfe du Saint-Laurent. Contributed oral presentation. 90^{ième} Congrès de l'ACFAS, 8-12 mai, 2023. Université de Montréal, QC.

2022

- (A319) WANG W., GÉLINAS Y., DE VERNAL A., MUCCI A., ALLAN E., SEIDENKRANTZ M.-S., DOUGLAS P. (2022) Organic carbon burial decoupled from the mid-late Holocene primary production in the northeast Labrador Sea. Contributed poster presentation, AGU Fall meeting, December 12-16, 2022, Chicago, IL, USA.
- (A318) ALLAN E., DOUGLAS P., DE VERNAL A., GÉLINAS Y., MUCCI A. (2022) Hydrogen and carbon isotopic composition ($\delta^2\text{H}$, $\delta^{13}\text{C}$) of fatty acids preserved in surface sediments of Baffin Bay and the Labrador Sea. Contributed oral presentation. Goldschmidt Conference, July 10-15, 2022, Honolulu, Hawaii, USA.
- (A317) JUTRAS M., PLANAT N., DUFOUR C., MUCCI A. (2022) Classification of Lagrangian trajectories in the Labrador Current with a Machine Learning algorithm. Contributed oral presentation. CMOS Annual Congress, June 1-3 & 6-8, 2022, Saskatoon, SK, Canada

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (continued)

- (A316) **JUTRAS M.**, DUFOUR C., MUCCI A., CYR F., GILBERT D. (2022) Temporal variations in the causes of oxygen decline in the Lower St. Lawrence Estuary: from local eutrophication to regional ocean circulation. Contributed oral presentation, 53rd Ocean Liège Colloquium and 3rd GO2NE Oxygen Conference, May 16-20, 2022.
- (A315) **BOUDREAU B.P.**, **SULPIS O.**, MUCCI A., LIU X., LUO Y. (2022) Calcite dissolution at the deep seafloor. Contributed oral presentation, ASLO/AGU Ocean Science Meeting, February 24-March 4 2022, virtual conference due to the COVID-19 pandemic.
- (A314) **GUINEY H.**, MUCCI A. (2022) Competitive dissolution of mixed carbonate solids under simulated ocean acidification: *Goniolithon* (red algae), *Halemida* (green algae), and synthetic. Virtual, contributed poster presentation, ASLO/AGU Ocean Science Meeting, February 24-March 4 2022, virtual conference due to the COVID-19 pandemic.
- (A313) **JUTRAS M.**, DUFOUR C., MUCCI A., PLANAT N. (2022) Subarctic control on the retroflexion of the Labrador Current. Contributed poster presentation, ASLO/AGU Ocean Science Meeting, February 24-March 4 2022, virtual conference due to the COVID-19 pandemic.
- (A312) MUCCI A. (2022) Seasonally-variable surface-water pCO₂ gradients and fluxes along the Gulf and St. Lawrence Estuary (Quebec, Canada). Contributed oral presentation, ASLO/AGU Ocean Science Meeting, February 24-March 4 2022, virtual conference due to the COVID-19 pandemic.
- (A311) **HÉRARD O.**, DESCHAMPS C.-É., NOISETTE F., MUCCI A., CHAILLOU G. (2022) Dynamique de la chimie des carbonates dans les eaux côtières du Kamouraska. Poster presentation, Annual Scientific Meeting Québec-Océan, January 31-February 3 2022, virtual conference due to the COVID-19 pandemic.

2021

- (A310) **JUTRAS M.**, DUFOUR C., MUCCI A., SUNDBY B., KATSEV S., GRATTON Y., CYR F., GILBERT D. (2021) Évaluation de l'eutrophisation dans l'estuaire maritime du Saint-Laurent: un modèle-à-boîtes des flux de nutriments et une reconstruction des masses d'eaux parentales. Contributed oral presentation, 88^{ième} Congrès de l'ACFAS, May 3-7 2021, Université de Sherbrooke et Université Bishop's, QC, Canada. – online due to the COVID-19 pandemic.
- (A309) **AUDET T.**, DE VERNAL A., MUCCI A., SEIDENKRANTZ M.-S. (2021) Évolution récente de l'hypoxie le long du chenal laurentien à partir du contenu biogénique du sédiment. Contributed oral presentation, 88^{ième} Congrès de l'ACFAS, May 3-7 2021, Université de Sherbrooke et Université Bishop's, QC, Canada. – online due to the COVID-19 pandemic.
- (A308) **JUTRAS M.**, DUFOUR C., MUCCI A., CYR F. and GILBERT D. (2021) Variability of the circulation in the western North Atlantic and its impact on deep-water oxygen concentrations in the St. Lawrence Estuary and in the Slope Sea: evidence from observations. Contribution oral contribution, 2021 EGU General Assembly, April 19-30 2021, online due to the COVID-19 pandemic.

2020

- (A307) **JUTRAS M.**, DUFOUR C., MUCCI A., CYR F., GILBERT D. (2020) How waters feeding the eastern American continental slope affect oxygen concentrations in the St. Lawrence Estuary. Contributed oral presentation. AGU Fall Meeting, December 1-17 2020. Remote presentation due to the COVID-19 pandemic.
- (A306) **AUDET T.**, DE VERNAL A., MUCCI A. and SEIDENRANTZ M.-S. (2020) Recent trends towards hypoxia in the Laurentian Channel: The foraminiferal signal. Contributed poster presentation. 7th ArcTrain Annual Meeting, October 26-30 2020, MARUM/University of Bremen, Germany. – Remote presentation due to the COVID-19 pandemic.

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (continued)

- (A305) **DAOUST P.**, HALVERSON G., MUCCI A., and PAQUETTE J. (2020) Ocean Acidification: Insights from the Paleocene-Eocene Thermal Maximum (PETM). Contributed oral presentation. Geological Society of America Annual Meeting, October 25-28 2020, Montreal, Quebec. Replaced by online meeting, October 26-30 2020, because of the COVID-19 pandemic.
- (A304) **JUTRAS M.**, DUFOUR C., MUCCI A., CYR F., GILBERT D. (2020) Changes in the circulation pattern in the Northwest Atlantic: Impact on the deoxygenation of deep waters in the Lower St. Lawrence Estuary. Contributed oral presentation, 54th CMOS Congress, May 26-June 15 2020, Ottawa, Ontario, Canada – Remote presentation due to the COVID-19 pandemic

2019

- (A303) **SULPIS O.**, MUCCI A. and BOUDREAU B.P. (2019) Carbonate compensation in the Anthropocene. **Invited oral presentation**, V.M. Goldschmidt Conference, 18-23 August, 2019, Barcelona, Spain.
- (A302) **OLDHAM V.E.**, HANSEL C.M., WANKEL S.D., KAROLWESKI J., BERNARD J., MICHEL A., LUTHER, G.W., TEBO B.M. and MUCCI A. (2019) Dissolved and solid-phase Fe and Mn speciation in marine sediments. Contributed oral presentation, V.M. Goldschmidt Conference, 18-23 August, 2019, Barcelona, Spain.
- (A301) **JUTRAS M.**, MUCCI A., SUNDBY B., KATSEV S. and GRATTON Y. (2019) A simple box model of nutrient fluxes and oxygen consumption rates in the Lower St. Lawrence Estuary. Contributed oral presentation, 27th IUGG General Assembly, July 8-18, 2019, Montreal, Canada.
- (A300) **JUTRAS M.**, MUCCI A., DUFOUR C. and GILBERT D. (2019) Temporal changes in the relative contributions of Labrador Sea and Gulf Stream waters to the Gulf of St. Lawrence. Contributed poster, 27th IUGG General Assembly, July 8-18, 2019, Montreal, Canada.
- (A299) **COOL J.**, RASMANN J., MUCCI A. and CHAILLOU G. (2019) Hypoxia in the Lower St. Lawrence Estuary: Impacts on benthic oxygen demand. Contributed oral presentation, XV International Estuarine Biogeochemistry Symposium (IEBS), June 4-5, 2019, Vigo, Spain.
- (A298) MUCCI A. (2019) Acidification des océans: L'incontestable problème et la dissolution des carbonates abyssaux. Séminaire Géosciences et Environnement, Université Paul-Sabatier, Toulouse, May 20, 2019.
- (A297) MUCCI A. (2019) Acidification des océans: L'incontestable problème et la dissolution des carbonates abyssaux. METIS (Milieux environnementaux, transferts et interactions dans les hydrosystèmes et les sols) Seminar Series, Sorbonne Université-Campus Jussieu, May 13, 2019.
- (A296) **LABAUNE M.**, CATTIN F., CHIARADIA M., MUCCI A. and RICHER I. (2019) Copper supply in Corsica at the end of the Neolithic and the beginning of the Bronze Age: Elemental compositions and lead isotope analyses. Contributed oral presentation, XXII^e colloque du *GMPCA*. Colloque sur les sciences archéologiques, May 9-12, 2019, Montréal, Canada.
- (A295) MUCCI A. (2019) L'estuaire du Saint-Laurent : Le grand estuaire malade. Journées d'Échanges Scientifiques EPOC-2019, Hippodrome de La Teste-de-Buch, April 29, 2019.
- (A294) MUCCI A. (2019) Acidification des océans: L'incontestable problème et la dissolution des carbonates abyssaux. UMR CNRS 5805 EPOC - OASU - Université de Bordeaux, April 8, 2019.
- (A293) MUCCI A. (2019) Acidification des océans: L'incontestable problème et la dissolution des carbonates abyssaux. Institute of Earth Science (ISTerre-OSUG UMR 5275), Université de Grenoble-Alpes, March 7, 2019.

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (continued)

2018

- (A292) **BEAUPRÉ-LAPERRIÈRE A.**, MUCCI A., and THOMAS H. (2018) Ocean acidification and biological activity in the Canadian Arctic: Insights from the carbonate system. Contributed poster presentation. Annual ArcticNet Annual Scientific Meeting, December 10-14, 2018, Ottawa, ON.
- (A291) **SULPIS O.**, MUCCI A., BOUDREAU B. and **DAOUST P.** (2018) Controls on the dissolution rates of natural and synthetic calcites under seafloor-like conditions. Contributed oral presentation, Fall AGU Meeting, December 10-14, 2018, Washington D.C., U.S.A.
- (A290) **JUTRAS M.**, MUCCI A., SUNDBY B. and KATSEV S. (2018) A simple box model of nutrient fluxes in the St. Lawrence Estuary. Contributed poster presentation, Fall AGU Meeting, December 10-14, 2018, Washington D.C., U.S.A.
- (A289) **SULPIS O.**, BOUDREAU B.P., MUCCI A., DUFOUR C., JENKINS C., TROSSMAN D., ARBIC B. and KEY R. (2018) Bottom-water acidification and CaCO_3 dissolution at the seafloor caused by anthropogenic CO_2 . Contributed oral presentation, Goldschmidt Conference, August 12-17, 2018, Boston, MA, USA.
- (A288) WANG K., MUNSON K., **BEAUPRÉ-LAPERRIÈRE A.**, MUCCI A., MACDONALD R. and WANG F. (2018) Methylmercury distribution in the sub-surface seawater explains the spatial trend of biotic mercury in the Canadian Arctic Ocean. Contributed oral presentation. ASLO Meeting, June 10-15, 2018, Victoria, BC.
- (A287) ATAMANCHUCK D., AZETSU-SCOTT K., BABIN M., BOSS E., BUSHINSKY S., CLAUSTRE H., DALL'OLMO G., DEVRED E., DEYOUNG B., DONEY S., DUFOUR C., ESTAPA M., FENNEL K., GREENAN B., HAMME R., JOHNSON K., LAGUNAS J., LE TRAON P.-Y., LEWIS M., MUCCI A., OLIVER E., POULIQUEN S., STEWART A. and WALLACE D. (2018) Biogeochemical Argo as an essential component of North Atlantic Ocean Observing System. Contributed oral presentation. Joint CMOS-MEOPAR Meeting, June 10-14, 2018, Halifax, NS.
- (A286) **BEAUPRÉ-LAPERRIÈRE A.**, MUCCI A. and THOMAS H. (2018) Time series of ocean acidification in the Canadian Arctic Ocean. Contributed poster. Joint CMOS-MEOPAR Meeting, June 10-14, 2018, Halifax, NS.
- (A285) MUCCI A. and **DINAUER A.** (2018) Spatial variability of surface-water pCO_2 and gas exchange in the world's largest semi-enclosed estuarine system: St. Lawrence Estuary (Canada). Contributed oral presentation. Joint CMOS-MEOPAR Meeting, June 10-14, 2018, Halifax, NS.
- (A284) **DELAIGUE L.**, THOMAS H. and MUCCI A. (2018) The biogeochemistry of the Saguenay Fjord water column. Contributed poster. Joint CMOS-MEOPAR Meeting, June 10-14, 2018, Halifax, NS.
- (A283) RUTHERFORD K., FENNEL K., LAURENT A., KUHN A., THOMAS H., AZETSU-SCOTT K. and MUCCI A. (2018) Elucidating carbon transport mechanisms that drive air-sea CO_2 fluxes on continental shelves: A numerical modeling study for the Scotian Shelf. Contributed poster. Joint CMOS-MEOPAR Meeting, June 10-14, 2018, Halifax, NS.
- (A282) MOL J., THOMAS H., MYERS P.G., HU X. and MUCCI A. (2018) Inorganic carbon fluxes on the Mackenzie Shelf of the Beaufort Sea. Contributed poster. EGU General Assembly, April 8-13, 2018, Vienna, Austria.
- (A281) LUTHER G. III, OLDHAM V., DE CHANVALON A.T., ESTES E.R., TEBO B.M., WRIGHT M.H., JONES M.R., SIEBECKER M., MADISON A.S. and MUCCI A. (2018) Formation and reactivity of manganese oxides in the environment: field and laboratory results. Contributed oral presentation, 255th ACS National Meeting, March 18-22, 2018. New Orleans, Louisiana.

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (continued)

- (A280) WRIGHT M.H., OLDHAM V., GESZVAIN K., JONES M., DE CHANVALON A.T., MUCCI A., LUTHER G. III and TEBO B. (2018) Influence of bacteria in the geochemical cycling of Mn(III) in the global ocean. Contributed poster, Ocean Sciences Meeting, February 11-16, 2018. Portland, Oregon, U.S.A.
- (A279) **NESBITT W.** and MUCCI A. (2018) The impact of hypoxia and the concomitant acidification of bottom waters on the preservation of detrital carbonates in the Gulf of St. Lawrence. Contributed poster, Ocean Sciences Meeting, February 11-16, 2018. Portland, Oregon, U.S.A.
- (A278) **DELAIGUE L.** and MUCCI A. (2018) The biogeochemistry of the Saguenay Fjord water column. Contributed poster, Ocean Sciences Meeting, February 11-16, 2018, Portland, Oregon, U.S.A.
- (A277) MALDONADO M., LI J., LAROCHE J., COLOMBO M., **BEAUPRÉ-LAPERRIÈRE A.**, ORIANI K. and MUCCI A. (2018) A hypothetical role of manganese-oxidizing bacteria on the distribution of particulate metals in the Canadian Arctic Ocean. Contributed oral presentation, Ocean Sciences Meeting, February 11-16, Portland, Oregon, U.S.A.

2017

- (A276) **MARSHALL N.R.**, DE VERNAL A., MUCCI A. and KUCERA M. (2017) Biogenic carbonate production and preservation in the northwestern Labrador Sea and central Baffin Bay during the Holocene and the Last Glacial Maximum (LGM). Contributed poster presentation, 2017 Fall AGU Meeting, December 11-15, 2017, New Orleans, Louisiana, U.S.A.
- (A275) **BEAUPRÉ-LAPERRIÈRE A.**, MUCCI A. and THOMAS H. (2017) Time Series of Ocean Acidification in the Canadian Arctic Ocean. Arctic Change 2017. Contributed poster, December 11-15, 2017, Québec City, Canada.
- (A274) **SULPIS O.**, MUCCI A. and BOUDREAU B. (2017) Transport-controlled, linear calcite dissolution kinetics at the sediment-seawater interface. V.M. Goldschmidt Conference, **Invited oral presentation**, August 13-18, 2017, Paris, France.
- (A273) OLDHAM V., TEBO B., MUCCI A., WRIGHT M., JONES M. and LUTHER G.W. III (2017) The temporal variability of Mn speciation in the Chesapeake Bay and St. Lawrence Estuaries. V.M. Goldschmidt Conference, **Invited oral presentation**, August 13-18, 2017, Paris, France.
- (A272) MUCCI A. Recent insights on the biogeochemistry of the St. Lawrence Estuary, the world's largest semi-enclosed estuary. **Opening keynote lecture**, International Biogeochemistry of Estuaries Symposium, June 4-6, 2017, Rimouski, QC.
- (A271) MUCCI A., LUTHER III G., TEBO B., SUNDBY B., OLDHAM V. and MADISON A. (2017) The biogeochemistry of Mn in the St. Lawrence Estuary: What's changed? Contributed oral presentation. International Biogeochemistry of Estuaries Symposium, June 4-6, 2017, Rimouski, QC.
- (A270) CHAILLOU G. and MUCCI A. (2017) Hypoxia in the Lower St- Lawrence Estuary: A geochemical investigation of historical sedimentary redox conditions. Contributed oral presentation. International Biogeochemistry of Estuaries Symposium, June 4-6, 2017, Rimouski, QC.
- (A269) RAO, A., CHARNIER J., COUTURIER M., SIROIS M., MUCCI A. and CHAILLOU G. (2017) Nitrogen removal in Laurentian Trough sediments. Contributed oral presentation. International Biogeochemistry of Estuaries Symposium, June 4-6, 2017, Rimouski, QC.
- (A268) **BEAUPRÉ-LAPERRIÈRE A.** and MUCCI A. (2017) Complex vertical distributions of aragonite saturation states in the Canadian Arctic Archipelago and eastern Beaufort Sea explained by a water-mass analysis. Contributed poster, 100th Canadian Chemistry Conference and Exhibition, May 28-June 1, 2017, Toronto, ON.
- (A267) MUCCI A. (2017) Hypoxia and acidification of the bottom waters of the St. Lawrence Estuary and their impact on sediment biogeochemistry, **21st Adrian Smith Lecture in Environmental Geochemistry**, April 20, 2017, University of Waterloo, Waterloo, ON.
- (A266) MUCCI A. and **DINAUER A.** (2017) Variabilité spatiale de la pCO₂ des eaux de surface et échanges gazeux dans l'estuaire du Saint-Laurent (Canada) durant la période estivale : une approche géochimique et isotopique. ACFAS Symposium, Contributed oral presentation, May 10-12, 2017, McGill University, Montreal, QC.

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (continued)

- (A265) **MARSHALL N.**, DE VERNAL A., MUCCI A., FILIPPOVA A. and KIENAST M. (2017) The Labrador Sea during the Last Glacial Maximum: Calcite dissolution or low biogenic carbonate fluxes? European Geosciences Union General Assembly, Contributed poster presentation, April 23-28, 2017, Vienna, Austria.
- (A264) **DINAUER A.** and MUCCI A. (2017) Spatial variability of pCO₂ and gas exchange in the ice-free surface waters of a macrotidal estuary: The St. Lawrence Estuary (Canada). ASLO Aquatic Science Meeting, Contributed poster presentation, February 26-March 3, 2017, Honolulu, Hawaii.

2016

- (A263) **SULPIS O.**, **LIX C.**, MUCCI A. and BOUDREAU B. (2016) Calcite dissolution kinetics at the interface between a calcite-rich simulated sediment and natural seawater. Fall AGU Meeting. Contributed poster presentation, December 12-16, 2016, San Francisco, California.
- (A262) LUTHER G.W., OLDHAM V.E., TEBO B.M., JONES M.R., MUCCI A. and SUNDBY B. (2016) Changing the manganese paradigm: Soluble manganese(III) is ubiquitous in natural waters and sedimentary pore waters. Invited oral presentation. 252nd American Chemical Society National Meeting, August 21-25, 2016, Philadelphia, Pennsylvania, U.S.A.
- (A261) RUTHERFORD K., FENNEL K., BRENNAN C.E., THOMAS H., AZETSU-SCOTT K. and MUCCI A. (2016) Source or sink? A modeling study of inorganic carbon cycling on the Scotian Shelf. Contributed poster, ASLO-AGU Ocean Sciences Meeting, February 21-26 2016, New Orleans, Louisiana, USA.

2015

- (A260) OLDHAM V., MUCCI A. and LUTHER III G.W. (2015) The complexation of Mn(III) in the sediments and water column of two coastal estuaries. Contributed oral presentation, Fall AGU Meeting, December 14-18, San Francisco, California.
- (A259) LUTHER III G.W., OLDHAM V., TEBO B., JONES M.R., MUCCI A. and SUNDBY B. (2015) Soluble manganese(III) is ubiquitous in natural waters and sedimentary pore waters. Invited oral presentation, 25th Goldschmidt Conference, August 16-21, Prague, Czech Republic.
- (A258) OLDHAM V., JONES M.R., SIEBECKER M., TEBO B., MUCCI A. and LUTHER III G.W. (2015) The cycling of Mn(III)-L in the suboxic porewaters and overlying oxic waters of the St. Lawrence Estuary, Québec, Canada. Contributed poster. Gordon Research Conference in Chemical Oceanography, July 26-31, Holderness School, Holderness, NH. U.S.A.
- (A257) **CHEN Q.**, MUCCI A. and SUNDBY B. (2015) Influence of environmental variables on the early diagenesis of sediments along the Laurentian Trough (Canada). Contributed poster. Gordon Research Conference in Chemical Oceanography, July 26-31, Holderness School, Holderness, NH. U.S.A.
- (A256) SUNDBY B., LECROART P., ANSCHUTZ P., KATSEV S. and MUCCI A. (2015) Anaerobic methane oxidation promotes deep diagenesis and blurs manganese based geochronology in Arctic Ocean sediments. Contributed poster. Gordon Research Conference in Chemical Oceanography, July 26-31, Holderness School, Holderness, NH. U.S.A.
- (A255) **CHEN Q.**, MUCCI A. and SUNDBY B. (2015) Influence of environmental variables on the early diagenesis of Fe and Mn in the Laurentian Trough - one of the world's largest estuaries. Contributed oral presentation. 13th International Estuarine Biogeochemistry Symposium, June 7-10, Bordeaux, France.
- (A254) MUCCI A. (2015) Ocean Acidification: The indisputable problem. Invited talk, May 18, Instituto Politecnico Nacional, Centro Interdisciplinario Ciencias Marinas, La Paz, Mexico.
- (A253) MUCCI A. and GÉLINAS Y. (2015) The Rusty Sink: How iron promotes the preservation of organic matter in sediments. **Invited talk**, May 14, Instituto de Ciencias del Mar y Limnología, Universidad Nacional Autónoma de México in Mazatlan. Re-transmitted the Universidad Nacional Autónoma de México in Mexico City, Puerto Morelos, and Ciudad del Carmen.

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (continued)

- (A252) BARBER A., **LALONDE K.**, MUCCI A. and GÉLINAS Y. (2015) The role of iron in the diagenesis of organic carbon and nitrogen in sediments: A long-term incubation experiment. Contributed poster presentation. AGU-GAC-MAC-CGU Joint Assembly, May 3-7, Montreal, QC.
- (A251) **CHEN Q.**, MUCCI A. and SUNDBY B. (2015) Early diagenesis of Fe and Mn in the Laurentian Trough: influence of environmental variables. Contributed oral presentation. AGU-GAC-MAC-CGU Joint Assembly, May 3-7, Montreal, QC.
- (A250) OLDHAM V., JONES M.R., SIEBECKER M., TEBO B., MUCCI A. and LUTHER III G.W. (2015) The source of Mn(III)-L in the surface waters of the Saguenay Fjord, Quebec, Canada. Contributed oral presentation, 249th ACS National Meeting, March 22-26, Denver, CO, U.S.A.

2014

- (A249) LUTHER, G. W., MADISON, A.S., OLDHAM, V.E., MADISON, A.S., MUCCI, A., TEBO, B.M., OWINGS, S.M., JONES, M.R, JENSEN, L., and SUNDBY, B. Soluble manganese(III) in the marine environment. Contributed oral presentation. Fall AGU Meeting, December 15-19, San Francisco, CA.
- (A248) **LIX, C.** and MUCCI A. (2014) CaCO₃ dissolution kinetics at the sediment-water interface. Contributed oral presentation. Fall AGU Meeting, December 15-19, San Francisco, CA.
- (A247) SUNDBY B., LECROART P., ANSCHUTZ P., MUCCI A. and KATSEV S. (2014) Anaerobic methane oxidation promotes deep diagenesis and blurs manganese based geochronology in Arctic Ocean sediments. . Contributed oral presentation. 24^{ième} Réunion des Sciences de la Terre, Palais Beaumont, October 27-31, Pau, France.
- (A246) SUNDBY B., LECROART P., ANSCHUTZ P., KATSEV S. and MUCCI A. (2014) Anaerobic methane oxidation promotes deep diagenesis and blurs manganese-based geochronology in Arctic Ocean sediments. Contributed oral presentation. 24rd V.M. Goldschmidt Conference, June 8-13, Sacramento, California.
- (A245) **LALONDE K.**, BARBER A., MUCCI A., and GÉLINAS Y. (2014) The rusty carbon sink: Mechanism of iron and organic matter association in marine sediments. Invited oral presentation. 24rd V.M. Goldschmidt Conference, June 8-13, Sacramento, California.
- (A244) MUCCI A., MICHEL C., NIEMI A. and HÉLIE J.-F. (2014) Kinetic fractionation of stable hydrogen and oxygen isotopes upon sea-ice formation. Contributed poster presentation. 24rd V.M. Goldschmidt Conference, June 8-13, Sacramento, California.
- (A243) **CHEN Q.**, MUCCI A. and SUNDBY B. (2014) Diagenetic remobilization of manganese and iron along a spatial gradient in organic matter supply and bottom water oxygenation. Contributed poster presentation. Annual Congress of the Canadian Meteorological and Oceanographic Society, June 1-5, Rimouski, Quebec. Abstract Book pp. 30,
http://www.cmos.ca/congress2014/images/CMOS_abstracts_20140508.pdf
- (A242) MUCCI A., MICHEL C., NIEMI A. and HÉLIE J.-F. (2014) Kinetic fractionation of stable hydrogen and oxygen isotopes upon sea-ice formation. Contributed oral presentation. Annual Congress of the Canadian Meteorological and Oceanographic Society, June 1-5, Rimouski, Quebec. Abstract Book pp. 115,
http://www.cmos.ca/congress2014/images/CMOS_abstracts_20140508.pdf
- (A241) MADISON A.S., LUTHER III G.W., SUNDBY B. and MUCCI A. (2014) Role of soluble Mn(III) in stabilizing suboxic zones in the natural environment. Invited oral presentation. 247th ACS National Meeting & Exposition, March 16-20, Dallas, Texas.
- (A240) BÉNARD R., LEVASSEUR M., SCARRATT M., MUCCI A. and TREMBLAY J.E. (2014) Impacts of ocean acidification on phytoplanktonic communities of estuarine and coastal regions of Canada. Contributed oral presentation. Ocean Sciences Meeting, February 23-28, Honolulu, Hawaii.

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (continued)

- (A239) EVANS W., MATHIS, J., CROSS, J., FREY K., ELSE B., PAPAKYRIAKOU T., BATES N., DEGRANPRE M., PETERSON B., CAI W.-J., CHEN B., MUCCI A., YAMAMOTA-KAWAI M., MILLER L., CARMACK E., WILLIAMS B., and TAKAHASHI T. (2014) A synthesis of Arctic coastal sea-air CO₂ fluxes surrounding the Canada Basin. Contributed oral presentation. Ocean Sciences Meeting, February 23-28, Honolulu, Hawaii.
- (A238) MADISON A.S., LUTHER III G.W., SUNDBY B. and MUCCI A. (2014) Assessing the strength of ligands bound to soluble Mn(III) with a kinetic approach. Contributed oral presentation. Ocean Sciences Meeting, February 23-28, Honolulu, Hawaii.

2013

- (A237) **LEFORT S.**, DADOU I., GILBERT D., BOPP L., MUCCI A., GRATTON Y. and RESPLANDY L. (2013) Temporal evolution of the oxygen depletion in the bottom water of the Lower St. Lawrence Estuary: from 1930 to 2100. Contributed oral presentation, 23rd V.M. Goldschmidt Conference, August 26-30 (Thursday), Firenze, Italy. Mineralogical Mag. **77**: 1576.
- (A236) BARBER A., **LALONDE K.**, MUCCI A. and GÉLINAS Y. (2013) The role of iron in the diagenesis of organic carbon and nitrogen in sediments: A long-term incubation experiment. Contributed oral presentation, 23rd V.M. Goldschmidt Conference, August 26-30 (Tuesday), Firenze, Italy. Mineralogical Mag. **77**: 654.
- (A235) MADISON A.S., MUCCI A., SUNDBY B., TEBO B.M. and LUTHER III G.W. (2013) Soluble manganese(III) and a revised sedimentary redox cycle. Keynote oral presentation, 23rd V.M. Goldschmidt Conference, August 26-30 (Tuesday), Firenze, Italy. Mineralogical Mag. **77**: 1667.
- (A234) CULLEN J., ZHOU J., **LANSARD B.** and MUCCI A. (2013) Dissolved iron in the Beaufort Sea and Canada Basin, Arctic Ocean. Contributed poster, Gordon Research Conference in Chemical Oceanography, August 4-9, University of New England in Biddeford, Maine, U.S.A.
- (A233) **CHEN Q.**, MUCCI A. and SUNDBY B. (2013) Early diagenesis of redox-sensitive metals in continental margin sediments. Contributed poster, Gordon Research Conference in Chemical Oceanography, August 4-9, University of New England in Biddeford, Maine, U.S.A.
- (A232) **STRUGSTAD M.P.**, MUCCI A. and SUNDBY B. (2013) Individual and competitive adsorption of arsenate and phosphate onto amorphous manganese oxide in seawater. Contributed poster, Gordon Research Conference in Chemical Oceanography, August 4-9, University of New England in Biddeford, Maine, U.S.A.
- (A231) **PRATTE S.**, MUCCI A. and GARNEAU M. (2013) A peat bog record of atmospheric heavy metal deposition from the north shore of the St. Lawrence Estuary. 29th International Conference of the Society for Environmental Geochemistry and Health, July 8-12, Toulouse, France. **Best poster award.**
- (A230) MUCCI A., **LEFORT S.** et SUNDBY B. (2013) Géochimie du sédiment suite à 25 ans d'hypoxie dans l'estuaire du Saint-Laurent. Présentation orale invitée, 81^{ième} Congrès de l'ACFAS, 6-10 mai, Université Laval, Québec.
- (A229) **LEFORT S.**, GILBERT D., DADOU I., MUCCI A., GRATTON Y., RESPLANDY L. et BOPP L. (2013) Hypoxie dans le Saint-Laurent: Quel avenir?. Présentation orale invitée, 81^{ième} Congrès de l'ACFAS, 6-10 mai, Université Laval, Québec.
- (A228) **LEFORT S.**, GRATTON Y., MUCCI A., DADOU I. et GILBERT D. (2013) La physique de l'hypoxie dans l'estuaire maritime et le golfe du Saint-Laurent. Présentation orale invitée, 81^{ième} Congrès de l'ACFAS, 6-10 mai, Université Laval, Québec.

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (continued)

2012

- (A227) **PRATTE S.**, MUCCI A. and GARNEAU M. (2012) St. Lawrence Valley trace metal deposition history from peat bog records. Contributed poster presentation, 9th International Symposium on Environmental Geochemistry, July 15-21, Aveiro, Portugal.
- (A226) **MOURET A.**, **CHAILLOU G.**, **ARCHAMBAULT P.**, **MARANGER R.**, **SUNDBY B.** and **MUCCI A.** (2012) An integrated study with benthocosms on the impact of different functional groups of macrofauna on benthic N-processes in coastal sediments of the St. Lawrence Estuary. Contributed oral presentation, 22st V.M. Goldschmidt Conference, June 24-29, Montréal, Canada. *Mineralogical Mag.* **76**: 2141.
- (A225) **GÉLINAS Y.**, **LALONDE K.**, MUCCI A. and OUELLET A. (2012) The rusty sink: Iron promotes the preservation of organic matter in sediments. Contributed oral presentation, 22st V.M. Goldschmidt Conference, June 24-29, Montréal, Canada. *Mineralogical Mag.* **76**: 1748.
- (A224) **MARANGER R.**, **ALTABET M.**, **GILBERT D.**, MUCCI A., **BRISTOWE L.** and **SUNDBY B.** (2012) Oxygen and di-nitrogen (N₂) dynamics in the hypoxic zone of the St-Lawrence Estuary. Contributed oral presentation, 22st V.M. Goldschmidt Conference, June 24-29, Montréal, Canada. *Mineralogical Mag.* **76**: 2064.
- (A223) **LANSARD B.**, MUCCI A., **BROWN K.** and **BABIN M.** (2012) A multi-proxy study of the Mackenzie Shelf waters (Canadian Arctic). Contributed poster presentation, 22st V.M. Goldschmidt Conference, June 24-29, Montréal, Canada. *Mineralogical Mag.* **76**: 1973.
- (A222) **LUTHER III G.W.**, **MADISON A.S.**, MUCCI A., **TEBO B.M.** and **SUNDBY B.** (2012) Understanding sediment interfaces with voltammetric microelectrodes: Two decades of science and fun with Bjorn Sundby. Keynote lecture, 22nd V.M. Goldschmidt Conference, June 24-29, Montreal, Canada. *Mineralogical Mag.* **76**: 2043.
- (A221) **LEFORT S.**, **GRATTON Y.**, MUCCI A., **GILBERT D.** and **DADOU I.** (2012) The Lower St. Lawrence Estuary: A suitable analogue for OMZ's. Contributed oral presentation, 22st V.M. Goldschmidt Conference, June 24-29, Montréal, Canada. *Mineralogical Mag.* **76**: 1994.
- (A220) **WANG T.** and MUCCI A. (2012) Breakdown of the Ostwald step rule: The precipitation of calcite and aragonite from seawater at 25° and 40°C. Contributed poster presentation, 22st V.M. Goldschmidt Conference, June 24-29, Montréal, Canada. *Mineralogical Mag.* **76**: 2513.
- (A219) **PRATTE S.**, MUCCI A. and GARNEAU M. (2012) Records of atmospheric Pb deposition along the St. Lawrence Valley, Quebec. Contributed poster presentation, 22st V.M. Goldschmidt Conference, June 24-29, Montréal, Canada. *Mineralogical Mag.* **76**: 2248.
- (A218) **CHEN Q.**, MUCCI A., **SUNDBY B.** and **MINARIK W.** (2012) Early diagenesis of redox-sensitive elements in the Estuary and Gulf of St. Lawrence. Contributed poster presentation, 22st V.M. Goldschmidt Conference, June 24-29, Montréal, Canada. *Mineralogical Mag.* **76**: 1568.
- (A217) **CROWE S.S.**, **BASU A.**, **DOSSING L.N.**, **ELLIS A.**, **FOWLE D.A.**, MUCCI A., **SUNDBY B.**, **JOHNSON T.M.** and **CANFIELD D.E.** (2012) Cr isotopes in a ferruginous lake. Contributed oral presentation, 22st V.M. Goldschmidt Conference, June 24-29, Montréal, Canada. *Mineralogical Mag.* **76**: 1609.
- (A216) **MADISON A.S.**, MUCCI A., **SUNDBY B.**, **TEBO B.M.** **CHU D.W.** and **LUTHER III G.W.** (2012) Changing the manganese paradigm: the importance of soluble Mn(III) in the environment. Contributed oral presentation, Argentina Y Ambiente 2012, May 28-June 1, Mar del Plata, Argentina.
- (A215) **LEFORT S.**, **GRATTON Y.**, MUCCI A., **DADOU I.**, and **GILBERT D.** (2012) Hypoxia in the bottom water of the Lower St. Lawrence Estuary: Is this ecosystem on borrowed time? Contributed oral presentation, European Geosciences Union General Assembly, April 22-27, Vienna, Austria.
- (A214) **ELSE B.G.T.**, **PAPAKYRIAKOU T.**, **GALLEY R.**, **ASPLIN M.**, **BARBER D.**, **DRENNAN W.**, MUCCI A., **MILLER L.A.**, **SHADWICK E.** and **THOMAS H.** (2012) New understandings of air-sea CO₂ exchange in polynya systems: Results from the IPY ArcticNet and CFL projects in the Cape Bathurst Polynya. Contributed oral presentation, IPY-2012 Conference, April 22-27, Montreal, Canada.

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (continued)

- (A213) FRANCOIS R., BROWN K., CULLEN J., GRANGER J., HOLMDEN C., KIENAST M., MALDONADO M., MILLER L., MUCCI A., ORIANI K., RIVKIN R.B., SAITO M., THOMAS H., TORTELL P. and VARELA D. (2012) Canadian IPY-GEOTRACES: Multi-tracer investigation of the effect of climate change on primary production, seawater chemistry and circulation of the Arctic Ocean. Contributed poster presentation, IPY-2012 Conference, April 22-27, Montreal, Canada.
- (A212) **LANSARD B.**, MUCCI A., GRATTON Y., MILLER L.A., THOMAS H. (2012) Chemical and physical properties of the surface mixed layer during sea-ice formation in the Canadian Arctic. Contributed oral presentation, IPY-2012 Conference, April 22-27, Montreal, Canada.

2011

- (A211) PAPAKYRIAKOU T., CARNAT G., CHIERICI M., DELILLE B., ELSE B.G.T., FRANSSON A., GEILFUS N.-X., MILLER L.A., MUCCI A., SHADWICK E., THOMAS H. and TISON J.-L. (2012)
Seasonal evolution of the CO₂ source/sink dynamics and air-sea exchange in the Amundsen Gulf and southeastern Beaufort Sea: A synthesis of results from CFL. IPY-2012 Conference, April 22-27, Montreal, Canada.
- (A210) MADISON A.S., TEBO B.M., MUCCI A., SUNDBY B. and LUTHER III G.W. (2012)
Occurrence of soluble manganese (III) in the marine environment. Contributed oral presentation, 2012 Ocean Sciences Meeting, February 20-24, Salt Lake City, Utah.
- (A209) MARANGER R., ALTABET M., BRISTOWE L., GILBERT D., MUCCI A. and SUNDBY B. (2012) Oxygen and di-nitrogen (N₂) dynamics in the hypoxic zone of the St. Lawrence Estuary. Contributed oral presentation, 2012 Ocean Sciences Meeting, February 20-24, Salt Lake City, Utah.
- (A208) **LALONDE K.**, MUCCI A., MORITZ A., OUELLET A. and GÉLINAS Y. (2011) The Rusty Sink: Iron promotes the preservation of organic matter in sediments. Contributed poster presentation. Fall Annual AGU Meeting, December 5-9, San Francisco, CA.
- (A207) STURM A., **CROWE S.A.**, JONES CA., LESLIE K.L., CANFIELD D.E., NOMOSATRYO S., MUCCI A. and FOWLE D.A. (2011) High methane oxidation rates in ferruginous Lake Matano. Contributed oral presentation, 21st V.M. Goldschmidt Conference, August 14-19, Prague, Czech Republic.
- (A206) RICHARD D., SUNDBY B. and MUCCI A. (2011) Kinetics of manganese adsorption, desorption and oxidation in coastal marine sediments. Contributed poster, Gordon Research Conference in Chemical Oceanography, August 14-19, Proctor Academy, Andover, New Hampshire, U.S.A.
- (A205) PELLERIN A., WING B., BUI T.H., MUCCI A., ROUGH M. and CANFIELD D.E. (2011) Fe-poor and sulfide-rich: Mangrove Lake as a Precambrian analogue? Contributed oral presentation, 21st V.M. Goldschmidt Conference, August 14-19, Prague, Czech Republic.
- (A204) MUCCI A., **LEFORT S.** and SUNDBY B. (2011) Sediment response to persistently low oxygen levels in bottom waters: the Lower St. Lawrence Estuary. Contributed oral presentation, 21st V.M. Goldschmidt Conference, August 14-19, Prague, Czech Republic.
- (A203) MADISON A., MUCCI A., SUNDBY B., TEBO B. and LUTHER III G.W. (2011) Soluble Mn(III), Mn(II) and total Mn in sediment porewaters: Mn(III) is a ubiquitous soluble species. Contributed oral presentation, 21st V.M. Goldschmidt Conference, August 14-19, Prague, Czech Republic.
- (A202) **CROWE S.A.**, DOSSING L.N., MACLEAN L.C., FREI R., FOWLE D.A., MUCCI A. and CANFIELD D.E. (2011) Oxidative weathering fractionates chromium isotopes. Contributed oral presentation, 21st V.M. Goldschmidt Conference, August 14-19, Prague, Czech Republic.
- (A201) **LEFORT S.**, MUCCI A. and SUNDBY B. (2011) Sediment response to persistently low oxygen levels in bottom waters: the case of the Lower St. Lawrence Estuary. Contributed oral presentation, Annual Congress of the Canadian Meteorological and Oceanographic Society, June 5-9, Victoria, British Columbia.

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (continued)

- (A200) THOMAS H., SHADWICK E.H., DEHAIRS F., **LANSARD B.**, MUCCI A., NAVEZ J., GRATTON Y., PROWE F., CHIERICI M., FRANSSON A., T. PAPAKYRIAKOU T., STERNBERG E. and MILLER L. (2011) Barium and carbon fluxes in the Canadian Arctic Archipelago. Contributed oral presentation, Liege Colloquium, May 2-6, Liege, France.
- (A199) THOMAS H., SHADWICK E.H., DEHAIRS F., **LANSARD B.**, MUCCI A., NAVEZ J., GRATTON Y., PROWE F., CHIERICI M., FRANSSON A., T. PAPAKYRIAKOU T., STERNBERG E. and MILLER L. (2011) Barium and carbon fluxes in the Canadian Arctic Archipelago. Contributed oral presentation, European Geosciences Union, April 3-8, Vienna, Austria.
- (A198) CHIERICI M., FRANSSON A., MILLER L.A., MUCCI A., SHADWICK E., THOMAS H. and PAPAKYRIAKOU T. (2011) Effect of sea ice and biological processes as drivers of annual cycle of aragonite saturation and carbon dioxide in the polar mixed layer in the Arctic Ocean. Contributed oral presentation. Arctic Science Summit Week, March 27-April 1, Seoul, Korea
- (A197) **LEFORT S.**, MUCCI A., GRATTON Y. and GILBERT D. (2011) Modeling oxygen dynamics in the St. Lawrence Estuary system. Contributed oral presentation, Annual ASLO Aquatic Science Meeting, 13-18 February, San Juan, Puerto Rico, USA.

2010

- (A196) THOMAS H., SHADWICK E.H., WOULE EBONGUE V., **LANSARD B.**, NAVEZ J., GRATTON Y., PROWE F., MUCCI A., CHIERICI M., FRANSSON A., PAPAKYRIAKOU T.N., STERNBERG E. and MILLER L.A. (2010) Barium and carbon fluxes in the Canadian Arctic Archipelago. Contributed oral presentation, Fall Annual AGU Meeting, December 14-17, San Francisco, CA, USA.
- (A195) **LANSARD B.** and MUCCI A. (2010) The relative contribution of freshwater inputs by the Mackenzie River and sea-ice melt to the seawater carbonate system. Contributed oral presentation, ArcticNet Symposium, December 13-17, Ottawa.
- (A194) JONES C.A., CROWE S.A., CANFIELD D.E., STURM A., FOWLE D.A., KATSEV S., MUCCI A., SUNDBY B. and NOMOSATRYO S. (2010) Biogeochemistry of Mn oxidation in Lake Matano, Indonesia. Contributed oral presentation, 29th V.M. Goldschmidt Conference, June 13-18, Knoxville, Tennessee, USA.
- (A193) **LEFORT S.**, MUCCI A. and SUNDBY B. (2010) Diagenetic evolution of sedimentary Mn, Fe, As and Se concentrations over 25 years of persistent hypoxia in the Lower St. Lawrence Estuary (Québec, Canada). Contributed oral presentation, Annual Congress of the Canadian Meteorological and Oceanographic Society, May 31-June 4, Ottawa, Ontario.
- (A192) STARR M., MUCCI A., GILBERT D. and SUNDBY B. (2010) Acidification of the ocean: a case study from the Estuary and Gulf of St. Lawrence. Contributed oral presentation, Annual Congress of the Canadian Meteorological and Oceanographic Society, May 31-June 4, Ottawa, Ontario.
- (A191) THIBODEAU B., DE VERNAL A., GENOVESI L., HILLAIRES-MARCEL C. and MUCCI A. (2010) Increase in bottom water temperatures in the St. Lawrence Estuary and Gulf over the last century: results of an isotopic study of benthic foraminifers. Contributed oral presentation. European Geosciences Union, May 2-7, Vienna, Austria.
- (A190) THOMAS H., DEHAIRS F., SHADWICK E.H., NAVEZ J., **LANSARD B.** and GRATTON Y. (2010) Barium, its seasonal variability and its relation to CO₂ in the Eastern Beaufort Sea. Contributed oral presentation. European Geosciences Union, May 2-7, Vienna, Austria.
- (A189) MADISON A., SUNDBY B., MUCCI A., TEBO B. and LUTHER G.W. (2010) Soluble Mn(II) in sedimentary porewaters of the Lower Saint-Lawrence Estuary. Contributed poster, Ocean Sciences Meeting, February 22-26, Portland, OR.
- (A188) SHADWICK E.H., THOMAS H., MILLER L.A., MUCCI A., PAPAKYRIAKOU T.N., TREMBLAY J. (2010) Seasonal variability of the inorganic carbon system in the Amundsen Gulf region of the Canadian Arctic. Invited poster, Ocean Sciences Meeting, February 22-26, Portland, OR.

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (continued)

2009

- (A187) MUCCI, A., STARR M., GILBERT D. and SUNDBY B. (2009) Acidification of the hypoxic bottom waters of the Lower St. Lawrence Estuary: A history and potential impacts. Contributed poster, Gordon Research Conference in Chemical Oceanography, August 3-7, Tilton, New Hampshire.
- (A186) **CROWE S.**, JONES C.A., STURM A., CANFIELD D., HAFFNER G.D., MUCCI A., SUNDBY B. and FOWLE D. (2009) Novel phototrophs from a deep water chemocline. Invited oral presentation, Gordon Research Conference in Applied and Environmental Microbiology, July 12-17, Mount Holyoke College, South Hadley, Maryland.
- (A185) MUCCI, A., STARR M., GILBERT D. and SUNDBY B. (2009) Acidification of the hypoxic bottom waters of the Lower St. Lawrence Estuary: A history and potential impacts. Contributed oral presentation, MOCA-09 IANAS-IAPSO-IACS Joint Assembly, July 19-29, Montreal, Canada.
- (A184) **LANSARD B.**, MUCCI A., MILLER L.A., SHADWICK E., THOMAS H. and PAPAKYRIAKOU T. (2009) Temporal trends in air-sea CO₂ fluxes in a changing Arctic climate. Contributed oral presentation, MOCA-09 IANAS-IAPSO-IACS Joint Assembly, July 19-29, Montreal, Canada.
- (A183) LEHMANN W.F., BARNETT B., BENDER M.L., GÉLINAS Y., GILBERT D., MARANGER R., MUCCI A., SUNDBY B. and THIBODEAU B. (2009) Isotopic constraints on oxygen sink partitioning in the Lower St. Lawrence Estuary. Contributed oral presentation, 19th V.M. Goldschmidt Conference, June 21-26, Davos Switzerland. *Geochim. Cosmochim. Acta* v. 73, A741.
- (A182) **LALONDE K.**, MUCCI A. and GÉLINAS Y. (2009) Mineral-solution partitioning and sedimentary organic fluxes. Contributed poster, 19th V.M. Goldschmidt Conference, June 21-26, Davos Switzerland. *Geochim. Cosmochim. Acta* v. 73, A716.
- (A181) **LEFORT S.**, MUCCI A., **CHAILLOU-BÉLANGER G.**, **MOLNAR, N.**, and SUNDBY B. (2009) Impact of hypoxia on the remobilization of arsenic and selenium in the Lower St. Lawrence Estuary (Québec, Canada). Contributed poster, 19th V.M. Goldschmidt Conference, June 21-26, Davos Switzerland. *Geochim. Cosmochim. Acta* v. 73, A739.
- (A180) GRATTON Y., PRIEUR L., TREMBLAY J.-E. and MUCCI A. (2009) The Amundsen Gulf Eddies. Contributed oral presentation, Annual Congress of the Canadian Meteorological and Oceanographic Society, May 31-June 4, Halifax, Nova Scotia.
- (A179) MUCCI, A., STARR M., GILBERT D. and SUNDBY B. (2009) Acidification of the hypoxic bottom waters in the Lower St. Lawrence Estuary: A history and potential impacts. Invited oral presentation, Annual Congress of the Canadian Meteorological and Oceanographic Society, May 31-June 4, Halifax, Nova Scotia.
- (A178) **LEFORT S.**, **CHAILLOU G.**, **MOLNAR, N.**, MUCCI A. and SUNDBY B. (2009) Impact of evolving hypoxia on the remobilization of As and Se in the Lower St. Lawrence Estuary. Contributed oral presentation, 24th International Applied Geochemistry Symposium, June 1-4, Fredericton, New Brunswick.
- (A177) PANETTA R.J., MUCCI A., MARANGER R., LEHMANN M. and GÉLINAS Y. (2009) High resolution stable isotope distribution of dissolved and suspended organic and inorganic carbon in the St. Lawrence Estuary: Carbon cycling in conservative system. Contributed oral presentation, ALSO Aquatic Sciences Meeting, January 25-30, Nice, France.
- (A176) **CROWE S.A.**, **KATSEV S.**, MUCCI A., SUNDBY B. and FOWLE D. (2008) The methane cycle in tropical Lake Matano: An analogue for Precambrian methane cycling? Contributed oral presentation, Fall Annual AGU Meeting, December 15-19, San Francisco, CA.
- (A175) GRATTON Y., PRIEUR L., TREMBLAY J.-E. and MUCCI A. (2008) Structure and dynamics of the Amundsen Gulf eddies. Contributed oral presentation, Arctic Change-2008 Conference, December 9-12, Quebec City, QC.

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (continued)

- (A174) SHADWICK E.H., PAPAKYRIAKOU T., MUCCI A., PROWE A.E.F., LEONG D., MOORE S. and THOMAS H. (2008) Dissolved inorganic carbon in the Canadian Archipelago of the Arctic Ocean: The export of Pacific carbon to the North Atlantic via Baffin Bay. Contributed oral presentation, Arctic Change-2008 Conference, December 9-12, Quebec City, QC.
- (A173) **LANSARD B.**, MUCCI A., MILLER L.M., MACDONALD R.W. and GRATTON Y. (2008) Winter variability of carbonate system parameters in the water column of Franklin Bay (CASES winter station). Contributed poster presentation, Arctic Change-2008 Conference, December 9-12, Quebec City, QC.
- (A172) **LANSARD B.**, MUCCI A., MILLER L.M., MACDONALD R.W. and THOMAS H. (2008) Water mass distribution on the Mackenzie Shelf and the Amundsen Gulf as determined by total alkalinity and $\delta^{18}\text{O}$ data. Contributed oral presentation, Arctic Change-2008 Conference, December 9-12, Quebec City, QC.
- (A171) MILLER L.A., PAPAKYRIAKOU T.N., OWENS O., SUTHERLAND S., MACDONALD R. and MUCCI A. (2008) A winter carbon flux time series in land-fast sea ice. Contributed oral presentation, Arctic Change-2008 Conference, December 9-12, Quebec City, QC.
- (A170) **CROWE S.A.**, FOWLE D.A., **KATSEV S.**, SUNDBY B., MUCCI A., HAFFNER G.D. (2008) Geochemistry of Mo in a modern Archean Ocean analogue. Contributed poster presentation. 18th Annual VM Goldschmidt Conference, July 13-18, Vancouver, BC.
- (A169) **VILLEGAS-JIMENEZ A.**, MUCCI A. and PAQUETTE J. (2008) Proton/calcium ion exchange behavior of calcite: implications for aqueous speciation and $\text{CO}_{2(g)}$ sequestration. Contributed poster presentation. 18th Annual VM Goldschmidt Conference, July 13-18, Vancouver, BC.
- (A168) **KATSEV S.**, **CROWE S.A.**, HAFFNER G.D., MUCCI A., SUNDBY B. and FOWLE D.A. (2008) Modeling biogeochemistry in an Early Ocean Analogue. Contributed poster presentation. 18th Annual VM Goldschmidt Conference, July 13-18, Vancouver, BC.
- (A167) SUNDBY B., MUCCI A., GILBERT D., **MAJEAU-BETTEZ G.** and GOBEIL C. (2008) The estuarine nutrient trap: evidence for increased diatom production in the Gulf of St. Lawrence. Contributed oral presentation. Annual Congress of the Canadian Meteorological and Oceanographic Society, May 25-May 29, Kelowna, BC
- (A166) LEHMANN M., BENDER M.L., BARNETT B., GÉLINAS Y., MUCCI A., MARANGER R.J. and GILBERT D. (2008) Aerobic respiration and hypoxia in the lower St. Lawrence Estuary: Constraints from stable isotope ratios of dissolved oxygen in the water column. Contributed oral presentation. Joint ASLO/AGU Ocean Sciences Meeting, March 2-7, 2008, Orlando, FL.
- (A165) SUNDBY B., **CROWE S.A.**, FOWLE D., **KATSEV S.**, MUCCI A. and NOMOSATRYO S. (2007) High concentrations of methane in the hypolimnion of Lake Matano, Indonesia: hazard and economic opportunity. Contributed oral presentation. 30th Congress of the International Association of Theoretical and Applied Limnology, August 12-18, Montréal, Québec.

2007

- (A164) **CROWE S.A.**, O'NEILL A.H., **KATSEV S.**, HAFFNER G.D., CANFIELD D.E., MUCCI A., SUNDBY B. and FOWLE D.A. (2007) Photoferrotrophs, primary production and the potential role for anoxygenic photosynthesis in Fe-rich environments. Contributed oral presentation. 30th Congress of the International Association of Theoretical and Applied Limnology, August 12-18, Montréal, Québec.
- (A163) MUCCI A., **CROWE S.A.**, FOWLE D.A., SUNDBY B., SABO E.M. and HAFFNER G.D. (2007) Carbon sources and cycling in Lake Matano, Indonesia. Contributed oral presentation. 30th Congress of the International Association of Theoretical and Applied Limnology, August 12-18, Montréal, Québec.

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (continued)

- (A162) **KATSEV S., CROWE S.A., FOWLE D.A., MUCCI A. and SUNDBY B.** (2007) A limnologist's El Dorado: Coupling geochemist to physical transport in deep oligotrophic Lake Matano, Indonesia. Contributed oral presentation. 30th Congress of the International Association of Theoretical and Applied Limnology, August 12-18, Montréal, Québec.
- (A161) **MAGEN C., CHAILLOU G., GILBERT C., CROWE S.A., MUCCI A. and SUNDBY B.** (2007) Iron and manganese as tracers of different sedimentation regimes in the Beaufort Sea region. Contributed oral presentation. Annual Congress of the Canadian Meteorological and Oceanographic Society. CMOS-CGU-AMS Congress 2007, May 28-June 1, St. John's, Newfoundland.
- (A160) **MAGEN C., CHAILLOU G., CROWE S.A., MUCCI A., SUNDBY B., MAKABE R. and SASAKI H.** (2007) Origin and fate of particulate organic carbon in the Beaufort Sea shelf - Amundsen Gulf area, Canadian Arctic. Contributed oral presentation. Annual Congress of the Canadian Meteorological and Oceanographic Society., CMOS-CGU-AMS Congress 2007, May 28-June 1, St. John's, Newfoundland.
- (A159) **KATSEV S., CHAILLOU G., SUNDBY B. and MUCCI A.** (2007) Effect of progressive oxygen depletion on sediment diagenesis, Contributed oral presentation, ASLO Aquatic Sciences Meeting, Feb. 4-9, Santa Fe, New Mexico.
- (A158) **DUFOUR S.C., DESROSIERS G., SUNDBY B., MUCCI A. and ARCHAMBAULT P.** (2007) CT-scan investigation of biogenic structures in sediments of the hypoxic lower St-Lawrence Estuary, Quebec, Canada. Contributed oral presentation, ASLO Aquatic Sciences Meeting, Feb. 4-9, Santa Fe, New Mexico.

2006

- (A157) **CROWE S.A., S. KATSEV S., MAGEN C., NOMOSATRYO S., HAFFNER G.D., MUCCI A., SUNDBY B., and FOWLE D.A.** (2006) DOC mineralization in Tropical Lake Matano, Indonesia. Contributed oral presentation, Fall AGU Meeting, Dec. 11-15, San Francisco, CA.
- (A156) **DUFOUR S., DESROSIERS G., SUNDBY B., MUCCI A. and ARCHAMBAULT P.** (2006) CT-scan investigation of biogenic structures in sediments of the hypoxic Lower St-Lawrence Estuary, Quebec, Canada. Contributed oral presentation, Fall AGU Meeting, Dec. 11-15, San Francisco, CA.
- (A155) **MUSCLOW, S.L. and MUCCI A.** (2006) Aquaculture alteration of sediment chemistry in the Bay of Fundy. Contributed poster, 27th Annual Meeting of SETAC, Nov. 5-9, Montreal, QC.
- (A154) **CROWE S.A., S. KATSEV S., O'NEILL A.H., HAFFNER G.D., MUCCI A., SUNDBY B., and FOWLE D.A.** (2006) Cr cycling in tropical Lake Matano, Sulawesi Island, Indonesia. Contributed oral presentation, 27th Annual Meeting of SETAC, Nov. 5-9, Montreal, QC.
- (A153) **CROWE, S.A., MAGEN C., MUCCI A., SUNDBY B. and FOWLE, D.A.** (2006) Sedimentary bacteria respire iron oxides through ligand-induced dissolution. Contributed poster presentation. 16th Annual VM Goldschmidt Conference, August 27 – Sept. 1, Melbourne, Australia. doi:10.1016/j.gca.2006.06.151.
- (A152) **KIM S.-T., HILLAIRE-MARCEL C. and MUCCI A.** (2006) Mechanisms of equilibrium and kinetic oxygen isotope effects in synthetic aragonite at 25°C. Contributed oral presentation. 16th Annual VM Goldschmidt Conference, August 27 – Sept. 1, Melbourne, Australia. doi:10.1016/j.gca.2006.06.643.
- (A151) **KATSEV S., SUNDBY B. and MUCCI A.** (2006) Redox boundary excursions in organic-poor and organic-rich sediments. Contributed oral presentation. ASLO Summer Meeting, June 4-9, Victoria, BC.
- (A150) **MAGEN C., MUCCI A., SUNDBY B., CROWE S., CHAILLOU G. and GILBERT C.** (2006) Early diagenesis in Beaufort Sea shelf sediments. Contributed oral presentation. Annual GAC-MAC Meeting, May 14-17, Montreal, Quebec.
- (A149) **DUFOUR S., DESROSIERS G., SUNDBY B., MUCCI A., ARCHAMBAULT P., LONG B. and STORA G.** (2006) Determination of the spatial occupation of biogenic structures in marine sediments using CT-SCAN. Contributed oral presentation. Annual GAC-MAC Meeting, May 14-17, Montreal, Quebec.

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (continued)

2006

- (A148) **CROWE S.**, O'NEILL A.H., HEHANUSSA P., HAFFNER G.D., SUNDBY B. MUCCI A. and FOWLE D.A. (2006) Diagenesis in Fe-rich sediments of Lake Matano, Sulawesi Island, Indonesia. Contributed oral presentation. Annual GAC-MAC Meeting, May 14-17, Montreal, Quebec.
- (A147) **THIBODEAU B.**, DE VERNAL A. and MUCCI A. (2006) Recent eutrophication and consequent hypoxia in the bottom waters of the Lower St. Lawrence Estuary: micropaleontological and geochemical evidence. Contributed oral presentation, Annual GAC-MAC Meeting, May 14-17, Montreal, Quebec.
- (A146) STURM A., **CROWE S.**, O'NEILL A.H., SUNDBY B. MUCCI A. and FOWLE D.A. (2006) Pb release from ferrihydrite during dissimilatory iron reduction. Contributed oral presentation. Annual GAC-MAC Meeting, May 14-17, Montreal, Quebec.
- (A145) **KIM S.-T.**, HILLAIRES-MARCEL C. and MUCCI A. (2006) Precipitation mechanism of orthorhombic carbonates: An oxygen isotope perspective. Contributed oral presentation. Annual GAC-MAC Meeting, May 14-17, Montreal, Quebec.
- (A144) **CHAILLOU G.**, SUNDBY B., GOBEIL C. and MUCCI A. (2006) Hypoxia in the Lower St-Lawrence Estuary: influence of the geochemical signal. Contributed oral presentation, 9th International Estuarine Biogeochemistry Symposium. May 7-11, Warnemünde, Germany.
- (A143) **DESROSIERS M.**, PLANAS D. and MUCCI A. (2006) Mercury methylation in the epilithon of boreal shield aquatic ecosystems. Contributed poster, SETAC-Europe 16th Annual Meeting, May 7-11, The Hague, The Netherlands.
- (A142) **KATSEV S.**, SUNDBY B. and MUCCI A. (2006) Predicting the geochemical response of sediments affected by hypoxia in the Lower St. Lawrence Estuary. Contributed oral presentation. European Geosciences Union Meeting, April 2-7, Vienna, Austria.
- (A141) **CROWE S.A.**, O'NEILL A.H., **KATSEV, S.**, HEHANUSSA P., HAFFNER G.D., SUNDBY B., MUCCI A., and FOWLE D.A., (2006) Lake Matano water chemistry: Insights into trace metal and phosphate cycling. Contributed oral presentation, International Symposium on The Ecology and Limnology of the Malili Lakes, March 20-22, Bogor, Indonesia.
- (A140) FOWLE D.A., O'NEILL A.H., HAFFNER G.D., SUNDBY B., MUCCI A., HEHANUSSA P. and **CROWE S.** (2006) Microbial ecology and the link between sediment respiration and sediment-water exchange in Lake Matano. Contributed oral presentation, International Symposium on The Ecology and Limnology of the Malili Lakes, March 20-22, Bogor, Indonesia.
- (A139) **VILLEGAS-JIMENEZ A.**, MUCCI A and WHITEHEAD A. (2006) Water adsorption on the (10.4) calcite surface: Towards the construct of a theoretical model of mineral dissolution. Contributed oral presentation. Sixth Annual Symposium of the Center for Research in Molecular Modeling, February 10-12, Montreal, Canada.

2005

- (A138) **VILLEGAS-JIMENEZ A.**, MUCCI A., PAQUETTE J. and WHITEHEAD A. (2005) First principles investigation on the chemical interactions of water with the (10.4) calcite surface. Contributed oral presentation. First Applied Pulp & Paper Molecular Modelling Symposium, August 24-26, Montreal, Canada.
- (A137) MUCCI A. and MILLER L. (2005) Carbon exchange across the air-sea interface on the Mackenzie Shelf, Canadian Arctic. Contributed poster presentation, Gordon Research Conference on Chemical Oceanography, August 7-12, Tilton, New Hampshire.
- (A136) CHAILLOU G., RINGUET S., SUNDBY B. and MUCCI A. (2005) Hypoxia in the Lower St-Lawrence Estuary: has it happened before. Contributed poster presentation, Gordon Research Conference on Chemical Oceanography, August 7-12, Tilton, New Hampshire.

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (continued)

- (A135) **MAGEN C., CROWE S.A., CHAILLOU G., MUCCI A., SUNDBY B. and FOWLE D.A.** (2005) Bacterial production of Fe complexing ligands in anaerobic porewaters: A strategy to access Fe(III) as an electron acceptor. Contributed poster presentation, Gordon Research Conference on Chemical Oceanography, August 7-12, Tilton, New Hampshire.
- (A134) **MUCCI A. and MILLER L.A.** (2005) Carbon exchange at the air-sea interface of the Mackenzie Shelf, Canadian Arctic (CASES Program), Contributed poster presentation, ASLO Summer Meeting, June 19-24, Santiago de Compostela, Spain.
- (A133) **KATSEV S., SUNDBY B. and MUCCI A.** (2005) Modeling a recent transition from oxic to anoxic conditions in deep basin Arctic sediments. Contributed oral presentation, ASLO Summer Meeting, June 19-24, Santiago de Compostela, Spain.
- (A132) **BARAZZUOL L., GÉLINAS Y. and MUCCI A.** (2005) The relationship between the diagenetic cycles of reducible iron and manganese oxides and dissolved organic carbon (DOC). Contributed oral presentation, ASLO Summer Meeting, June 19-24, Santiago de Compostela, Spain.
- (A131) **MILLER L.A., OWENS O., MUCCI A., PAPAKYRIAKOU T.N., SUTHERLAND N.E., EHN J., and MUNDY C.J.** (2005) Sea-ice carbon biogeochemistry: Relationship to atmospheric CO₂ fluxes. Invited talk, 37th International Liège Colloquium on Ocean Dynamics, May 2-6, Liège, France.

2004

- (A130) **KIM S.-T., O'NEIL J., MUCCI A. and HILLAIRES-MARCEL C.** (2004) Oxygen isotope fractionation between synthetic aragonite and water: Influence of solution chemistry. Contributed poster presentation. Fall AGU meeting, 85(47), Suppl., 384-384, Dec. 13-17, San Francisco, CA.
- (A129) **O'NEILL A., CROWE S., SONG Z., MUCCI A., SUNDBY B., FRYER B. and FOWLE D.** (2004) Carbon mineralization pathways and early diagenesis in Lake Erie sediments. Contributed poster presentation. Fall AGU meeting, 85(47), Suppl., 384-384, Dec. 13-17, San Francisco, CA.
- (A128) **BENOIT P., GRATTON Y. and MUCCI A.** (2004) Modeling the development of hypoxic waters in the Lower St. Lawrence Estuary. Contributed poster presentation. Joint ECSA and ERF International Conference, June 21-25, Balina, Australia.
- (A127) **MUCCI A.** (2004) Hypoxia in the Lower St-Lawrence Estuary. Invited Speaker. Center for Climate Change Modeling and Research, University of Victoria, April 22, 2004.
- (A126) **MUCCI A.** (2004) Hypoxia in the Lower St-Lawrence Estuary. Invited Speaker. Institute of Ocean Sciences, Fisheries and Oceans Canada, Sidney, B.C. April 21, 2004.
- (A125) **MUCCI A.** (2004) Hypoxia in the Lower St-Lawrence Estuary. Invited Speaker. Department of Oceanography, Texas A&M University, College Station, Texas. February 23, 2004.
- (A124) **VILLEGAS-JIMENEZ A., MUCCI A., PAQUETTE J., PROKROVSKY O.S. and SCHOTT J.** (2004) A generalized surface complexation model for carbonate minerals in aqueous solutions. Contributed oral presentation, 14th Annual VM Goldschmidt Conference, June 7-11, Copenhagen, Denmark. *Geochim. Cosmochim. Acta* 68(11), Suppl. A126.
- (A123) **BENOIT P., GRATTON Y. and MUCCI A.** (2004) Modeling the development of hypoxic waters in the Lower St. Lawrence Estuary. Contributed oral presentation. 8th International Symposium on Model Estuaries, May 16-20, Solomons, Maryland.
- (A122) **THIBODEAU B., DE VERNAL A. and MUCCI A.** (2004) Development of micropaleontological and geochemical indicators of eutrophication in the St. Lawrence Estuary. Contributed poster presentation, Spring AGU meeting, EOS Transactions AGU, 85(17): JA153, May 17-21, Montreal, QC, Canada.
- (A121) **BOUDREAU B.P. and MUCCI A.** (2004) Modelling transient manganese diagenesis: a simple prediction and confirmation. Contributed oral presentation. ASLO Ocean Research Conference, February 15-20, Honolulu, Hawaii.

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (continued)

2003

- (A120) **THIBODEAU B.**, DE VERNAL A. and MUCCI A. (2003) Les dinokystes, indicateurs d'eutrophisation dans l'Estuaire maritime du St-Laurent, Est du Canada? Contributed oral presentation, 18ème symposium de l'Association des Palynologues de Langue Française, September 1-4, Université Bordeaux I, Talence, France. (*Best student paper prize*).
- (A119) ST-ONGE G., BILODEAU G., DE VERNAL A., HILLAIRES-MARCEL C., GHALEB B., **LEDUC J.**, MUCCI A., SAVARD J., **ZHANG D.**, MULDER T., PIPER D. and STONER J. (2003) Physical, magnetic, sedimentological, geochemical, isotopic and micropaleontological features of rapidly deposited layers in the Saguenay Fjord, Québec: from 7200 cal BP to the 1996 AD flood layer. Contributed oral presentation. 2nd International Symposium on Contaminated Sediments, May 26-28, Québec City, QC.
- (A118) **POULIN P.**, GHALEB B., HILLAIRES-MARCEL C. and MUCCI A. (2003) Monitoring the origin, reactivity and residence time of suspended particulate matter in transitional environments using Th isotopes (^{234}Th , ^{232}Th , ^{230}Th , ^{228}Th) - Example from the Saguenay Fjord (Québec). Contributed oral presentation. 2nd International Symposium on Contaminated Sediments, May 26-28, Québec City, QC.
- (A117) MUCCI A., GUIGNARD C. and **BERNIER G.** (2003) Trace metal mobility in sediments following a catastrophic depositional event. Contributed oral presentation. 2nd International Symposium on Contaminated Sediments, May 26-28, Québec City, QC.
- (A116) TREMBLAY H., LOCAT J., MUCCI A. and PELLETIER É. (2003) Characterization of a catastrophic flood sediment layer: geological, geotechnical, biological and geochemical signatures. Contributed oral presentation. 2nd International Symposium on Contaminated Sediments, May 26-28, Québec City, QC.
- (A115) LOCAT J., TREMBLAY H., GALVEZ-CLOUTIER R., DESROSIERS G., GAGNÉ J.-P., GRATTON Y., HILL P., KONRAD J.-M., LEROUÉIL S., LONG B., HILLAIRES-MARCEL C., MUCCI A., PELLETIER É., SIMPKIN P. and DE VERNAL A. (2003) La réalisation du projet Saguenay post-déluge : un projet unique avec des gens exceptionnels. Contributed oral presentation. 2nd International Symposium on Contaminated Sediments, May 26-28, Québec City, QC.
- (A114) PELLETIER É., TREMBLAY H., DESROSIERS G., MUCCI A. and LOCAT J. (2003) The origin and behavior of a catastrophic capping layer deposited on contaminated sediments of the Saguenay fjord (Quebec). Invited keynote lecture. 2nd International Symposium on Contaminated Sediments, May 26-28, Québec City, QC.
- (A113) DE VERNAL A., ST-ONGE G., HILLAIRES-MARCEL C. and MUCCI A. (2003) Large amplitude variations in the hydrological regime and hydrography of the St. Lawrence River and Gulf during the Holocene - Climatic inferences. Contributed oral presentation. Annual Canadian Geophysical Union, May 10-14, Banff, AB.

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (continued)

2002

- (A112) DESROSIERS M., PLANAS D. and MUCCI A. (2002) Methylmercury and THg accumulation by littoral communities in lakes of pre- and post-harvest watersheds. Contributed oral presentation. Sustainable Forest Management Network Conference, November 13-15, Edmonton, Alberta.
- (A111) DE VERNAL A., HILLAIRES-MARCEL C., MUCCI A. and ST-ONGE G. (2002) El registro palinológico e isotópico de los cambios ambientales y climáticos en el estuario del Río St-Laurent (Canadá) durante los últimos ocho mil años. Congrès de l'Association des palynologues de langue espagnole, Invited oral presentation, Sept. 23-27, Salamanca, Spain.
- (A110) PAQUETTE J., **CHIEN Y.-C.**, MUCCI A. and VALI H. (2002) Abiotic calcites: crystal morphology, zoning and microstructure. Invited oral presentation, 12th Annual VM Goldschmidt Conference, August 18-23, Davos, Switzerland. *Geochim. Cosmochim. Acta* 66(15A), Suppl. A579.
- (A109) **CHIEN Y.-C.**, MUCCI A., PAQUETTE J. and VALI H. (2002) The influence of ionic strength and magnesium ions on calcite crystal growth morphology. Contributed poster presentation, 12th Annual VM Goldschmidt Conference, August 18-23, Davos, Switzerland. *Geochim. Cosmochim. Acta* 66(15A), Suppl. A138.
- (A108) **VILLEGAS-JIMENEZ A.**, MUCCI A. and PAQUETTE J. (2002) Re-calibration of surface complexation models for magnesite and dolomite using Brown valence theory and a genetic algorithm. Contributed poster presentation, 12th Annual VM Goldschmidt Conference, August 18-23, Davos, Switzerland. *Geochim. Cosmochim. Acta* 66(15A), Suppl. A807.
- (A107) PLANAS D., **DESROSIERS M.**, BEYRUTH Z. and MUCCI A. (2002) Watershed characteristics and methylmercury/total mercury accumulation in lake littoral communities. Contributed oral presentation, ASLO Summer Meeting, June 10-14, Victoria, B.C.
- (A106) MUCCI A. (2002) Non-steady state sediment diagenesis in the Saguenay Fjord (Quebec, Canada) following a catastrophic depositional event. **Invited keynote speaker**, 7th International Estuarine Biogeochemistry Symposium, May 28-30, Grimstad, Norway.
- (A105) **GARAND A.** and MUCCI A. (2002) The influence of ionic strength and fluoride ion concentration on the adsorption properties of gibbsite: Phosphate and arsenate adsorption. Contributed poster presentation, AGU/ASLO Ocean Sciences Meeting, February 11-15, 2002, Honolulu, Hawaii.
- (A104) SUNDBY B., MUCCI A., GOBEIL C., GILBERT D., GRATTON Y., ARCHAMBAULT P. and DE VERNAL A. (2002) Hypoxia in the deep waters of the Laurentian Trough, Lower St. Lawrence Estuary. Contributed poster presentation, AGU/ASLO Ocean Sciences Meeting, February 11-15, 2002, Honolulu, Hawaii.

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (continued)

2001

- (A103) **DAVIS T.A.**, GIANNITTI E., VOLESKY B. and MUCCI A. (2001) Cadmium biosorption by *Sargassum* brown algae: Importance of alginates in heavy metal uptake. Contributed oral presentation, September 11-15, Symposia on Environmental Biogeochemistry, Wroclaw, Poland.
- (A102) **FRIIS A.K.**, **DAVIS T.A.**, FIGUEIRA M.M., VALI H. and MUCCI A. (2001) The effect of EDTA, *Bacillus subtilis*, and bovine blood serum on calcite dissolution rates and crystal surface features imaged by atomic force microscopy (AFM) and Transmission electron microscopy (TEM). Contributed oral presentation, September 11-15, Symposia on Environmental Biogeochemistry, Wroclaw, Poland.
- (A101) MUCCI A. and GUIGNARD C. (2001) Trace metal mobility in a sediment covered by a massive flood deposit. Contributed oral presentation, Sixth International Conference on the Biogeochemistry of Trace Elements, July 29-August 2, Guelph, Ontario.
- (A100) **DAVIS T.A.**, MARTIMBEAU C.-E., MUCCI A., and VOLESKY B. (2001) Bio-remediation of mercury in aquatic environments by the brown algae *Sargassum Fluitans*. Contributed oral presentation, Sixth International Conference on the Biogeochemistry of Trace Elements, July 29-August 2, Guelph, ON.
- (A99) LONG B., PARENT M., LABEYRIE L., HILLAIRES-MARCEL C., PIPER D.J.W., CORTIJO E., DE VERNAL A., HEMMING S., LAMOTHE M., MUCCI A., SAVARD M.M., ANDREWS J.T., PICKRILL D., HART B. and SYVITSKY J.P.M. (2001) The Laurentian Channel: Late to Middle Quaternary record of sea/ice sheet interactions in the Northwest Atlantic. APLACON, Contributed oral presentation, May 10-12, Lisbon, Portugal.
- (A98) MUCCI A. (2001) Remobilisation différentielle de métaux lors de la diagénèse suite au dépôt de la crue éclair dans le Fjord du Saguenay. **Invited Speaker**, Forum des Sciences de la Mer, April 5-6, 2001, Rimouski, Québec
- (A97) **DESROSIERS M.**, PLANAS D. and MUCCI A. (2001) Importance of littoral biofilm in Hg and MeHg accumulation in lakes. Contributed oral presentation, Annual Meeting of the Society of Canadian Limnology/Canadian Conference on Fisheries Research, January 4-6, Toronto, Ontario.

2000

- (A96) **DAVIS T.A.**, MARTIMBEAU C.-E., VOLESKY B. and MUCCI A. (2000) Bio-remediation of mercury in aquatic environments by the brown algae *Sargassum Fluitans*. Contributed oral presentation, AGU Fall Meeting, Dec. 15-19, San Francisco, California.
- (A95) MUCCI A. and GUIGNARD C. (2000) Trace metal mobility in sediments following a catastrophic depositional event. **Invited oral presentation**, AGU Fall Meeting, Dec. 15-19, San Francisco, California.
- (A94) MUCCI A., GUIGNARD C. and **OLEJCZYK P.** (2000) Mobility of metals and As in sediments following a large scale episodic sedimentation event. Contributed oral presentation, Oct. 15-18, 53rd Canadian Geotech. Conf., Montreal, Quebec.
- (A93) DEFLANDRE B., MUCCI A., SUNDBY B., GUIGNARD C. and GAGNÉ J.-P. (2000) Early diagenetic processes in coastal marine sediments disturbed by a catastrophic depositional event. Contributed oral presentation, ASLO Meeting, June 5-9, Copenhagen, Sweden.
- (A92) **GEHLEN M.**, MUCCI A., ANSCHUTZ P. and SUNDBY B. (2000) Geochemistry of Canadian continental shelf surface sediments south-west of Vancouver Island: a transect across the oxygen minimum. Contributed oral presentation, Joint Global Ocean Flux Study-2000 Conference, April 13-17, Bergen, Norway.
- (A91) **DESROSIERS M.**, MUCCI A. and PLANAS D. (2000) How watershed perturbation influence methylmercury loading in the littoral biofilm? Contributed oral presentation, Annual Meeting of the Society of Canadian Limnology/Canadian Conference on Fisheries Research, January 6-8, Fredericton, New Brunswick.

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (continued)

1999

- (A90) **DAVIS T.**, LLANES F., MUCCI A. and VOLESKY B. (1999) Variation of alginate conformation from a global sampling of *Sargassum* species and its implications for heavy metal binding in the biosorption process. Contributed oral presentation, II International Congress on Biomaterials, November 1-5, Havana, Cuba.
- (A89) **GAO Y.** and MUCCI A. (1999) Phosphate and arsenate complexation at the surface of goethite in 0.7 M NaCl solution. Contributed poster. Ninth Annual V.M. Goldschmidt Conference, August 22-27, Cambridge, Massachusetts.
- (A88) **ZHANG D.**, **ALPAY S.**, HILLAIRES-MARCEL C., GHALEB B. and MUCCI A. (1999) Spatial and temporal variations in Th isotopic ratios of suspended particulate matter in the Saguenay Fjord (Canada). Contributed poster. 33rd CMOS Congress, May 31-June 4, Montreal.
- (A87) **LEDUC J.**, BILODEAU G., DE VERNAL A. and MUCCI A. (1999) Distribution of benthic foraminifera in surface sediments of the Saguenay fjord, before and after the flood of 1996. Contributed oral presentation. 33rd CMOS Congress, May 31-June 4, Montreal.
- (A86) MUCCI A. and GUIGNARD C. (1999) Trace metal mobility in sediments covered by the 1996 flood deposits in the Saguenay Fjord. Contributed oral presentation. 33rd CMOS Congress, May 31-June 4, Montreal.
- (A85) **LEDUC J.**, BILODEAU G., DE VERNAL A. and MUCCI A. (1999) Distribution des foraminifères benthiques dans les sédiments de surface du fjord du Saguenay, avant et après le déluge de 1996. Congrès de l'AQQUA, 13-14 mai, Université d'Ottawa.
- (A84) **DESROSIERS M.**, MUCCI A., PLANAS D. et GUIGNARD C. (1999) L'influence des perturbations des bassins versants sur la production et concentrations de méthylmercure dans le biofilm de la zone littorale : Résultats préliminaires. Présentation orale. 67^{ième} Congrès de l'ACFAS, 10-14 mai, Université d'Ottawa.
- (A83) **DESROSIERS M.**, MUCCI A., PLANAS D. and GUIGNARD C. (1999) The influence of watershed perturbation on mercury loading in the littoral of boreal forest lakes: preliminary results. Contributed oral presentation. 1999 Sustainable Forest Management Network Conference, February 14-17, Edmonton, Alberta.

1998

- (A82) **ANSCHUTZ P.**, SUNDBY B., LEFRANCOIS L., LUTHER G. and MUCCI A. (1998) High resolution profiles and fluxes of redox species in continental margin sediments: implications for the cycles of nitrogen, iodide, manganese, and iron. Contributed oral presentation. Eight Annual V.M. Goldschmidt Conference, August 30-September 3, Toulouse, France.
- (A81) **ALPAY S.**, MUCCI A. and HILLAIRES-MARCEL C. (1998) Perturbations in particulate and colloidal+dissolved species within the water column of the Saguenay Fjord. Contributed oral presentation. Joint Annual GAC/MAC Meeting, May 18-20, Quebec City, Quebec. Program with abstracts, p. A4.
- (A80) **LOCAT J.**, **DESROSIERS G.**, DE VERNAL A., GAGNE J.-P., GALVEZ-CLOUTIER R., GRATTON Y., HILL P., HILLAIRES-MARCEL C., LONG B., MUCCI A., PELLETIER E., SIMPKIN P. and THERRIEN R. (1998) Performance environnementale de la couche de sédiments du déluge de 1996 recouvrant les sédiments contaminés du fjord du Saguenay; une occasion de développement technologique. Contributed oral presentation. Joint Annual GAC/MAC Meeting, May 18-20, Quebec City, Quebec. Program with abstracts, p. A111.
- (A79) **ZHONG S.** and MUCCI A. (1998) Application of chelation ion chromatography to the determination of REEs and trace metals in geological samples. Contributed oral presentation. Joint Annual GAC/MAC Meeting, May 18-20, Quebec City, Quebec. Program with abstracts, p. A204.
- (A78) **SAULNIER I.** and MUCCI A. (1998) Trace metal remobilization following the resuspension of Saguenay Fjord sediments. Contributed poster presentation. Joint Annual GAC/MAC Meeting, May 18-20, Quebec City, Quebec. Program with abstracts, p. A165.

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (continued)

- (A76/77) MUCCI A., **RICHARD L.-F.** and LUCOTTE M. (1998) The differential geochemical behavior of phosphorus and arsenic in a coastal marine sediment. Contributed oral presentations. AGU/ASLO Ocean Sciences Meeting, February 9-13, 1998, San Diego, California and Joint Annual GAC/MAC Meeting, May 18-20, Quebec City, Quebec. Program with abstracts, p. A129.
- (A75) **ALPAY S.**, MUCCI A. and HILLAIRES-MARCEL C. (1998) Particulate and colloidal+dissolved species within a well-stratified estuarine environment: Preliminary results. Contributed oral presentation. AGU/ASLO Ocean Sciences Meeting, February 9-13, 1998, San Diego, California.
- (A74) BOUDREAU B.P., MUCCI A., SUNDBY B., LUTHER III G.W. and SILVERBERG N. (1998) Comparative diagenesis at three continental margin sites. Contributed oral presentation. AGU/ASLO Ocean Sciences Meeting, February 9-13, 1998, San Diego, California.
- (A73) ANSCHUTZ P., SUNDBY B., LEFRANCOIS L., LUTHER III G.W. and MUCCI A. (1998) High-resolution microelectrode profiles of iodide and other redox species in sediment pore waters. Contributed oral presentation. AGU/ASLO Ocean Sciences Meeting, February 9-13, 1998, San Diego, California.
- (A72) SILVERBERG N., SUNDBY B. and MUCCI A. (1998) Vertical fluxes in the western Gulf of St. Lawrence. Contributed oral presentation. AGU/ASLO Ocean Sciences Meeting, February 9-13, 1998, San Diego, California.

1997

- (A71) MUCCI A., **RICHARD L.-F.** and LUCOTTE M. (1997) The differential geochemical behavior of phosphorus and arsenic in the water column and sediments of the Saguenay Fjord. 5th Int. Symp. on Model Estuaries, May 25-29, Rimouski, Quebec.
- (A70) **SAULNIER I.** and MUCCI A. (1997) Trace metal remobilization following the resuspension of Saguenay Fjord sediments. 5th Int. Symp. on Model Estuaries, May 25-29, Rimouski, Quebec.
- (A69) **GAGNON C.**, PELLETIER E. and MUCCI A. (1997) Diagenetic mobility of anthropogenic mercury in sediments of the Saguenay Fjord. 5th Int. Symp. on Model Estuaries, May 25-29, Rimouski, Quebec.

1996

- (A68) MUCCI A., **GEHLEN M.**, BOUDREAU B. et HILLAIRES-MARCEL C. (1996) Minéralisation de la matière organique, dissolution et précipitation du CaCO₃ dans les sédiments du plateau continental de l'est du Canada. 64^{ième} Congrès de l'ACFAS, 13-17 Mai, McGill, Montréal, Québec.
- (A67) ANSCHUTZ P., SUNDBY B., ZHONG S., MUCCI A. et GOBEIL C. (1996) Enfouissement du phosphore et la diagénèse du fer dans les sédiments des marges continentales. 64^{ième} Congrès de l'ACFAS, 13-17 Mai, McGill, Montréal, Québec.
- (A66) **RICHARD L.-F.**, MUCCI A. et LUCOTTE M. (1996) Comparaison des comportements géochimiques de l'arsenic et du phosphore. 64^{ième} Congrès de l'ACFAS, 13-17 Mai, McGill, Montréal, Québec.
- (A65) **SAULNIER I.** et MUCCI A. (1996) Réactivité des sédiments du Fjord du Saguenay: relargage des métaux traces. 64^{ième} Congrès de l'ACFAS, 13-17 Mai, McGill, Montréal, Québec.
- (A64) MUCCI A., **ARAKAKI T.**, SUNDBY B., SILVERBERG N., GRANT J. and HILLAIRES-MARCEL C. (1996) Mineralization of organic carbon, CaCO₃ dissolution and precipitation in continental shelf sediments of Eastern Canada: CJGOFs Phase I. Contributed oral presentation. AGU/ASLO Ocean Sciences Meeting, February 12-16, 1996, San Diego, California.
- (A63) **ANSCHUTZ P.**, **ZHONG S.**, SUNDBY B., GOBEIL C. and MUCCI A. (1996) Phosphorus and iron diagenesis in Eastern Canadian continental margin sediments. Contributed poster. AGU/ASLO Ocean Sciences Meeting, February 12-16, 1996, San Diego, California.

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (continued)

- (A62) SILVERBERG N., SUNDBY B., MUCCI A., ZHONG S., **ARAKAKI T.**, HALL P., TENGBERG A., HILLEMAYER A. and GRANT J. (1996) Organic carbon mineralization and carbon dioxide efflux in sediments at JGOFS sites in eastern Canada. Contributed oral presentation. AGU/ASLO Ocean Sciences Meeting, February 12-16, 1996, San Diego, California.
- (A61) SAVENKOFF C., VÉZINA A.F., PACKARD T.T., SILVERBERG N., THERRIault J.-C., CHEN W., BÉRUBÉ C., MUCCI A., KLEIN B., MESPLÉ F., TREMBLAY J.-E., LEGENDRE L., WESSON J. and INGRAM R.G. (1996) Oxygen and nutrient variations in the deep layer of the Gulf of St. Lawrence and their implications for the carbon cycle. Contributed poster. AGU/ASLO Ocean Sciences Meeting, February 12-16, 1996, San Diego, California.

1995

- (A60) **BONO A.** and MUCCI A. (1995) Partitioning of mercury in the Saguenay Fjord sediments. Contributed poster. 4th International Symposium on Model Estuaries, March 21-24, 1995, Nantes, France.
- (A59) **RICHARD L.-P.**, MUCCI A. and LUCOTTE M. (1995) Constrasting the geochemical behaviour of arsenic and phosphorus during the early diagenesis in sediments of the Saguenay Fjord, Quebec, Canada. Contributed poster. 4th International Symposium on Model Estuaries, March 21-24, 1995, Nantes, France.
- (A58) PAQUETTE J., VALI, H. and MUCCI A. (1995) Morphology of calcite overgrowths precipitated from strong electrolyte solutions: A TEM study of growth mechanisms. Contributed poster. 209th ACS National Meeting, April 2-6, 1995, Anaheim, California.

1994

- (A57) **MONTGOMERY S.**, MUCCI A. and LUCOTTE M. (1994) Dissolved mercury profiles in the water column and pore waters of natural and artificial aquatic systems of northern Québec. 3rd Conference on Mercury as a Global Pollutant, July 10-14, Whistler, British Columbia.
- (A56) LUCOTTE M., HILLAIRE-MARCEL C., MUCCI A., PICHET P., PLANAS D. and VAN TRA H. (1994) Mercury in hydroelectric reservoirs of northern Québec, Canada: A reassessment of its source and processes of release. 3rd Conference on Mercury as a Global Pollutant, July 10-14, Whistler, British Columbia.
- (A55) **DMYTRIW R.**, MUCCI A., LUCOTTE M. and PICHET P. (1994) The partitioning of mercury in the solid components of forest soils and sediments from a hydroelectric reservoir, Québec. 3rd Conference on Mercury as a Global Pollutant, July 10-14, Whistler, British Columbia.
- (A54) GRONDIN A., LUCOTTE M. and MUCCI A. (1994) Mercury and lead burdens before and after flooding in Québec soils. 3rd Conference on Mercury as a Global Pollutant, July 10-14, Whistler, British Columbia.
- (A53) **MONTGOMERY S.**, MUCCI A., LUCOTTE M. et PICHET P. (1994) Le mercure dans la colonne d'eau et les eaux interstitielles de réservoirs naturels et artificiels du moyen-nord Québécois. 62ième Congrès de l'ACFAS, 9-13 Mai, UQAM, Montréal, Québec.
- (A52) **BOIRIDY M.**, CHIASSON D. et MUCCI A. (1994) Mesures d'atténuation de la remobilisation et de la méthylation du mercure suite à l'ennoiment d'un sol organique. 62ième Congrès de l'ACFAS, 9-13 Mai, UQAM, Montréal, Québec.
- (A51) MACHEL H.G., MUCCI A. and BURTON E.A. (1994) Barbados dolomite-origin from modified seawater. Contributed oral presentation, IAS Conference, April 12-15, Ischia, Italy.

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (continued)

1993

- (A50) **ZUDDAS P.** and MUCCI A. (1993) Mechanistic description of calcite precipitation from seawater. European Research Conferences: Natural Waters and Water Technology: Rates in Natural Waters and Water Technology, November 20-25, Acquafredda di Maratea, Italy.
- (A49) GRONDIN A., LUCOTTE M., MUCCI A. and PICHET P. (1993) Géochimie du Hg et du Pb dans les sols forestiers avant et après inondation. 20e Colloque Annuel sur la Toxicologie Aquatique, 17-20 octobre, Québec.
- (A48) LUCOTTE M., HILLAIRES-MARCEL C., MUCCI A., PICHET P., PLANAS D. and VAN TRA H. (1993) Sources and fate of mercury in hydroelectric reservoirs of Northern Quebec. 20e Colloque Annuel sur la Toxicologie Aquatique, 17-20 octobre, Québec.
- (A47) **DMYTRIW R.P.**, MUCCI A., LUCOTTE M. and PICHET P. (1993) The partitioning of mercury in the solid components of a forest soil and sediments from a hydroelectric reservoir. 20e Colloque Annuel sur la Toxicologie Aquatique, 17-20 octobre, Québec.
- (A46) **MONTGOMERY S.**, MUCCI A., LUCOTTE M. and PICHET P. (1993) Dissolved mercury profiles in the water column and pore waters of natural and artificial aquatic systems of northern Quebec. 20e Colloque Annuel sur la Toxicologie Aquatique, 17-20 octobre, Québec.
- (A45) **GAGNON C.**, PELLETIER E. et MUCCI A. (1993) Methyl-mercury in porewaters of an anoxic marine sediment: Saguenay Fjord. 20e Colloque Annuel sur la Toxicologie Aquatique, 17-20 octobre, Québec.
- (A44) **ZHONG S.** and MUCCI A. (1993) Partitioning of rare earth elements (REE) between calcite and seawaters. Invited poster. Gordon Conference on Chemical Oceanography: Global Fluxes, Climate Change, and Ocean Chemistry. August 15-20, Meriden, New Hampshire
- (A43) **ZUDDAS P.** and MUCCI A. (1993) Kinetics of calcite precipitation: A preliminary mechanistic description in a strong electrolyte solution. Contributed oral presentation. Spring AGU Meeting, May 24-28, Baltimore, Maryland. Program with abstracts EOS v. 74(16), p. 319.
- (A42) **GAGNON C.**, MUCCI A. et PELLETIER E. (1993) Accumulation anormale de monosulfure de fer dans un sédiment côtier marin. Présentation orale, 61e Congrès de l'ACFAS, 17-19 mai, Rimouski, Québec, Annales de l'ACFAS v. 61, p. 30.
- (A41) **ZUDDAS P.** and MUCCI A. (1993) Geochemical kinetics of diagenetic reactions: Calcite precipitation from seawater. Contributed oral presentation, Joint Annual GAC/MAC Meeting, May 17-19, Edmonton, Alberta, Program with abstracts, p. A115.
- (A40) MUCCI A. (1993) Magnesium incorporation in calcite overgrowths precipitated from seawater and solutions of similar compositions. Contributed oral presentation, Joint Annual GAC/MAC Meeting, May 17-19, Edmonton, Alberta, Program with abstracts, p. A73.
- (A39) **GAGNON C.**, PELLETIER E. and MUCCI A. (1993) Anomalous predominance of acid volatile sulphides (AVS) in a coastal marine sediment: Implications with respect to the sequestration of heavy metals. Contributed oral presentation, Society of Environmental Toxicology and Chemistry, March 27-31, Lisbon, Portugal.

1992

- (A38) GHALEB B., GARIÉPY C., HILLAIRES-MARCEL C., MUCCI A., QUÉMERAIS B. and VALLIÈRES S. (1992) Uranium isotope geochemistry of sediment pore waters from the Labrador Sea and the mechanism of U-uptake in hemipelagic sediments. Contributed oral presentation. Fall AGU Meeting, December 7-11, San Francisco, California. Program with abstracts EOS v. 73(43), p. 270.
- (A37) **ZHONG S.** and MUCCI A. (1992) Partitioning of rare earth elements between calcite and seawater solutions: preliminary results. Contributed oral presentation. Fall AGU Meeting, December 7-11, San Francisco, California. Program with abstracts EOS v. 73(43), p. 278.

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (continued)

- (A36) LUCOTTE M., FERLAND P., FORTIN B., GRONDIN A., HILLAIRES-MARCEL C., LOUCHOUARN P., MUCCI A. and PICHET P. (1992) Transport atmosphérique à longue distance du Hg et du Pb dans les sédiments lacustres du Québec. Contribution orale au Congrès annuel de l'AQQUA, 23-27 septembre Rouen-Noranda, Québec.
- (A35) **ZHONG S.** and MUCCI A. (1992) Calcite precipitation kinetics in seawater using a constant addition system. Contributed oral presentation, V.M. Goldschmidt Conference, May 4-8, Washington, D.C.
- (A34) and Contributed poster, AGU Spring Meeting, May 11-15, Montreal, Quebec. Program with abstracts EOS v. 73(14), p. 168.
- (A33) **HARTLEY G., ZHONG, S.** and MUCCI A. (1992) The influence of pCO₂ on the incorporation of magnesium in calcite overgrowths precipitated from seawater at 25°C. Contributed poster, AGU Spring Meeting, May 11-15, Montreal, Quebec. Program with abstracts EOS v. 73(14), p. 168.
- (A32) DURAND J., **DOIG F.**, LUCOTTE M. and MUCCI A. (1992) Évolution des teneurs en Hg et Pb dans les sédiments du lac Lusignan à l'Holocène (Laurentides, Québec). Contribution d'une affiche au Congrès annuel de l'AQQUA, Février, Ottawa, Ontario.

1991

- (A31) **GAGNON C.**, PELLETIER E. and MUCCI A. (1991) Rôle de la chimie du soufre sur la remobilisation du mercure dans les sédiments du fjord du Saguenay. 18th Annual Aquatic Toxicity Workshop, Sept. 30- Oct. 3, Ottawa, Ontario.
- (A30) MUCCI A., CANFIELD D. and BOUDREAU B. (1991) Stoichiometric relations in the porewaters of a marine sapropel (Mangrove Lake, Bermuda). Contributed oral presentation, ASLO Summer Meeting, June 10-14, Halifax, Nova Scotia.
- (A29) MUCCI A. (1991) Le programme canadien sur les flux océaniques (JGOFS-Joint Global Ocean Flux Study). Invited oral presentation, Congrès annuel de l'Association professionnelle des géologues et géophysiciens du Québec, April 10-12, Montreal, Quebec.

1990

- (A28) MUCCI A. (1990) The solubility of "pseudokutnahorite" in seawater: carbonate saturation in deep-sea sediment pore waters. Contributed poster, Fall AGU Meeting, December 3-7, San Francisco, California.

1989

- (A27) PAGÉ, P., MUCCI, A. and POIRIER J. (1989) Paleosalinity indicators in postglacial marine clays of Eastern Canada. Contributed poster, Sixth International Symposium on Water-Rock Interaction, August 3-8, Malvern, U.K.
- (A26) MUCCI, A. and **ZHONG, S.** (1989) The influence of salinity on the precipitation kinetics of calcite and aragonite in seawater. Contributed oral presentation. CMOS XXIII Annual Congress, June 6-9, Rimouski, Québec.
- (A25) MUCCI, A. (1989) Calcite solubility behaviour in seawater in the presence of Mn(II): preliminary results. Contributed poster, CMOS XXIII Annual Congress, June 6-9, Rimouski, Québec.
- (A24) and Contributed poster, Joint Annual GAC/MAC Meeting, May 15-17, Montreal, Quebec. Program with abstracts v. 14, p. A88.
- (A23) VLASSOPOULOS, D., WOOD, S.A. and MUCCI, A. (1989) Contents of Pt, Pd and Au in lake and ground waters associated with two Pt-Pd showings in mafic rocks in Quebec. Contributed oral presentation, Joint Annual GAC/MAC Meeting, May 15-17, Montreal, Quebec. Program with abstracts v. 14, p. A71.
- (A22) **ZHONG, S.** and MUCCI, A. (1989) Calcite and aragonite precipitation rates and overgrowth compositions in seawater solutions of various salinities. Contributed paper, Joint Annual GAC/MAC Meeting, May 15-17, Montreal, Quebec. Program with abstracts v. 14, p. A113.

A. Mucci

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (continued)

(A21) MUCCI, A. and EDENBORN, H.M. (1989) Non-steady state diagenesis in a coastal marine sediment. Contributed poster, Workshop/Symposium on the Gulf of St. Lawrence, Maurice Lamontagne Institute, March 14-17, Mont-Joli, Quebec. Programme and abstracts p. 100.

(A20) and, CMOS XXIII Annual Congress, June 6-9, Rimouski, Québec.

1988

(A19) WOOD S. A. and MUCCI A. (1988) The solubility of platinum as bisulfide and hydroxide complexes at 25°C. Contributed oral presentation, V.M. Goldschmidt Conference, May 11-13, Baltimore, Maryland.

(A18) VLASSOPOULOS D., WOOD S. A. and MUCCI A. (1988) The solubility and speciation of gold in aqueous solutions containing organic ligands at 25°C. Contributed oral presentation, V.M. Goldschmidt Conference, May 11-13, Baltimore, Maryland.

(A17) MUCCI A. (1988) Manganese uptake during calcite precipitation from seawater: the formation of a magnesian calcite-kutnahorite solid solution. Contributed poster, Ocean Sciences Meeting, January 18-22, New Orleans, Louisiana. EOS v. 68

(A16) EDENBORN H. M., SILVERBERG N. and MUCCI A. (1988) Patterns of microbial heterotrophic activity in a deep coastal sediment. Contributed poster, Ocean Sciences Meeting, January 18-22, New Orleans, Louisiana. EOS v. 68, p. 1723.

1987

(A15) MUCCI A. (1987) La solubilité de la calcite et de l'aragonite en eau de mer: relations avec les marqueurs sédimentologiques. Invited speaker, 10th Annual GIROQ Colloquium, March 5-6, Université Laval, Québec.

1986

(A14) MUCCI A. (1986) The influence of temperature on the uptake of magnesium in magnesian calcite overgrowths precipitated from seawater. Contributed oral presentation, Joint Annual GAC, MAC, CGU Meeting, May 19-21, Ottawa, Ontario. Program with abstracts v. 11, p. 105.

(A13) MUCCI A. (1986) Quantitative influence of phosphate ions on calcite precipitation from seawater. Contributed poster, Ocean Sciences Meeting, January 13-17, New Orleans, Louisiana. EOS v. 66, p. 1307.

1985

(A12) MUCCI A. (1985) Quantitative influence of phosphate on calcite precipitation from seawater. Contributed oral presentation, Annual CMOS Congress, June 12-14, Montreal, Quebec. Program and abstracts p. 32.

1984

(A11) MUCCI A. (1984) SAM determination of the Mg/Ca on the surface of four carbonate minerals exposed to seawater. Invited poster, Gordon Research Conference in Environmental Sciences: Water, June 24-29, New Hampton, New Hampshire.

1983

(A10) MUCCI A. and MORSE J. W. (1983) Composition of carbonate overgrowths produced on calcite crystals in Bahamian pore waters. Contributed oral presentation, Fall Annual AGU meeting December 5-9, San Francisco, California. EOS v. 64, p. 734.

(A9) MUCCI A. (1983) The interaction between magnesium and the surface of calcite. Invited speaker, Gordon Research Conference in Chemical Oceanography, Jan 31-Feb 4, Ventura, California.

A. Mucci

2. COMMUNICATIONS, POSTERS AND ABSTRACTS (continued)

- (A8) MUCCI A. and MORSE J. W. (1982) Composition and kinetics of precipitation of magnesium calcites from seawater and solutions of similar composition. Contributed oral presentation, AGU/ASLO meeting, February 16-19, San Antonio, Texas. EOS v. 63, p. 92.

1981

- (A7) MUCCI A. (1981) Solubility of calcite and aragonite in seawater and composition of calcite overgrowths in seawater and related solutions. Invited speaker, DISCO III meeting, February 20-25, University of Hawaii.

1980

- (A6) MUCCI A. and MORSE J. W. (1980) The surface chemistry of calcium carbonate in seawater. Invited speaker, Fall Annual AGU meeting, December 8-12, San Francisco, California. EOS v. 61,
(A5) MUCCI A. and MORSE J. W. (1980) Incorporation of magnesium and strontium in calcite overgrowths in seawater. Invited poster, Gordon Research Conference in Chemical Oceanography, January, Santa Barbara, California.

1979

- (A4) MUCCI A. and MORSE J. W. (1979) Incorporation of Mg^{2+} and Sr^{2+} in calcite. Contributed oral presentation, Fall Annual AGU meeting, December 3-7, San Francisco, California. EOS v. 60, p. 861.
(A3) WALTER L. M., MUCCI A. and MORSE J. W. (1979) Calcite and aragonite growth kinetics in seawater. Contributed oral presentation, Annual GSA meeting, San Diego, California.

1977

- (A2) MUCCI A., BENOIT R. L. and DOMAIN R. (1977) Solvent effect on the basicity of alkylamines. Contributed oral presentation, 2nd Joint Conference of the CIC and ACS, May 29-June 2, Montreal, Quebec.
(A1) BENOIT R. L., MUCCI A. et DOMAIN R. (1977) Effet de solvant sur la basicité d'une série d'amines aliphatiques. Présentation orale, 44ième Congrès de l'ACFAS, 19-21 Mai, Trois-Rivières, Québec. Résumés des communications v. 44, p. 42.

A. Mucci

RECENT MEDIA INTERVIEWS AND PUBLICATIONS

January 2012 issue of Québec-Science: “L’estuaire tourne au vinaigre”

Article featuring a publication in Atmosphere-Ocean:

Mucci A., Starr M., Gilbert D. and Sundby B. (2011) Acidification of Lower St. Lawrence Estuary bottom waters. Atmosphere-Ocean 49: 206-213. doi:10.1080/07055900.2011.599265

selected by the magazine as one of the top 10 discoveries of the year 2011 by a Quebec researcher.

<http://www.quebecscience.qc.ca/les-10-decouvertes-2011/8-estuaire-tourne-au-vinaigre>

January 9, 2012; 16h15: Radio-Canada

Interview on the local (Côte Nord) radio station about the acidification of the Lower St. Lawrence Estuary bottom waters.

January 10, 2012:

Métro newspaper, pp.4: “L’acidification des océans”

January 13, 2012:

McGill Reporter, Vol. 44(9), pp.2: “Four McGill discoveries among Québec Science magazine’s top 10 breakthroughs of 2011.”

February 2012

CMOS Bulletin, Vol. 40(1), p.42: “L’estuaire tourne au vinaigre”

February 7, 2012:

The McGill Tribune Vol. 31(17), pp. 17: “St. Lawrence river may hold clues to the ocean’s future”

March 13, 2012 Geochemical News

“Geochemistry: A rusty carbon sink”

<http://multibriefs.com/briefs/gs/GS031312.php>

March 15, 2012

La CyberPresse – Encore l’agriculture

[http://www.cyberpresse.ca/environnement/dossiers/changements-climatiques/201203/15/01-4505707-le-pire-sera-evite-avec-les](http://www.cyberpresse.ca/environnement/dossiers/changements-climatiques/201203/15/01-4505707-le-pire-sera-evite-avec-les-glaciers.php?utm_categorieinterne=traffiddrivers&utm_contenuinterne=cyberpresse_B9_environnement_263_accueil_POS1)

[glaciers.php?utm_categorieinterne=traffiddrivers&utm_contenuinterne=cyberpresse_B9_environnement_263_accueil_POS1](http://www.cyberpresse.ca/environnement/dossiers/changements-climatiques/201203/15/01-4505707-le-pire-sera-evite-avec-les-glaciers.php?utm_categorieinterne=traffiddrivers&utm_contenuinterne=cyberpresse_B9_environnement_263_accueil_POS1)

Pertaining to the role of iron in sedimentary organic matter preservation and our Nature paper:

Lalonde K., Mucci A., Ouellet A. and Gélinas Y. The Rusty Sink: Iron promotes the preservation of organic matter in sediments. Nature v. 483, 2012, pp. 198-200.

A. Mucci

RECENT MEDIA INTERVIEWS AND PUBLICATIONS (continued)

May 6, 2013

Le Devoir

Le fleuve Saint-Laurent à bout de souffle.

Les Années Lumières, Radio-Canada – October 19, 2014

Les océans brûlés: Un impact des changements climatiques

Interview with Chantal Srivastava

<http://www.radio-canada.ca/util/postier/suggerer-go.asp?nID=1214390>

Première chaîne de Radio-Canada – October 16, 2014

Interviews with:

Stéphane Côté – Halifax

Denis Duchesne – Charlottetown

Marie Villeneuve – Vancouver

Jean Fontaine – Winnipeg

Michel Plourde – Sept-Îles

Jacques Montpetit – Rimouski

Doris Labrie – Regina

Sandra Gagnon – Edmonton/Calgary

Jean-Pierre Girard – Saguenay

Réjean Blais – Sherbrooke

CBC International on the web – October 9, 2014

Interview with Marc Montgomery

La Presse – October 9, 2014 (section Actualités)

Interview with Charles Côté

Acidification des océans: Les eaux canadiennes durement frappées

http://plus.lapresse.ca/screens/1752d663-d612-4066-93e7-578499367521|_0.html

La Presse – June 17, 2014

Interview with Mathieu Perreault

Le Banc Public – CHOQ-FM, June 16, 2014

Radio interview by Marion Bérubé - Le Saint-Laurent s'acidifie.

<http://www.choq.ca/emissions/bancpublic>

Le Devoir, June 12, 2014

Le Saint-Laurent étouffé par l'acidification (front page)

TVA/Rimouski, June 4, 2014

L'acidification du fleuve Saint-Laurent.

A. Mucci

RECENT MEDIA INTERVIEWS AND PUBLICATIONS (continued)

Le monde aujourd'hui, Radio-Canada/Rimouski, June 3, 2014
Le fleuve Saint-Laurent et les changements climatiques.

Le Code Chastenay, Télé-Québec, February 18, 2014
Le fleuve Saint-Laurent s'acidifie.

Déluge du Saguenay: un bienfait insoupçonné fait surface
Le Soleil, February 19, 2015
Interview by Jean-François Cliché
<http://www.lapresse.ca/le-soleil/actualites/environnement/201502/19/01-4845629-deluge-du-saguenay-un-bienfait-insoupconne-fait-surface.php>

Le déluge de 1996 a nettoyé le fond du Saguenay, confirme un chercheur
CJAB-FM/Bell Média – Saguenay, February 19, 2015
Interview by Carolyn Labrie
<http://saguenay.radionrj.ca/infosaglac/2015/02/19/le-deluge-de-1996-a-nettoye-le-fond-du-saguenay-confirme-un-chercheur>

Des lacs saskatchewanais ralentissent le réchauffement climatique
Radio-Canada Saskatoon – February 25, 2015
Interview by William Burr
<http://ici.radio-canada.ca/regions/saskatchewan/2015/02/25/007-lacs-saskatchewan-rechauffement-climatique-revue-nature.shtml?isAutoPlay=1>

Menace au large : L'acidification des océans
<https://coeurdessciences.ugam.ca/component/content/article/7-menu-horizontal/30-videos.html>
Cœur des Sciences-UQAM
February 18, 2016

Media interviews

Menace au large : L'acidification des océans
Canal Savoir, video interview with Sophie Malavoy
<https://coeurdessciences.ugam.ca/component/content/article/7-menu-horizontal/30-videos.html>
Cœur des Sciences-UQAM
February 18, 2016

L'acidification des océans
CKUT, interview with Julie Robert
February 18, 2016

A. Mucci

RECENT MEDIA INTERVIEWS AND PUBLICATIONS (continued)

Science à bord

Article describing our work at sea in May 2016, written by Mélissa Guillemette

Québec-Science

August-September 2016 issue

June 11, 2017

Le Téléjournal- Est du Québec

Nouvelle mission pour le Coriolis II

Isabelle Damphousse

<http://ici.radio-canada.ca/tele/le-telejournal-est-du-quebec/2016-2017>

December 12, 2019

FM 103.3 La radio allumée - Libres et verts

L'acidification des océans

Barbara Secours et Isabelle Saulnier

<http://www.fm1033.ca/emission/libres-et-verts/>

November 24, 2021

Chute abrupte d'oxygène dans les eaux du Saint-Laurent

Le Devoir

Interview by Alexandre Shields

<https://www.ledevoir.com/societe/environnement/649758/environnement-chute-abrupte-d-oxygene-dans-les-eaux-du-saint-laurent>

February 6, 2022

Le déclin de l'oxygène dans les eaux profondes du St-Laurent atteint de nouveaux creux.

Découverte – Radio-Canada

Interview by André Bertrand

<https://ici.radio-canada.ca/tele/decouverte/site/episodes/602796/sport-violence-fleuve-temperature-medicament-decouverte?fbclid=IwAR2ga-kbK5Y8w22Pkqx54N4p0pidgT-87-hTc4XJhY9LgtavlsKaPIUR4wY>

February 16, 2022

Declining oxygen concentrations in the deep waters of the St. Lawrence Estuary

CBC – Quebec AM (FM Radio)

Interview with Peter Tardif

<https://www.cbc.ca/listen/live-radio/1-87-quebec-am/clip/15895919-scientist-says-oxygen-levels-st-lawrence-estuary-hit>

A. Mucci

RECENT MEDIA INTERVIEWS AND PUBLICATIONS (continued)

September 4, 2024

L'acidification des océans en images.

Courrier de la planète – Le Devoir

Interview by Alexandre Shields

<https://www.ledevoir.com/environnement/819175/acidification-oceans-resume-image>

April 23, 2025

Le blanchissement des coraux

Le Téléjournal de Radio-Canada

Interview by Mathieu Papillon

TEACHING EXPERIENCE

Undergraduate courses:

Université du Québec à Rimouski (UQAR)

Cinétique Chimique, 1983

Cristallographie et Minéralogie (participation), 1984

Laboratoire de Chimie Instrumentale (participation), 1984

Chimie des Milieux Aquatiques

McGill University

CHEM-121A General Chemistry, 1997

EPSC-200A Terrestrial Planets (participation), 1987, 1988

EPSC-201A/B Introduction to Geology/Understanding Planet Earth

McGill- 1991, 1992, 1994, 1995, 1996, 2000, 2001, 2007, 2008, 2009, 2010, 2011, 2012, 2014, 2015

EPSC-344B/220B Principles of Geochemistry

McGill- 1991, 1992, 1993, 1995, 1996, 1998, 1999, 2001, 2010

EPSC-310A Introductory Petrology I (participation)

McGill- 1986

EPSC-341 Field School III

McGill- 2020

EPSC-480D Honours Research Project

McGill- 1992/ Frances Doig

1993/ Mia Boiridy and Christine Veiga-Pires

1994/ Gordon Weary

1996/ Scott Harris, Marisa Espinosa, Alison Shaw

1997/ Nathan Yee

1998/ Gela Crane

1999/ Yang Shek

2000/ Stéphanie Ringuet

2001/ Anne Friis

2002/ Geneviève Bernier and Anthony Bellis

2003/ Sandra Musclow and David Dufresne

2006/ Emmanuelle Hélias

2007/ Michaela Rough/ and Bobek Karimi

2008/ Nathalie Molnar

2013/ Benjamin Uveges

2021/ Zoya Qudsi

EPSC-396 Undergraduate Research Project

McGill- 2009/ Melissa Maisonneuve

McGill-2012/ Katia Lamer

McGill-2013/ Jason Piha-Gossack

McGill-2016/ Alexis Beaupré-Laperrière

EPSC-482 Research in Earth and Planetary Sciences

McGill-2017/ Alexis Beaupré-Laperrière

McGill-2021/ Zoya Qudsi

ENVR-495 Honours Research – McGill School of Environment

McGill-2018/ Deneyn White

TEACHING EXPERIENCE

Senior undergraduate and graduate courses:

EPSC-542A Chemical Oceanography

McGill- 1988, 1990, 1992, 1994, 1996, 1998, 2000, 2002, 2004, 2006, 2008, 2010, 2013, 2015, 2018, 2020

EPSC-545A Low-Temperature Geochemistry & Diagenesis

McGill- 1986, 1990, 1992, 1996

EPSC-551B Advanced Environmental Geochemistry Seminar

McGill- 1996

EPSC-580A Aqueous Geochemistry

McGill- 1997, 1999, 2002, 2005, 2007, 2009, 2012, 2014, 2016

EPSC-590B Applied Geochemistry Seminar

McGill- 1995, 1997, 1999, 2011, 2017

Graduate courses:

Séminaire I/UQAR-1983/84

Séminaire II/UQAR-1984

Examen de synthèse/UQAR-1984

EPSC-600 Mandatory Graduate Entry Course

McGill- 2005

186-660D Seminars in Oceanography

McGill-1989, 1990

EPSC-666 Current Topics in Earth Sciences (Coordinator)

McGill-2006, 2007, 2008, 2009, 2010

EPSC-721D Marine Geology and Recent Sediments

McGill- 1985/86, 1987/88, 1989/90, 1992/93

EPSC-725A Independent Studies in Geological Sciences

McGill- 1991/ Lin Su (Department of Atmospheric & Oceanic Sciences)

1993-1994/ Andrew Heyes (Department of Geography)

1998-1999/ Christopher Omelon (Department of Geography)

2000-2001/Geneviève Bernier (Earth & Planetary Sciences)

2002-2003/Robyn Nelson (Earth & Planetary Sciences)

2005-2006/Carole Gilbert (Earth & Planetary Sciences)

2006-2007/Bobek Karimi (Earth & Planetary Sciences)

2008-2009/Thais Lamana (Earth and Planetary Sciences)

Fatimah Sulu-Gambari (Earth and Planetary Sciences)

2011-2012/ Maryon Paulsen Strugstad (Earth and Planetary Sciences)

2015-2016/ Olivier Sulpis and Ashley Dinuer (Earth and Planetary Sciences)

2017/Louise Delaigue (Earth and Planetary Sciences)

2020/Hannah Guiney (Earth and Planetary Sciences)

OCE-925-97 Nouveaux Développements en océanographie (required course for the joint Ph.D. program in Oceanography), ISMER- 1999 (Institut des Sciences de la Mer de Rimouski)

Sediment diagenesis, hypoxia and ocean acidification

Intensive short-course, Universidad National Autonoma de Mexico, Mazatlan

May 11-15, 2015

École d'été de l'Observatoire Aquitain des Sciences de l'Univers et l'Institut France-Québec Maritime

Le littoral sous surveillance : enjeux et techniques liées à l'observation du littoral.

17-24 July, 2022 at Université de Bordeaux.

A. Mucci

SUPPLEMENTARY INFORMATION

Internal administrative/community/professional activities

Inter-faculty working group on the McGill School of the Environment

Member: 1995/1996

Inter-Departmental Graduate Program in Oceanography,

Coordinator: 1988/1991

Joint McGill-Laval Oceanography Ph.D. Program,

Co-administrator: 1992/1993

Joint McGill-Laval-UQAR Oceanography Ph.D. Program

McGill representative: 1998-2004

Member of the Program Committee: 1998-2003

Library Committee,

Departmental representative: 1989/1990

Faculty of Graduate Studies and Research,

Faculty Council-Departmental representative: 1989/1991

Grant Committee for Conferences, Publications and Seminars: 1991-1993

Bellairs Research Institute Advisory Committee: 1993-1999

Max Dunbar Award Committee (Chair): 1998-2003

Faculty of Science,

Committee on Environmental Studies (Joint Majors): 1991/1992, 1995/1996

Committee on the McGill School of the Environment: 1995-1997

Faculty Tenure Committee Member (alternate): 1998-2000

Faculty Tenure Committee Member: 2006-2007, 2007-2008, 2009-2010

Leo Jaffe Award Selection Committee: 2013

CFI proposal internal evaluation committee member: 2015-2017

Bicentennial Celebration Committee member: 2019-2020

Chair, Ad-hoc Committee for the nomination of RSC Fellows and New Scholars: 2020-present

Faculty of Arts,

Faculty Tenure Committee Member: 1998-2000

Department of Biology

Re-appointment Committee (Dr. Neil Price) 1995

Tenure Committee (Dr. Neil Price) 1997/1998

Search Committee for an Aquatic Science Faculty Member 1997/1998

McGill School of the Environment

Executive Committee Member (alternate) 1997/1998

Executive Committee Member (full) 1998-2000

Committee for "The Evolving Earth" 1997/1998

McGill University

Chair, Senate Ad-Hoc Committee on Ancillary Services: 2005-2008

Elected Member, University Senate: 2014-2017

NSERC-based review committee for CRC applications and renewal of William Dawson Chairs and James

McGill Professorships committee: 2015-2017

AMURE negotiating team: 2016-2017

A. Mucci

Internal administrative/community/professional activities

Department of Earth and Planetary Sciences Committees,

Undergraduate Recruitment: 1989-1992

Undergraduate Program Advisor: 1992/1993

Undergraduate Academic and Curriculum Committee: 1991/1992, 1995-1998

Environmental Sciences Program Advisor: 1991-1993, 1995-1998

Joint Majors in Earth and Environmental Sciences Program Advisor: 1995-1998

Geological Sciences Program Advisor: 1992/1993

Geochemistry Minor Program Advisor: 1991-1998

Graduate Admissions Committee: 1992/1993, 1997-2000

Graduate Academic Standing Committee 1997/1998

Chair's Advisory Committee: 1994-2000, 2006-2009, 2010-2011, 2012-2013, 2017-2018

Geochemical Laboratory Development: 1991-1993, 1994-1995 (Chair), 2010-2011 (Chair)

Safety Committee: 1990-1991; 2012-2013 (Chair)

Search Committee for new Faculty Member 1997/1998; 1998/1999; 1999/2000; 2012;

Chair: 2000-2003, 2004-2006, 2007-2008, 2013-2016

Departmental representative to l'Ordre des Géologues du Québec : 2006-2010

External administrative/community/professional activities

UQAR/ISMER (Institut des Sciences de la Mer de Rimouski)

External member of the Scientific Advisory Committee of ISMER: 1999-2002

UQAM

Dépt. Sciences de la terre et atmosphère, Tenure Appeals Committee: 2007

Faculty of Science Promotion Committee: 2011-2011

NSERC

Environmental Earth Sciences Grant Selection Committee (EESGSC): 1989-1992

EESGSC membership advisory group: 1992-1996

FQRNT

Geosciences CFI-FQRNT Panel Committee Member: 2008

Post-doctoral scholarships Selection Committee: 2006-2007

Other

Member of the Administrative Council for the R/V Coriolis II: 2002-2012, 2016-present

Member of the Scientific Advisory Committee for the Canadian JGOFS program: 1992-1994

Chair of the Steering Committee for the Canadian JGOFS program: 1994-1997

Member of the Steering Committee for the Canadian JGOFS program: 1994-1998

Member of the Canadian National Committee for SCOR (Scientific Committee on Ocean Research): 2007-2016

Chair, Science Program Committee, Goldschmidt 2012 Conference (Montreal, June 24-19, 2012): 2010-present

Jury member, Geological Association of Canada Hutchison Medal: 2013

RSC Earth-Ocean-Atmosphere Science Fellow Selection Committee Member: 2023-2026

ACFAS Michel-Jourdan Award (Environmental Sciences) Selection Committee Member: 2023

Community

Judge, Montreal Regional Science Fair: 1991, 1992

Judge, Science Fair at FACE: 1999

Président du 1er Concours de Chimie du Collège Montmorency: 2001-2002

A. Mucci

Recent Grants/Awards held in last ten years

(Note: Name of PI is underlined)

<u>D. Pinti</u>	FQRNT-Regroupement stratégique		
A. Mucci	GEOTOP – Centre de recherche sur la dynamique du système Terre		
C. Hillaire-Marcel, A. de Vernal, Y. Gélinas and 37 others		200,000/yr	2024-26
<u>A. de Vernal</u>	FCAR, Team Grant	50,000/yr	2023-26
A. Mucci	Impact of climate and ocean changes on marine environments of the Estuary and Gulf of St. Lawrence		
P. Douglas			
F.R.S. Pausata			
<u>A. Mucci</u>	NSERC, Discovery Grant, Ocean acidification in Canadian Arctic waters	43,000/yr	2018-25
	Canadian coastal waters and the response of shallow and deep-ocean carbonate sediments to ocean acidification.		
<u>A. Mucci</u>	NSERC, Northern Research Supplement Mechanisms and rate of anthropogenic CO ₂ uptake in	15,000/yr	2018-25
	and sediment response to past greenhouse periods from pre- and post-Cryogenian deposits preserved in the Yukon.		
<u>A. de Vernal</u>	NSERC, Research Tools and Instruments	124,393/yr	2021-22
A. Mucci	Multi-flow system for stable isotope analyses		
F. Barbecot			
C. Hillaire-Marcel and J.-F. Hélie			
<u>G. Chaillou</u>	NSERC, Ship-Time Allocation	162,586/yr	2021-22
A. Mucci	Benthic ecosystem functioning and reactivity of sedimentary organic matter		
Y. Gélinas	in the St. Lawrence Estuary		
P. Archambault, N. Mahmoudi, P. Douglas.			
<u>A. Mucci</u>	NSERC, Research Tools and Instruments Autonomous pCO ₂ measurement system.	38,559/yr	2018-19
<u>Y. Shao</u>	FQRNT- Fonds Vert	100,000/yr	2018-23
A. Mucci	La réduction des émissions de dioxyde de carbone (CO ₂) en remplaçant le		
B. Fournier	ciment Portland par du laitier activé par carbonatation.		
<u>A. Mucci</u>	FQRNT/GEOTOP – Projets collaboratifs		
G. Halverson	Shelf sediment response to the current and past	12,500/yr	2018-20
R. Stevenson	episodes of ocean acidification		
<u>A. Mucci</u>	Institut France-Québec Maritime – Déplacement de chercheur en France		
	Biogéochimie des estuaires souterrains côtiers.	3,500/yr	2018-19

A. Mucci

Recent Grants/Awards held (continued)

<u>D. Pinti</u>	FQRNT-Regroupement stratégique		
A. Mucci	GEOTOP – Centre de recherche sur la dynamique du système Terre		
C. Hillaire-Marcel, A. de Vernal, Y. Gélinas and 37 others		480,000/yr	2017-24
<u>J.-É. Tremblay</u>	Department of Fisheries and Ocean Canada		
A. Mucci	St. Lawrence ECOSystem Health Research and Observation NETwork		
D. Dumont, G. Chaillou, K. Lemarchand and M. Gosselin		165,900/yr	2017-20
<u>Y. Gélinas</u>	Concordia University, Ship-Time		
A. Mucci	Organic-inorganic interactions in the St. Lawrence Estuary and Gulf		
L. Tremblay		205,000	2017-18
<u>A. Mucci</u>	Réseau Québec Maritime, Ship-time		
Y. Gélinas	Origine et réactivité de la matière organique dans le fleuve Saint-Laurent		
		40,000	2017-18
<u>A. Mucci</u>	NSERC, Ship-Time Allocation		
B. Sundby	Biogeochemistry of Mn(III) and ocean acidification in the St. Lawrence Estuary		
G. Chaillou, A. Rao		280,890	2015-16
<u>R. Hamme</u>	NSERC, Ship-Time Allocation		
J. Cullen,	Saanich Inlet Redox Experiment	41,760	2015-16
K. Juniper, J. Dower, J. Klymak, D. Varela, V. Pospelova			
A. Mucci	FQRNT-Équipe		
A. de Vernal,	Productivité, ventilation et acidification de la mer du Labrador en réponse aux		
<u>C. Hillaire-Marcel</u>	variations du climat et des concentrations du CO ₂ atmosphérique	60,000	2014-17
	Equipment	43,500	2014-15
<u>Tim Papakyriakou</u>	ArcticNet – Phase 4		
<u>Brent Else,</u>	Gas exchange at the air-sea interface in the Arctic Ocean		
Maurice Levasseur,	Mucci's share	9,000	2014-17
Lisa Miller, Alfonso Mucci, Nadja Steiner, Helmuth Thomas, Philippe Tortell, Huixiang Xie			
<u>Helmuth Thomas</u>	NCE-Meopar		
<u>Peter Tyedmers,</u>	Canadian Ocean Acidification Research Partnership (COARP)		
William Cheung,	Mucci's share	29,000	2014-17
David Garvary, Markus Kienast, Alfonso Mucci, Zou Zou Kuzyk, Rashid Sumiala, Blair Greenan, Lisa Miller, Michel Starr, Joel Heath.			
<u>A. Mucci</u>	NSERC, Ship-Time Allocation		
Bjorn Sundby	The role of Mn(III) in biogeochemical cycles	154,630	2013-14
Roxanne Maranger, Gwenaëlle Chaillou			
<u>A. Mucci</u>	NSERC, Engage Grant,		
	Carbonation of concrete	22,000	2013-14

A. Mucci

Recent Grants/Awards held (continued)

<u>A. Mucci</u>	NSERC, Discovery Grant, Experimental carbonate geochemistry and diagenesis	48,000	2013-18
<u>A. Mucci</u>	NSERC, Research Tools and Instruments		
Y. Shao	Calorimetric cells for thermodynamic and kinetic studies of mineral reactions		
A. Williams-Jones, V. van Hinsberg		58,106	2013-14
<u>R. François</u>	NSERC, CCAR		
A. Mucci,	The Canadian Arctic GEOTRACES Program:	4.8M	2013-18
P. Tortell,	Biogeochemical and tracer study of a rapidly changing Arctic Ocean		
J. Cullen, K. Orians, D. Varela and 15 others			
	Mucci's share	28,000	2013-14
		35,090	2014-15
		35,090	2015-16
		25,500	2016-17
		11,000	2017-18
<u>M. Levasseur</u>	NSERC, Ship-Time Allocation	122,767	2012-13
A. Mucci,	Impacts of acidification on planktonic ecosystem biogeochemistry an		
M. Scarrat,	climate-active trace gases in the St. Lawrence Estuary		
G.A. Ferreyra, Y. Gratton and J.-É. Tremblay			
<u>M. Levasseur</u>	FQRNT, Team Grant	65,000	2012-15
A. Mucci	Acidification du Saint-Laurent: biogéochimie, plankton et climat		
G.A. Ferreyra, Y. Gratton and J.-É. Tremblay			