

Curriculum Vitae

Dr. Rudolf Jaffé

*Florida International University
Southeast Environmental Research Center
and
Department of Chemistry & Biochemistry
OE-148, University Park Campus, Miami, Florida 33199
Telephone: (305) 348-2456 FAX: (305) 348-4096 E-mail: jaffer@fiu.edu*

Education

- 1985-86** Université Louis Pasteur de Strasbourg, France. Post-Doctoral position under the direction of Dr. Pierre Albrecht in organic geochemistry.
- 1981-85** Indiana University, Indiana, U.S.A. Ph.D. in Environmental/Analytical Chemistry under the direction of Dr. Ronald A. Hites. Major in Analytical Chemistry, minor in Environmental Sciences.
- 1975-80** Universidad Simón Bolívar, Caracas, Venezuela. Licenciatura en Química (five year B.S. program in Chemistry). Thesis research in inorganic chemistry.

Work Experience

- 2002-pr.** Florida International University, **Director** Southeast Environmental Research Center & **Professor** Department of Chemistry
- 2000-02** Florida International University, **Associate Director** Southeast Environmental Research Center & **Professor** Department of Chemistry.
- 1997-00** Florida International University, **Associate Director** Southeast Environmental Research Center & **Associate Professor** Department of Chemistry.
- 1992-97** Florida International University, Drinking Water Research Center & Department of Chemistry, **Associate Professor**.
- 1986-92** Universidad Simón Bolívar, Caracas, Venezuela Department of Chemistry, Assistant Professor 1986-1990; Associate (tenured) Professor 1990-1992.
- 1987** Woods Hole Oceanographic Institution, Woods Hole, USA. Visiting Scientist, summer 1987, Chemistry Department.
- 1980-81** Universidad Simón Bolívar, Caracas, Venezuela. Chemistry Department, Instructor of General Chemistry and Analytical Chemistry.

1978-80 Universidad Simón Bolívar, Caracas, Venezuela Chemistry Department,
Teaching Assistant of General Chemistry and Analytical Chemistry.

General Research Interests:

- ***Environmental Geochemistry & Aquatic biogeochemistry/Organic geochemistry:***
 - Application of molecular markers and compound-specific stable isotopes to the investigation of biogeochemical/ecological processes in carbon cycling in aquatic ecosystems.
 - Biogeochemistry of natural dissolved organic matter (DOM and DON) in aquatic environments: Molecular characterization and dynamics.
 - Dissolved Organic Matter – Metal interactions
 - Geochemistry of riverine environments in South America with emphasis on the Guayana Shield region.
 - Coastal pollution with emphasis on the Caribbean basin.

Proposals funded since 2002:

1. Florida Coastal Everglades LTER. **NSF**. Childers, Jaffé, Boyer, Trexler and Fourqurean - \$4.2 million/6yrs.
2. The Southern Everglades integrated monitoring and science work plan. **SFWMD**; Childers and Jaffé; \$400,378/1yr.
3. Organic contaminant residue concentrations and their potential biological effects in Everglades National Park: Initial hazard assessment. **ENP-DOI**; Rand, Gardinali, Jaffé and Cai; \$682,000/3yrs.
4. Environmental Science Research Internship Program (ESRIP) for undergraduate students at Florida International University. **NOAA** Education Partnership Program with Minority Serving Institutions: Environmental Entrepreneurship Program. Heinen and Jaffé. \$245,000/3yr.
5. The seagrass history of Florida Bay reconstructed from integrating micro-paleontological and geochemical proxies. **NSF**. Collins, Jaffé, Anderson and Fourqurean. \$135.188/1yr.
6. Biological availability of organic nitrogen in Florida Bay. **South Florida Water Management District**. Boyer and Jaffé. \$ 48,000/0.5 yr.
7. Dissolved organic nitrogen in the Florida Coastal Everglades: Molecular biogeochemistry, bioavailability and potential contribution to the microbial loop. **NOAA**, Jaffé, Boyer and Childers. \$320,000/2yr.

8. Seagrass derived dissolved organic matter in Florida Bay: Molecular biogeochemistry and microbial bioavailability. **NOAA**. Jaffé, Boyer, & Fourqurean. \$148,000/2yr.
9. Molecular characterization of dissolved organic matter (DOM) in aquatic environments: biogeochemical importance and analytical approaches for the LTER program: Workshop. **NSF LTER Network Office**; with D. McKnight. \$8,000/1yr.
10. Documenting the importance of water flow to Everglades' landscape structure and sediment transport in Everglades National Park. **ENP-DOI**. D. Childers, Jaffé and others \$140,000/1yr.
11. Florida Coastal Everglades LTER – supplement equipment grant. **NSF**. Childers, Jaffé, Boyer, Fourqurean and Trexler; \$100,000/4yr.
12. Understanding *Cladium jamaicense* dynamics over the last century in ENP using simulation modeling and paleoecological data. **ENP-DOI**. Saunders, Childers, Anderson, Lynch and Jaffé. \$107,422/3yrs.
13. Restoration ecology of the greater Everglades ecosystem. Federal Appropriations Funds – **EPA Science & Technology Program**. Scinto, Richards and Jaffé. \$194,000.
14. Characterization of dissolved organic matter in headwater streams from six different North American biomes. NSF – supplement to FCE-LTER. \$12,500.
15. Water quality and hydrology-based biogeochemical assessment of the Cuyuni River Basin, Eastern Venezuela. **Cisneros Foundation**. Jaffé and Briceño. \$150,000/3yrs.
16. Florida Coastal Everglades LTER. **NSF**. Gaiser, Jaffé, Price, and Heithouse - \$4.92 million/6yrs.
17. Origin, fate and transport of anthropogenic materials in Antigua and Barbuda: Nutrients, trace metals and trace organics. Sub-contract through University of Miami, RSMAS. Jaffé and Gardinali. \$620,000/4+ yrs. New (funding granted for FY 0608 \$107,000).
18. Assessment of Natural Water Resources and Watershed Conditions for Biscayne National Park. DOI-NPS. Jaffé and Harlem - \$84,428/1 yr.
19. Dissolved Organic Matter in the Florida Coastal Everglades: Workshop. Jaffé - \$25,000/1 yr. **South Florida Water Management District.**
20. Collaborative Research: Linking the Chemical Properties of Dissolved Organic Matter with Coral Microbial Populations in Reef Ecosystems. With Shank (UT) and Perdue (Georgia Tech), **NSF** – pending.
21. Collaborative Research: Dissolved Organic Matter (DOM) Quality: Linking Sources and Molecular Composition to Photoreactivity and Bioavailability. With Cooper (UCI), **NSF** – pending.

Publications:

1984-1991

1. **R. Jaffé** and R. Hites (1984) Environmental impact of two, adjacent, hazardous waste disposal sites on the Niagara River watershed. *Journal of Great Lakes Research* 10: 440-448.
2. **R. Jaffé** and R. Hites (1985) Identification of new fluorinated biphenyls in the Niagara River - Lake Ontario area. *Environmental Science and Technology* 19: 736-740.
3. **R. Jaffé**, B. Eitzer, E. Stemmler and R. Hites (1985) Anthropogenic organic compounds in sedentary fish from Lakes Superior and Huron tributaries. *Journal of Great Lakes Research* 11: 156-162.
4. **R. Jaffé** and R. Hites (1986) Anthropogenic polyhalogenated organic compounds in non migratory fish from the Niagara River area and tributaries to Lake Ontario. *Journal of Great Lakes Research* 12: 63-71.
5. **R. Jaffé** and R. Hites (1986) Fate of hazardous waste derived organic compounds in Lake Ontario. *Environmental Science and Technology* 20: 167-174.
6. **R. Jaffé**, P. Albrecht and J. Oudin (1988) Carboxylic acids as indicators of oil migration - I: Occurrence and geochemical significance of C-22 diastereomers of the (17 β ,21 β)C-30 hopanoic acid in geological samples. *Organic Geochemistry* 13: 483-488.
7. **R. Jaffé**, P. Albrecht and J. Oudin (1988) Carboxylic acids as indicators of oil migration - II: Case of the Mahakam Delta, Indonesia. *Geochimica et Cosmochimica Acta* 52: 2599-2607.
8. **R. Jaffé** and P. Gardinali (1990) Generation and maturation of carboxylic acids in ancient sediments from the Maracaibo Basin, Venezuela. *Organic Geochemistry* 16: 211-218.
9. **R. Jaffé** (1991) Fate of hydrophobic organic pollutants in the aquatic environment: A review. *Environmental Pollution* 69: 237-257.
10. **R. Jaffé** and G. A. Wolff (1991) A preliminary investigation of dissolved and particle associated lipids in a "blackwater" river, Venezuela. *Organic Geochemistry: Applications in Energy and the Natural Environment*, D. Manning (Editor), Manchester University Press, pp.518.

1992

11. **R. Jaffé**, C.A. Fernandez and J. Alvarado (1992) Analyses of heavy metals in octocorals by microwave acid digestion and electrothermal atomic absorption spectrometry, *Talanta* 39: 113-117.
12. **R. Jaffé**, P. Gardinali and G. Wolff (1992) Evolution of carboxylic acids and alkanes in rocks from the Maracaibo Basin, Venezuela. *Organic Geochemistry* 18:195-201.
13. Eckardt C., Pearce G., Keely B., Kowalewska G., **Jaffé R.** and Maxwell J. (1992) A widespread chlorophyll transformation pathway in the aquatic environment, *Advances in Organic Geochemistry 1991*, *Organic Geochemistry* 19: 217-227.

1993

14. Jaffé K. et al. (1993) Chemical ecology of the palm weevil *Rhynchophorus palmarum* (L.) (Coleoptera: Curculionidae): Attraction to host plants and to a male-produced aggregation pheromone. *Journal of Chemical Ecology* 19 (8): 1703-1720.

15. **Jaffé R.**, Cabrera A., Hausmann K. and Carvajal H. (1993) On the origin and fate of n-alkane-2-ones in freshwater environments. *Organic Geochemistry: Applications in Energy and the Natural Environment*, pp. 356-359.
16. **Jaffé R.**, Benitez F. and Bojus S. (1993) Assessment of eutrophication chronology via sediment core analyses: Case of Lake Valencia, Venezuela. *Fresenius Environmental Bulletin* 2 (10): 602-607.
17. **Jaffé R.** and M. Gallardo (1993) Application of carboxylic acids biomarkers as indicators of biodegradation and migration of crude oils from the Maracaibo Basin, Venezuela. *Organic Geochemistry* 20: 973-984.
18. **Jaffé R.**, Carero H., Cabrera A and Alvarado J. (1993) Organic compounds and heavy metals in the atmosphere of the city of Caracas, Venezuela - 1: Atmospheric particles. *Air, Water & Soil Pollution* 71: 293-313.
19. **Jaffé R.**, Cabrera A., Carero H and Alvarado J. (1993) Organic compounds and heavy metals in the atmosphere of the city of Caracas, Venezuela - 2: Atmospheric deposition. *Air, Water & Soil Pollution* 71: 315-329.

1994

20. Furton K. G., Huang C. W., **Jaffé R.** and Sicre M. A. (1994) High temperature supercritical fluid extraction of hydrocarbons from geological samples and comparison to soxhlet extraction. *Journal of High Resolution Chromatography* 17: 1-3.
21. Alli A., **Jaffé R.** and Jones R. (1994) Analysis of organomercurials in sediments by capillary column gas chromatography with atomic fluorescence detection. *Journal of High Resolution Chromatography* 17: 745-748.

1995

22. **Jaffé R.** and Hausmann K. (1995) Origin and fate of arborinone in sediments of a highly productive lake. *Organic Geochemistry* 22: 231-235.
23. **Jaffé R.**, Espiño R., Benitez F. and Gardinali P. R. (1995) Pollution Chronology of Lake Valencia, Venezuela. *Bulletin of Environmental Contamination and Toxicology* 54: 930-936.
24. Furton K. G., Chen L. and **Jaffé R.** (1995) Rapid determination of uranium on solid matrices by synergistic in-situ chelation supercritical fluid extraction and UV absorption spectroscopy. *Analytica Chimica Acta* 304: 203-208.
25. Jones R. D., Jacobson M. E., **Jaffé R.**, West-Thomas J., Arfson C. and Alli A. (1995) Method development and sample processing of water, soil and tissue for the analysis of total and organic mercury by cold vapor atomic fluorescence spectrometry. *Water, Air and Soil Pollution* 80: 1285-1294.
26. **Jaffé R.** and Elismé T. (1995) Molecular evidence for anaerobic micro-environments in rain forest soils, *Organic Geochemistry: Developments & Applications in Energy, Climate, Environment and Human History*, Grimalt & Dorronsoro Eds., Itxaso Estrones, San Sebastian, 1995, pp. 690.
27. **Jaffé R.**, Chen L., Huang C.W., Hajje N., Furton K.G. and Sicre M.A (1995) An investigation on hydrocarbon speciation in ancient sediments by stepwise supercritical carbon dioxide extraction at various temperatures: Preliminary results, *Organic Geochemistry: Developments & Applications in Energy, Climate, Environment and Human History*, Grimalt & Dorronsoro Eds., Itxaso Estrones, San Sebastian, 1995, pp. 796.

28. Harradine P.J., Peakman T.M., Eckardt C.B., **Jaffé R.** and Maxwell J.R. (1995) Pyrophaeophorbide a esterified to a C₃₂ Hopanol: A novel Cyanobacterial marker, Harradine P. et al., *Organic Geochemistry: Developments & Applications in Energy, Climate, Environment and Human History*, Grimalt & Dorronsoro Eds., Itxaso Estrones, San Sebastian, 1995, pp. 921.
29. **Jaffé R.**, Wolff G., Cabrera A. and Carvajal-Chitty (1995) Biogeochemistry of lipids in rivers from the Orinoco Basin. *Geochimica et Cosmochimica Acta* 59: 4507-4522.
30. **Jaffé R.**, Leal I., Alvarado J., Gardinali P. and Sericano J. (1995) Pollution effects of the Tuy River on the central Venezuelan coast: Anthropogenic organic compounds and heavy metals in *Tivela macroidea*. *Marine Pollution Bulletin* 30: 820-825.

1996

31. Fuentes H. R., **Jaffé R.**, Tsihrintzis V. A. and Boje D. (1996) Experimental simulation of weathering and dispersion of a crude oil in coastal waters. *Journal of Marine Environmental Engineering* 3: 15-30.
32. **Jaffé R.**, Elismé T. and Cabrera A.C. (1996) Organic geochemistry of seasonally flooded rainforest soils: Molecular composition and early diagenesis of lipid components. *Organic Geochemistry* 25: 9-17.
33. Cai Y., **Jaffé R.**, Alli A. and Jones R. (1996) Determination of organic mercury compounds in natural waters by solid phase extraction and capillary gas chromatography with atomic fluorescence detection. *Analytica Chimica Acta* 334: 251-259.
34. **Jaffé R.**, Cabrera A., Hajje N. and Carvajal-Chitty H. (1996) Organic biogeochemistry of a hypereutrophic tropical freshwater lake - Part 1: Particle associated and dissolved lipids. *Organic Geochemistry* 25: 227-240.
35. Cai Y., **Jaffé R.** and Jones R. (1996) On the occurrence of ethylmercury in the Florida Everglades. *Environmental Science and Technology* 31: 302-305.

1997

36. **Jaffé R.**, Diaz D., Hajje N., Chen L., Eckardt C. and Furton K.G. (1997) Hydrocarbon speciation in ancient sediments studied by stepwise supercritical carbon dioxide extraction. *Organic Geochemistry* 26: 59-65.
37. **Jaffé R.**, Cai Y., West-Thomas J., Morales M.B. and Jones R.D. (1997) On the occurrence of methyl mercury in Lake Valencia, Venezuela. *Bulletin of Environmental Contamination and Toxicology* 59: 99-105.
38. Cai Y., Tang G., **Jaffé R.** and Jones R.D. (1997) Evaluation of some isolation methods for organomercury determination in soil and fish samples by capillary gas chromatography - atomic fluorescence spectrometry. *International Journal of Environmental Analytical Chemistry*, 68: 331-345.
39. Ferreira O.G., Fuentes H.R., **Jaffé R.** and Furton K.G. (1997) Supercritical fluid extraction of PAHs from aquifer materials. *Hazardous and Industrial Wastes* 29: 273-281.
40. **Jaffé R.**, Gong Y. and Furton K.G. (1997) Temperature effects on supercritical carbon dioxide extractions of hydrocarbons from geological samples. *Journal of High Resolution Chromatography*, 20: 586-590.
41. Lang Q., **Jaffé R.**, Rogge W. and Zhang Q. (1997) Analysis and evaluation of atmospheric organic pollution. III. Monitoring and analyses of atmospheric organic pollution in the Miami area, USA. *Rock and Mineral Analysis*, 16(2): 118-127 (in Chinese).

1998

42. Alvarado J. and **Jaffé R.** (1998) Tube in flame atomization: A way of enhancing detection limits in flame atomic absorption spectrometry. *Journal of Analytical Atomic Spectrometry*, 13: 37-40.
43. Cai Y., Monsalud S., Furton K.G., **Jaffé R.** and Jones R. (1998) Determination of methylmercury in fish and aqueous samples using solid-phase microextraction followed by gas chromatography-atomic fluorescence spectrometry. *Applied Organometallic Chemistry*, 12: 565-569.
44. **Jaffé R.**, Leal I., Alvarado J., Gardinali P.R. and Sericano J. (1998) Baseline study on the levels of organic pollutants and heavy metals in bivalves of Morrocoy National Park, Venezuela. *Marine Pollution Bulletin*, 36: 925-929.
45. Alvarado J. and **Jaffé R.** (1998) Determination of lead by atomic absorption spectrometry using tube in flame atomization and solid sampling. *Journal of Analytical Atomic Spectrometry*, 13: 1297-1300.

1999

46. Cai Y., **Jaffé R.** and Jones OR. (1999) Interaction between dissolved organic carbon and mercury species in surface waters of the Florida Everglades. *Applied Geochemistry*, 14: 395-407.
47. Furton K.G., Chen L., and **Jaffé R.** (1999) Relative recoveries of hydrocarbons from geological samples using high temperature supercritical fluid extractions: Contributions from thermal desorption. *Journal of High Resolution Chromatography*, 22: 623-627.

2000

48. **Jaffé R.**, Diaz D., Furton K.G. and Lafarge E. (2000) High temperature supercritical carbon dioxide extractions of geological samples: Trapped vs. pyrolytic hydrocarbons. *Applied Geochemistry*, 15: 79-89.
49. Simoneit B.R.T., Rogge W., Lang Q. and **Jaffé R.** (2000) Molecular characterization of woodsmoke from campfire burning of pine wood (*Pinus elliottii*). *Chemosphere: Global Change Science*, 2: 107-122.
50. Shen L. and **Jaffé R.** (2000) Interactions between dissolved petroleum hydrocarbons and pure and humic acid coated mineral surfaces in artificial seawater. *Marine Environmental Research* 49: 217-231.
51. Cai Y., Monsalud S., **Jaffé R.** and Jones R.D. (2000) Gas chromatographic determination of organomercury following aqueous derivatization with NaBEt_4 and NaBPh_4 : A comparative study of GC/AFS, GC/AES and GC/MS. *Journal of Chromatography*, 876: 147-155.

2001

52. Lu X. and **Jaffé R.** (2001) Interaction between Hg(II) and natural dissolved organic matter: A fluorescence spectroscopy based study. *Water Research*, **35**, 1793-1803.
53. Hernandez M.E., Mead R., Peralba M.C. and **Jaffé R.** (2001) Origin and transport of n-alkane-2-ones in a sub-tropical estuary: Potential biomarkers for seagrass-derived organic matter. *Organic Geochemistry*, 32: 21-32.
54. **Jaffé R.**, Hernandez M.E., Mead R., Peralba M.C. and DiGuida O.A. (2001) Origin and transport of sedimentary organic matter in two sub-tropical estuaries: A comparative, biomarker-based study. *Organic Geochemistry*, **32**, 507-526.

2002

55. Lang Q., Zhang Q. and **Jaffé R.** (2002) A temporal variability study of airborne organic compounds in the Miami area, USA: Suspended particles and wet/dry deposition. *Chemosphere*, 47: 427-441.

2003

56. **Jaffé R.**, Gardinali P.R., Cai Y., Sudburry A., Fernandez A., and Hay B. (2003) Organic compounds and trace metals of anthropogenic origin in sediments from Montego Bay, Jamaica: Assessment of sources and distribution pathways. *Environmental Pollution*, 123: 291-299.
57. Lu X.Q., Maie N., Hanna J.V., Childers D. and **R. Jaffé** (2003) Molecular characterization of dissolved organic matter in freshwater wetlands of the Florida Everglades. *Water Research*, 37: 2599-2606.

2004

58. **Jaffé R.**, Boyer J.N., Lu X., Maie N., Yang C., Scully N. and Mock S. (2004) Sources characterization of dissolved organic matter in a mangrove-dominated estuary by fluorescence analysis. *Marine Chemistry* 84: 195-210.
59. Jones V., Ruddell C.J., Wainwright G., Rees H.H., **Jaffé R.**, Wolff G.A. (2004) Application of one-dimensional and two-dimensional gel electrophoresis on aquatic samples: A tool for the characterization of dissolved organic nitrogen. *Marine Chemistry* 85: 63-73.
60. Riviera-Monroy V., et al. (2004). The need to develop long term ecological research in the Caribbean region: A biogeochemical research agenda for sustainable coastal managements plans. *Biosciences* 54(9):843-856.
61. Scully N.M., Maie N., Dailey S., Boyer J.N., Jones R.D. and **Jaffé R.** (2004). Photochemical and microbial transformation of plant derived dissolved organic matter in the Florida Everglades. *Limnology & Oceanography* 49(5):1667-1678.
62. Mead R.N., Xu Y., Chong J. and **Jaffé R.** (2004). Sedimentary organic matter source assessment in a sub-tropical wetland and estuarine environment using the molecular distribution and carbon isotopic composition of n-alkanes. *Organic Geochemistry* 36: 363-370.

2005

63. Maie, N., C.-Y. Yang, T. Miyoshi, K. Parish, and R. Jaffé (2005). Chemical characteristics of dissolved organic matter in an oligotrophic subtropical wetland/estuarine ecosystem. *Limnology & Oceanography* 50(1): 23-35.
64. Jones V., Collins M.J., Penkman K.E.H., **Jaffé R.** and Wolff G.A. (2005). An assessment of the microbial contribution to aquatic dissolved organic nitrogen using amino acid enantiomeric ratios. *Organic Geochemistry* 36: 1099-1107.
65. Neto R., Mead R.N., Louda W. and **Jaffé R.** (2005). Organic biogeochemistry of detrital flocculent material (floc) in a subtropical, coastal wetland. *Biogeochemistry* 77: 283-304.

2006

66. Yanes C., Alvarez H. and **Jaffé R.** (2006). Preliminary observations on the geochemistry of a tropical lake (Lake Leopoldo) developed on a pseudo-karst topography within the Roraima Group, Guayana Shield, Venezuela. *Applied Geochemistry* 21: 870-886.
67. Maie N., **Jaffé R.**, Miyoshi T. and Childers D. (2006). Quantitative and qualitative aspects of dissolved organic carbon leached from plants in an oligotrophic wetland. *Biogeochemistry* 78: 285-314.

68. Xu Y., Wachnicka A., Gaiser E.E. and **Jaffé R.** (2006). Occurrence of C₂₅ highly branched isoprenoids in Florida Bay: Paleoenvironmental indicators of diatom-derived organic matter inputs. *Organic Geochemistry* 37:847-859.
69. **Jaffé R.**, Rushdi A.I., Medeiros P.M. and Simoneit B.R.T. (2006). Natural product biomarkers as indicators of sources and transport of sedimentary lipids in a subtropical river. *Chemosphere* 64: 1870-1884.
70. Saunders C., Gao M., Lynch J., **Jaffé R.** & Childers D. (2006). Using soil profiles of seeds and molecular markers as proxies for sawgrass and wet prairie slough vegetation in Shark Slough, Everglades National Park. *Hydrobiologia* 569: 475-492.
71. Xu Y. Mead R.N. and **Jaffé R.** (2006). A molecular marker-based assessment of sedimentary organic matter sources and distributions in Florida Bay. *Hydrobiologia* 569: 179-192.
72. Hajje N. and **Jaffé R.** (2006). Lipids associated with peat humic fractions from Everglades National Park (USA). *Hydrobiologia*. 569: 99-112.
73. Maie N., Boyer J.N. Yang C. and **Jaffé R.** (2006). Spatial, geomorphological and seasonal variability of CDOM in estuaries of the Florida Coastal Everglades. *Hydrobiologia* 569: 135-150.
74. Jones V., Parish K., Thompson A., Wolff G.A., Maie N and **Jaffé R.** (2006). Molecular characterization of proteinaceous material in the Florida coastal Everglades. *Hydrobiologia* 569: 129-133.
75. Maie N., Parish K., Watanabe A., Knicker H., Benner R., Abe T., Kaiser K. and **Jaffé R.** (2006). Chemical characteristics of dissolved organic nitrogen in an oligotrophic subtropical coastal ecosystem. *Geochimica et Cosmochimica Acta* 70: 4491-4506.

2007

76. Maie N., Scully N.M., Pisani O. and **Jaffé R.** (2007). Composition of a protein-like fluorophore of dissolved organic matter in coastal wetland and estuarine ecosystems. *Water Research* 41: 563-570.
77. Xu Y., C. Holmes and **R. Jaffé** (2007). A lipid biomarker record of environmental change in Florida Bay over the past 150 years. *Estuarine, Coastal & Shelf Sci.* 73: 201-210.
78. Xu Y., Simoneit B.R.T. and **Jaffé R.** (2007). Occurrence of long-chain mid-chain alkenols, diols, keto-ols and alkanols in a sediment core from a hypereutrophic, tropical, freshwater lake. *Organic Geochemistry* 38:870-883.
79. Xu Y. and **Jaffé R.** (2007). Lipid biomarkers in suspended particulates from a subtropical estuary: Assessment of seasonal changes in sources and transport of organic matter. *Marine Environmental Research* 64:666-678.
80. Fernandez A., Singh A., and **Jaffé R.** (2007). A literature review of trace metals and organic compounds of anthropogenic origin in the Wider Caribbean region. *Mar. Poll. Bull.* 54:1681-1691.
81. Gao M., Simoneit B.R.T. and **Jaffé R.** (2007). Occurrence and distribution of botryococanes in the Florida Everglades. *Chemosphere* 70:224-236.
82. Xu Y. and **Jaffé R.** (2007). Biomarker-based paleo-record of environmental change for a eutrophic, tropical freshwater lake, Lake Valencia, Venezuela. *Journal of Paleolimnology* 40: 179-194 / DOI 10.1007/s10933-007-9150-x.

2008

83. Tzortziou M., Neale P.J., Osburn C.L., Megonigal P.J., **Jaffé R.** and Maie N. (2008). Tidal marshes as a source of colored dissolved organic matter in the Chesapeake Bay. *Limnology & Oceanography* 53: 148-159.
84. Maie N., Pisani O. and **Jaffé R.** (2008). Mangrove tannins in aquatic ecosystems: their fate and possible role in dissolved organic nitrogen cycling. *Limnology & Oceanography* 53: 160-171.
85. Gonsior M., Peake B.M., Cooper W.J., **Jaffé R.**, Young H., Kahn A.E. and Kowalczyk P. (2008). Spectral characterization of chromophobic dissolved organic matter (CDOM) in a fjord (Doubtful Sound, New Zealand). *Aquatic Sciences*. DOI 10.1007/s00027-008-8067-4.
86. Yamashita Y., **Jaffé R.**, Maie N., and Tanoue E. (2008). Assessment of the dynamics of fluorescent dissolved organic matter in coastal environments by EEM-PARAFAC. *Limnology and Oceanography* 53: 1900-1908.
87. Briceño H., Mora A. and **Jaffé R.** (2008). Limnologia. In: RAP 49: Evaluacion Rapida de la Biodiversidad de los Ecosistemas Acuaticos de la Cuenca Alta del Rio Paragua, Estado Bolivar, Venezuela, J.C. Senaris, C.A. Lasso and A.L. Flores (Editors). Conservation International, Arlington, Virginia, pp. 80-96.
88. Xu Y., **Jaffé R.** and Simoneit B.R.T. (2008). Oxygenated *spiro*-arbores in sediments of a tropical, hypereutrophic, freshwater lake. *Organic Geochemistry* 39:1400-1404.
89. Yamashita Y. and **Jaffé R.** (2008). Characterizing the Interactions between Trace Metals and Dissolved Organic Matter Using Excitation-Emission Matrix and Parallel Factor Analysis. *Environ. Sci. & Technol.* 42:7374-7379.

In press

90. **Jaffé R.**, McKnight D., Maie N., Cory R., McDowell W.H., Campbell J.L (2008). Spatial and temporal variations in DOM composition in ecosystems: The importance of long-term monitoring of optical properties. *Journal of Geophysical Research - Biogeosciences*. **In press.**
91. Duque-Botero F., Maurrasse F.J.M-R, Hickey-Vargas, Melinte M., **Jaffé R.**, and Lopez-Oliva J.G. (2008). Microspheroids accumulation and geochemistry of an anoxic basin of the Cenomanian/Turonian: The record of the Indidura Formation, NE Mexico. In "Geologic Problem Solving with Microfossils", Special Publication of Cretaceous Research. Waszczak and T. D. Demchuk, Editors. **In press.**
92. Dittmar T., Koch B. and **Jaffé R.** (2008). Tools for studying biogeochemical connectivity among tropical coastal ecosystems. In: Ecological interactions among tropical coastal ecosystems. Editor: Ivan Nagelkerken. **In press.**
93. Simoneit B.R.T., Xu Y., Neto R.R., Cloutier J. and **Jaffé R.** (2008). Photochemical alteration of 3-oxy-triterpenoids: Implications for the origin of des-A-triterpenoids in aquatic sediments and soils. *Chemosphere*. **In press.**
94. Balcarczyk K., Jones Jr. J.B., **Jaffé R.** and Maie N. (2008). Dissolved organic matter bioavailability and composition in streams draining catchments with discontinuous permafrost. *Biogeochemistry*. **In press.**

Submitted

95. Xu Y. and **Jaffé R.** (2008). Geochemical record of anthropogenic impacts on Lake Valencia, Venezuela. *Applied Geochemistry*. **Submitted.**

96. Williams. C.J., **Jaffé R.**, Anderson W.T., and Jochem F.J. (2008). Importance of seagrass to heterotrophic bacteria in a subtropical estuary (Florida Bay). *Estuaries and Coasts*. **Submitted**.
97. Boyer J.N., Dailey S.K., Maie N. and **Jaffé R.** (2008). Physical and microbial processing of dissolved organic nitrogen (DON) in the Florida Coastal Everglades, USA. *Hydrobiologia*. **Submitted**.
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- Hydrology and geochemistry of the Cuyuni River basin, Venezuela: Influence of illegal gold mining and lithology on water quality and material fluxes. Briceño and Jaffé. For *Applied Geochemistry*.
- Influences of lithology, geology and land cover on water quality of rivers in the Guyana Shield, Venezuela. Briceño and Jaffé. For *Aquatic Sciences*.
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- Paleolimnological study of vegetation cover change to assess historical variations in hydroperiod in freshwater wetlands of the Everglades: A molecular marker approach. Gao, Saunders and Jaffé. For *Limnology and Oceanography*.
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Presentations and seminars: >200 (available upon request)

Principal collaborators:

N. Maie (KU, Japan); A. Thompson & G. Wolff (Liverpool); B. Simoneit (OSU), R. Benner (UCS), H. Knicker (Munich), T. Myioshi & A. Watanabe (Japan); C. Yanez (Venezuela); W.J. Cooper (UCI); W. Cooper & T. Dittmar (FSU); D. McKnight (UC); W. Louda (FAU); B. Koeppl (UGA); W. Dodds (KSU); J. Ortiz (UPR); J. Jones (UAF); S. Ziegler (MUN); L. McCallister (VCU).

Advisors:

Ph.D.: Dr. Ronald Hites (Indiana University – Department of Chemistry/School of Public & Environmental Affairs)

Postdoctoral Advisor: Dr. Pierre Albrecht (Université Louis Pasteur – Strasbourg, France)

Awards:

- 1981-1985 Full graduate scholarship CONICIT (Venezuelan Government)
- 1985-1986 CNRS Post Doctoral fellowship (Strasbourg – France)
- Summer 1987 Visiting Scientist, WHOI
- 2006 Florida International University Excellence in Research Award

Synergistic Activities:

- Associate Editor, Applied Geochemistry (1997-pres.)
- Chair (w/ McKnight) of LTER-sponsored DOM workshop; Miami, Fall 2004.
- Member of the Board – Association of Marine Laboratories of the Caribbean – AMLC.
- Co-PI, FCE-LTER (2000 – 2012)
- Session Chair SS04, ASLO 2007 Santa Fe
- Chair of DOM in the Everglades Workshop 2008

Professional Memberships:

- American Society of Limnology and Oceanography
- European Association of Organic Geochemistry
- International Association of Geochemistry
- Association of Marine Laboratories of the Caribbean

Personal Information:

- Citizenship: United States of America
- Born: Caracas, Venezuela; Nov. 10/1956
- Marital status: Married; two sons.
- Ethnic background: Hispanic
- Languages: Fluent in English, Spanish, German