***Curriculum Vitae***

**Department of Earth and Environmental Studies**

**Montclair State University NJ**

**Phone: 412-865-9991; Email: lix@mail.montclair.edu**

**Education**

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| Ph.D. | 2009, Oceanography, with emphasis inBiogeochemistry Thesis:Sulfur biogeochemistry in the Cariaco Basin (Mary Scranton, dissertation advisor) | Stony Brook University,Stony Brook, NY |
| M.S. | 2004, Marine Chemistry Department Thesis:The contribution of river input and  benthic flux to the nutrient budget of East China  Sea and Yellow Sea (Jing Zhang and SuMei Liu, thesis advisor) | Ocean University of China,Qingdao, China |
| B.S. | 2001, Marine Chemistry Department | Ocean University of China,Qingdao, China |

**Academic Positions**

2013 to present: Analytical Instrumental Specialist, Earth and Environmental Studies, Montclair State University, NJ

2012-2013: Post-doctoral Researcher, Department of Plant & Soil Sciences, University of Delaware, DE (with D. Jaisi). Study oxygen isotope composition of phosphate in the soil.

2009-2012: Post-doctoral Fellow, Institute of Marine and Coastal Sciences, Rutgers University, NJ (With S. Severmann). Investigate Fe isotopic variations and trace metal abundance in sedimentary rocks.

**Research Interests**

Isotope geochemistry; element redox cycling; geomicrobiology; sediment diagenesis; soil geochemistry

**Peer Reviewed Papers**

**Li XN**, GT Taylor,R Varela, MI Scranton. A response to comment to ‘The conundrum between chemoautotrophic production and reductant and oxidant supply: a case study from the Cariaco Basin’. Deep Sea Research I., 10.1016/j.dsr.2012.08.002.

Owens, J., T. Lyons, **XN Li**, G. Gordon, M. M. Kuypers, A. Anbar, W. Kuhnt, S. Severmann, 2012. Isotope records of iron cycling in the proto-North Atlantic during the Cenomanian-Turonian oceanic anoxic event.Paleoceanography 27, doi:10.1029/2012PA002328.

Wakeham, SG., C Turich, F Schubotz, A Podlaska, **XN Li**, R Varela, Y Astor, JP Sáenz, D Rush, JS SinningheDamsté, RE Summons, MI Scranton, GT Taylor, KU Hinrichs, 2012. Biomarkers, Chemistry and Microbiology Show Chemoautotrophy in a Multilayer Chemocline in the Cariaco Basin.Deep Sea Research I 63: 133-156.

**Li XN**, GT Taylor,R Varela, MI Scranton, 2012. The conundrum between chemoautotrophic production and reductant and oxidant supply: a case study from the Cariaco Basin. Deep Sea Research I 61:1-10.

**Li XN,**GA Cutter, RC Thunell, E Tappa, WP Gilhooly III, TW Lyons, A Yrene,

MI Scranton, 2011.Particulate sulfur species in the water column of the Cariaco Basin.GeochimicaetCosmochimicaActa 75: 148-163.

**Li XN,**WP Gilhooly III, AL Zerkle, TW Lyons, J Farquhar, JWerne, MI Scranton, 2010. Stable sulfur isotopes in the water column of the Cariaco Basin.GeochimicaetCosmochimicaActa 74: 6764-6778.

Wakeham SG, C Turich, GT Taylor, A Podlaska, MI Scranton, **XNLi,**R Varela, Y Astor, 2010. Mid-chain methoxylated fatty acids within the chemocline of the Cariaco Basin: a chemoautotrophic source? Organic Geochemistry. 41: 498-512.

**Li XN,**GT Taylor, Y Astor, MI Scranton, 2008.Relationship of sulfur speciation to hydrographic conditions and chemoautotrophic production in the Cariaco Basin.Marine Chemistry.112: 53-64.

Percy D, **XN Li,**GT Taylor, Y Astor, MI Scranton, 2007.Controls on iron, manganese and intermediate oxidation state sulfur compounds in the Cariaco Basin. Marine Chemistry.111: 47-62.

Liu SM, **XNLi,**J Zhang, H Wei, JL Ren, GL Zhang, 2007. Nutrient dynamics in Jiaozhou Bay.Water Air Soil Pollut: Focus 7: 625–643 DOI 10.1007/s11267-007-9125-y.

**Li XN,**SM Liu, R Lv, J Zhang, LZou, 2004. The analysis of chlorophyll in the sediments of East China Sea and Yellow Sea. Journal of Ocean University of China 34: 603-610(in Chinese).

**Li XN,**WH Zhou, SM Liu, J Zhang, 2003. Sediment chlorophyll in HAB (Harmful Algal Bloom) area of East China Sea. Chinese Journal of Applied Ecology 14: 1102-1106 (in Chinese).

**Published Conference Proceedings**

Scranton MI, Y Astor, D Percy, **XN Li**, XJ Lin, GT Taylor, 2006.The biogeochemistry of the suboxic and anoxic zones in the Cariaco Basin.Gayana 70: 83-86.

**Book Chapters**

**Li XN.**Determination of sulfur species.In Astor Y, L Lorenzoni, MI Scranton eds. 2009.Handbook of Methods for the Analysis of Oceanographic Parameters at the CARIACO Time-series Station.<http://www.us-ocb.org/documents/CARIACO_Methods.pdf>

**Manuscripts Submitted and in Preparation**

**Li XN,** S Joshi, D.P. Jaisi.Phosphorus cycling: with the approach of phosphorus speciation and oxygen isotopic composition of phosphate. In preparation for Science.

**Li XN**, J Owens, B Sageman, M Hurtgen, S Severmann.Spatial trends of iron isotope reveal different iron enrichment mechanism during Oceanic Anoxic Event II in the Western Interior Seaway. In preparation for Geology.

**Li XN**, S Severmann. Post deposition iron diagenesis in the Black Sea: from the perspective of Fe isotope and iron speciation. In preparation for GeochimicaetCosmochimicaActa.

**Honors and Awards**

2011 Georgia Institute of Technology School of Earth and Atmospheric Sciences Research Frontiers Postdoctoral Fellowship($90,000, declined)

2010 Dissertation Invitation by NSF for Chemical Oceanography Symposium (DISCOXXII)

2009 Rutgers University Institute of Marine and Coastal Science PostdoctoralFellowship($60,000)

2008 University of South California Wrigley Institute GeoBiology Course($4,000 tuition waiver)

2007 ASLO Student Travel Award

2006-2009 Stony Brook Graduate Student Organization Travel Award

2004 Stony Brook University Fellowship ($3,000)

1998-2001 Yearly Scholarship for Outstanding Academic Performance at OceanUniversity of China ($1,000)

**Abstracts and Conference Presentations**

2013. Li XN, D Jaisi. Phosphorus cycling: with the approach of phosphorus speciation and oxygen isotope composition of phosphate. 5th Graduate Research Symposium Department of Plant & Soil Sciences, University of Delaware. Longwood Garden, PA, USA.

2011. **Li XN,** S Severmann.Iron postdepositiondiagenesis in the Black Sea sediment: evidence from iron isotopes and iron speciation. Gordon Research Conference, Chemical Oceanography. Proctor Academy in Andover, NH, United States.

2011.Scranton MI., AS Samodurov, S Konovalov, GT Taylor, **XN Li,** YAstor. The effect of intrusions of Caribbean water on the geochemistry of the Cariaco Basin.ASLO, San Juan, Puerto Rico, USA.

2011. Taylor, GT, A Podlaska, S Cernadas-Martin, XN Li, K Fanning, D Rueda, RC Thunell, R Varela, Y Astor. Processes driving temporal variations in the Cariaco Basin’s microbial populations.ASLO, San Juan, Puerto Rico, USA.

2010.**Li XN.** Sulfur biogeochemistry in the Cariaco Basin.Dissertation Symposium of Chemical Oceanography (DISCO) XXII, Honolulu, Hawaii, USA

2010. **Li XN,** S Severmann, J Owens, B Sageman.Hydrothermal contributions to Oceanic Anoxic Event 2?-evidence from trace metals.Goldschmidt, Knoxville, TN, USA.

2010. Scranton MI, Y Astor, **XN Li,** GT Taylor. Sulfur cycling at the CARIACO redox interface: conundrums and surprises. ASLO, Portland, OR, USA.

2010. Taylor GT, M Lopez-Gasca, A Podlaska, **XNLi,** M Muller-Karger, L Lorenzoni, D Rueda, K Fanning, R Thunell, R Varela, Y Astor. Temporal Variations in the Biogeochemistry of the Permanently Anoxic Cariaco Basin.ASLO, Portland, OR, USA.

2009. **Li XN,** G Cutter, RC Thunell, E Tappa, Y Astor, MI Scranton. Particulate sulfur species in the water column of the Cariaco Basin. Gordon Research Conference, Chemical Oceanography. Tilton School, NH, United States.

2009. Turich C, A Podlaska, **XN Li,** YAstor, R Varela, GT Taylor, MI Scranton, S Wakeham. Stable isotope probing of sulfur-oxidizing chemoautotrophic bacteria in the Cariaco Basin. ASLO, Nice, France.

2009. Taylor GT, A Podlaska, M Gasca, **XNLi**, MI Scranton. Quest for the chemoautotrophs dominating the Cariacoredoxcline: a multi-faceted campaign. ASLO, Nice, France.

2008. **Li XN,** WP Gilhooly, AZerkle, TW Lyons, J Farquhar, J Werne, MI Scranton. Fractionation of sulfur isotopes in the Cariaco Basin.AGU. San Francisco, USA.

2008. Scranton MI, **XN** Li, M Lopez-Gasca, A Podlaska, Y Astor, K Fanning, L Lorenzoni, GTTaylor. Observations of the Effect of non-steady state injections of oxygen into anoxic waters of the Cariaco Basin, Venezuela. AGU. San Francisco, USA.

2008. **Li XN,** WP Gilhooly, TW Lyons, G Cutter, L Cutter, MI Scranton. Biogeochemistry of sulfur cycling in the Carlaco Basin.Goldschmidt, Vancouver, Canada.

2008. Podlaska A, M Lopez-Gasca, **XNLi,** GT Taylor. Importance of sulfur intermediates in chemolithotrophic microbial production in anoxic Cariaco Basin. ASLO.Newfoundland Labrador, USA.

2008. **Li XN**, C Flagg, D Wang, R Weisberg, GT Taylor, MI Scranton. Temporal variability of oxidants and reductants supply to the redox interface in the Cariaco Basin and controls on chemoautotrophy.ASLO, Orlando, USA.

2008. Lopez-Gasca M, **XNLi, A**Podlaska, GT Taylor. Anaerobic thiosulfate and sulfur oxidation/disproportionation mediated by autotrophic bacteria in the Cariaco Basin’s redoxcline. ASLO, Orlando, USA.

2007. Scranton MI, GT Taylor, **XNLi,** R Weisberg, DP Wang, C Flagg, L Lorenzoni, Y Astor. Cross-shelf Processes as primary sources of oxidants and reductants to the suboxic zone in the Cariaco Basin. Joint IMBER/LOICZ Continental Margins Open Science Conference Shanghai , China.

2007. **Li XN**, GT Taylor, A Podlaska, Y Astor, MI Scranton. Sulfur Speciation in the Cariaco Basin: with a reference to chemoautotrophic production. Gordon Research Conference, Chemical Oceanography. Tilton School, NH, United States.

2007. **Li XN,** D Percy, Y Astor, GT Taylor, L Lorenzoni, MI Scranton. Sulfur speciation and metal cycling in the Cariaco Basin. ASLO, Santa Fe, NM.

2007. Podlaska A, **XN Li,** YXu, P Suarez, MI Scranton, GT Taylor. In pursuit of the dominant chemoautotrophs in the anoxic Cariaco Basin.ASLO, Santa Fe, NM.

2006. Taylor GT, X Lin, **XN Li,** A Christoserdov, MJ Rodriguez, S Epstein, A Podlaska, M Pangano, MI Scranton. Microbiogeochemical exploration of the Cariaco Basin’s redoxcline.Gordon Research Conference Microbiology. University of New England, USA.

2006. Scranton MI, Y Astor, D Percy, **XNLi,** XJ Lin, GT Taylor. The biogeochemistry of the suboxic and anoxic zones in the Cariaco Basin. Symposium on the oxygen minimum systems in the ocean: distribution, diversity and dynamics. Concepcion, Chile.

2003. **Li XN,** SM Liu, J Zhang. Nutrient flux at the sediment-water interface of East China Sea and Yellow Sea: in situ incubation vs diffusive flux calculated by pore water profiles. Annual meeting for *China Globec project*. Hang Zhou, China.

**Invited Talks**

2012. University of Delaware, DE, Plant and Soil Sciences. Host: Deb Jaisi

2011. Georgia Institute of Technology, GA, School of Earth and Atmospheric Sciences. Host: Martial Taillefert.

2011. Penn State University, PA, Department of Geosciences. Host: Matthew Fantle.

2010.Dissertation Symposium of Chemical Oceanography (DISCO) XXII, Honolulu, Hawaii. Host: Simone Metz

2009.University of Aarhus, Denmark, Department of Biological Sciences. Host: Bo Jorgensen.

**Research Experience**

**Research Assistant**

University of Delaware, Delaware Aug 2012-June 2013

* Measure concentrations of phosphorus speciation in the soils;
* Quantify isotope composition of oxygen in phosphate using isotope ratio mass spectrometer

**Postdoctoral Fellow**

Rutgers University, New Brunswick, New Jersey Sep 2009-August 2012

* Write macros to analyze concentration data of 39 elements;
* Supervised undergraduate and graduate students to original research project
* Quantified isotope composition of Fe and U using multi collector ICP MS
* Ran trace metal laboratory, wrote SOP and prepared for data reports

**Geobiology Research Fellow**

University of Southern California June-July 2008

* Studied carbon cycling in the earth history
* Analyzed biomarker *(amino acid, lipid)* with GC-MS

**Research Assistant**

Stony Brook UniversityJune2004-July 2009

* Developed MATLAB code to study the flux of reactants compared to the carbon fixation rate
* Quantified sulfur intermediates concentration, Fe and Mn concentration
* Applied isotope ratio monitoring of sulfur compounds

**Research Assistant**

Ocean University of China July 2002- June 2004

* Developed MATLAB codes to simulate pore water nutrient profiles and calculate benthic flux.
* Collected sediment core samples, prepared for pore water samples and incubated sediment core onboard
* Measured nutrients concentration using Nutrient Automatic Analyzer

**Teaching Experience**

 2011 Undergraduate mentor (Carlos Carvajal, Rutgers University)

 2010 Guest Lecturer, Introduction to Oceanography (Rutgers University)

 2007 Teaching practicum,Coastal Oceanography (Stony Brook University)

 2004Lab instructor, Introductory Chemistry 133/134 Lab I/II (Stony Brook University)

 2003Undergraduate mentor (Xiaohong Qi, Ocean University of China)

**Cruise Experience**

2005-2009 Six Cariaco microbio-geochemical cruises R/V *Hermano Ginés*

2003-2004 Participation in four one-month cruises aboard R/V *DongFangHong II*

**Service**

Manuscript reviewer for *GeochimicaetCosmochimicaActa, Limnology and Oceanography, Paleoceanography*

Organizer of the Joint Princeton-Rutgers Seminar series, 2009-2010

Volunteer for National Bay Scallop Bowl, 2007; 2011

Representative of Graduate Student Club of SoMAS, Stony Brook, 2007

**Professional Affiliations**

Sigma Xi; American Geophysical Union; American Society of Limnology and Oceanography; *The Geochemical Society;* American Association for the Advancement of Science