CURRICULUM VITAE

Professor **Isai T. URASA, Ph.D.**
Professor Emeritus
Department of Chemistry & Biochemistry
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EDUCATION

Ph.D., Analytical Chemistry, 1977, Colorado State University
M.S., Analytical Chemistry, 1972, State University of New York, Buffalo
B.S., Chemistry and Mathematics, 1970, Hampton Institute (Hampton University)

POSITIONS HELD

2022 – Present	Retired - Professor Emeritus, Department of Chemistry & Biochemistry, Hampton University.
2018 - 2022	Professor of Chemistry, Department of Chemistry & Biochemistry, Hampton University.
1989 – 2017	Professor of Chemistry and Chairman, Department of Chemistry, Hampton University.
1983 – 1988:	Associate Professor of Chemistry and Chairman, Hampton University.
1980 –1983:	Assistant Professor of Chemistry

OTHER (Special) APPOINTMENTS

September 1, 2000 - February 28, 2001:	Higher Education Specialist, Education for Development and Democracy Initiative, U.S. Agency for International Development (AAAS Science Scholar in Higher Education Program)
March 1, 2001 - August 31, 2001:	Water Team, Global Environment Center, USAID (AAAS Science Scholar Program)

PROFESSIONAL AWARDS

- American Association for the Advancement of Science (AAAS) Fellow, Science Scholar, 2000-2001
- Recipient, Edward L. Hamm, Sr. Distinguished Teaching Award, Hampton University, 1996.

- Recipient, The Outstanding Faculty Award, State Council of Higher Education for Virginia, 1991.

PROFESSIONAL AFFILIATIONS AND COMMITTEE ACTIVITY

- Member, Chesapeake Bay Board, York County, Virginia, 2023 – Present
- Member, Wetlands Board, York County, Virginia, 2024 - Present
- Member, Committee on Project SEED, American Chemical Society, 2022 – Present.
- Member, International Activities Committee, American Chemical Society, 1991-2000, 2012 – 2022.
- Member, Committee on Minority Affairs, American Chemical Society, 2000-2010
- Member, Advisory Committee, National Science Foundation Center for Workshops in the Chemical Sciences, 2002 – 2008.
- Member, Project Advisory Committee, American Water Works Association Research Foundation, 2001 – 2005.
- Member, Advisory Board, University of Pittsburgh Cancer Institute and Hampton University Research and Training Partnership, 2003 -2007.
- Board of Trustees, Hampton University, 2000-2001.
- Board of Trustees, Southeast Universities Research Association (SURA), 2007-2010.
- Member, American Chemical Society
- Member, Tanzania Chemical Society
- Member, National Organization for the Professional Advancement of Black Chemists and Chemical Engineers.
- Member, Beta Kappa Chi Honor Society
- Member, International Activities Committee, American Chemical Society, 1991-1999 (Chair, Task Force on Southern Africa – 1993-1997)
- Member, Committee on Minority Affairs, American Chemical Society, 2000-2009.
- Member, International Activities Committee, American Chemical Society, 2011-Present, (Chair, Global Waters Working Group).
- Member, Editorial Board, Instrumentation Science and Technology, 1995-2000
- Member, Editorial Board, Tanzania Journal of Science, 1999-2005
- Member, Steering Committee, HBCU/MI Environmental Technology and Education Committee (Chair, Subcommittee on Undergraduate Education), 1990-2005.
- Member, Committee of Visitors, National Science Foundation, 1997
- External Examiner, University of Nairobi, Kenya, 1990
- External Examiner, Monsoura University, Egypt, 1996
- External Examiner University of Dar es Salaam, Tanzania, 1998

OTHER PROFESSIONAL CONTRIBUTIONS

Program Reviews

- Science Review Committee, Louisiana Board of Regents - reviewed chemistry programs at several State University campuses in the State of Louisiana,1992., 2011.
- U.S. Agency for International Development (Education for Development and Democracy Initiative, EDDI) – reviewed a partnership project between Mississippi

Consortium for International Development and Agostinho Neto University (Angola), 2001.
- U.S. Agency for International Development, EDDI – reviewed a partnership project between West Virginia State College and National University of Benin, 2001.
- U.S. Agency for International Development, EDDI – reviewed a partnership project between Virginia Tech and Malawi Ministry of Education, 2001.
- U.S. Agency for International Development, EDDI – reviewed a partnership project between Howard University and graduate programs at several African Universities.

Service on Proposal Review Panels for:
- U.S. National Science Foundation
- U.S. Environmental Protection Agency
- U.S. Department of Education
- U.S. Department of Energy
- American Chemical Society
- Alfred P. Sloan Foundation
- International Union of Pure and Applied Chemistry
- U.S. Agency for International Development

INTERNATIONAL ACTIVITIES AND EXPERIENCE

Member, The Water Team, Global Environment Center, USAID.; as a team member, I developed Public Private Partnership program in the water sector for developing countries; organized Water and Agriculture session of Global Environment Workshop (July, 2001).

Higher Education Specialist, Education for Development and Democracy Initiative (EDDI); coordinated higher education partnership projects involving higher education institutions in the US and developing countries; developed planning, monitoring, and performance (PMP) tool for EDDI.

Resource person, and Workshop Presenter; American Chemical Society-National Science Foundation Environmental Quality Workshop for Developing Countries, Dakar, Senegal, July, 2001.

Research and Study Abroad Program, 1994-2009 (***Project Director***): a research collaboration and training program that sent students and faculty to the University of Dar es Salaam in Tanzania and Egerton University in Kenya to conduct research during the summer. The program was supported by U.S. National Institutes of Health.

Chemical Instrumentation Program for Developing Countries, 1993-1995 (***Project Co-Director***): a project to provide opportunities for scientists from Sub-Saharan Africa to travel to the U.S. to participate in chemical instrumentation training workshops. The project was supported by a grant from U.S. Trade and Development Agency to the International Activities Committee of the American Chemical Society. Scientists from eight African countries participated in the program.

Egyptian Foreign Study Program, 1992 -1994 (***Collaborating Scientist, Research Advisor)***: a program of Egyptian government designed to bring Egyptian students to

selected academic research laboratories in the U.S. to conduct research for advanced degrees to be awarded by Egyptian universities. Under this program, I mentored and served on the Ph.D. dissertation committee of an Egyptian student from Monsoura University.

Water Quality Project for the Great Rift Valley of East Africa, 1984-1987 (***Project Director***): a collaborative project with scientists at the University of Nairobi, Kenya. The project involved water quality research requiring the collection of water samples from several Great Rift Valley lakes and shipping them to Hampton University; presentation of lectures at the University of Nairobi; and mentoring a Kenyan student who spent a year in the environmental analytical chemistry laboratory at Hampton in conjunction with the project. The project was funded by U.S. National Science Foundation.

Travel Award, 1992: to present lectures and establish linkages at University of Dar es Salaam, Tanzania, and Sokoine University of Agriculture in Morogoro, Tanzania.

Examination Committees: ***External Examiner*** for University of Dar es Salaam (1998); Monsoura University (1993) University of Nairobi (1986).

PUBLICATIONS and selected presentations

PUBLICATIONS and selected presentations

(1) I.T. Urasa and Zachary Messegee, **"The Effect of Wetland Retrofit Projects on Phosphate Levels in the Estuarine and Coastal Waters of Hampton, Virginia",** 25th Annual Maryland Water Monitoring Council, Linthicum, MD, December 6, 2019.
(2) I.T. Urasa and Dawanna White, "Development of Analytical Methods for the Detection and Characterization of Emerging Contaminants using LC-MS", In Preparation **(*Talanta*)**

(3) I.T. Urasa, Kefa K. Onjoke, and Barbara Shipes, "Influence of Composted Wastewater Sludge (CWS) on Lead and Copper Uptake by Radish (Raphanus sativus L.)", ***Compost Science and Utilization***, DOI: 10.1080/1065657X.2018.1496044, September 2018.

(4) I.T. Urasa and Nixon Mwebi, "Factors influencing the behavior of land applied biosolids**"**, ***Journal of Environmental Science and Health, Part A*** (2011) **46**, 1625-1631.

(5) I. T. Urasa, Anael Kimaro, Samuel Manyele, "Wastewater stabilization ponds: Water quality Assessment", Proceedings, ***World Chemistry Congress***, San Juan, Puerto Rico, paper Number 214, August 4, 2011.

(6) M.J. Moshi, E. Innocent, P.J. Masimba, D.F. Otieno, A. Weisheit, P. Mbabazi, M. Lynes, K. Meachem, A. Hamilton, and I. Urasa, ***"Antimicrobial and brine shrimp toxicity of some plants used in traditional medicine in Bukoba***

District, north-western Tanzania", ***Tanzania Journal of Health Research***, Vol. 11, No. **1**, January 2009, 23.

(7) S.J. M. Mdachi, M.H.H. Nkunya, V.A. Nyigo, and I.T. Urasa, "Amino Acid Composition of Some Tanzanian Wild Mushrooms", ***Food Chemistry*****,** 2004, **86**,179-182.

I.T. Urasa, "Citizen Science in the Context of Indigenous Knowledge", 5th Annual International Conference on Chemistry, Athens Institute for Education and Research, 17-20 July 2017, Athens, Greece.

I.T. Urasa, "Global Networking for Professional Training and Development in the Chemical Sciences: The American Chemical Society Model", ***IUPAC for Africa, Postgraduate Summer School on Green Chemistry****,* University of Dar es Salaam, Dar es Salaam, Tanzania, May 12 – 19, 2019.

I.T. Urasa, "Global Networking for Professional Training and Development in the Chemical Sciences: The American Chemical Society Model", ***IUPAC for Africa, Postgraduate Summer School on Green Chemistry****,* University of Dar es Salaam, Dar es Salaam, Tanzania, May 12 – 19, 2019.

I.T. Urasa, Kefa K. Onjoke, and Barbara Shipes, "Influence of Composted Wastewater Sludge (CWS) on Lead and Copper Uptake by Radish (Raphanus sativus L.)", ***Compost Science and Utilization***, DOI: 10.1080/1065657X.2018.1496044, September 2018.

I.T. Urasa and Nixon Mwebi, "Factors influencing the behavior of land applied biosolids**"**, ***Journal of Environmental Science and Health, Part A*** (2011) **46**, 1625-1631.

I. T. Urasa, Anael Kimaro, Samuel Manyele, "Wastewater stabilization ponds: Water quality Assessment", Proceedings, ***World Chemistry Congress***, San Juan, Puerto Rico, paper Number 214, August 4, 2011.

I.T. Urasa, "Citizen Science in the Context of Indigenous Knowledge", 5th Annual International Conference on Chemistry, Athens Institute for Education and Research, 17-20 July 2017, Athens, Greece.

I.T. Urasa, "Global Perspectives of Citizen Science", Division of International Activities, American Chemical Society National Meeting, April 2- 6, 2017, San Francisco, CA, Conference Proceedings, Paper Number IAC 20.

I.T. Urasa, and A. Kimaro, "International Research Training in Natural Products and Environmental Health: A unique Interdisciplinary Research Experience", Division of Chemical Education, American Chemical Society National Meeting, August 10-14, 2014, San Francisco, CA, Paper Number 13964.

I.T. Urasa, A. Kimaro, W. J. Mavura, "Developing a Bioreactor for Water Defluoridation: A University-community partnership", Symposium Proceedings, ***Water: A Global***

Problem, Local Solutions, Environmental Chemistry Division, American Chemical Society National Meeting, September 10, 2013, Indianapolis, Indiana, U.S.A., Paper Number 118.

I.T. Urasa and Dawanna White, “Development of Analytical Methods for the Detection and Characterization of Emerging Contaminants using LC-MS”, In Preparation **(*Talanta*)**

I.T. Urasa, and Gervas Assey, “Comparative Study of the Capabilities of LC-MS and GC-ECD/FID for the Determination of Pesticides in Environmental Samples” In Preparation (***J. Env Qual*).**

I. T. Urasa, Anael Kimaro, Samuel Manyele, “Wastewater stabilization ponds: Water quality Assessment”, Proceedings, ***World Chemistry Congress***, San Juan, Puerto Rico, paper Number 214, August 4, 2011.

M.J. Moshi, E. Innocent, P.J. Masimba, D.F. Otieno, A. Weisheit, P. Mbabazi, M. Lynes, K. Meachem, A. Hamilton, and I. Urasa, ***“Antimicrobial and brine shrimp toxicity of some plants used in traditional medicine in Bukoba District, north-western Tanzania***”, Tanzania Journal of Health Research, Vol. 11, No. 1, January 2009, 23.

S.J. M. Mdachi, M.H.H. Nkunya, V.A. Nyigo, and I.T. Urasa, “Amino Acid Composition of Some Tanzanian Wild Mushrooms”, ***Food Chemistry*,** 2004, **86**, 179-182.

I.T. Urasa and S.F. Macha, "Investigation into Heavy Metal Uptake by Waste Water Sludges", ***J. Water, Air and Soil Pollution,*** 2000, **109**, 207-218.

I.T. Urasa, The Use of Ion Chromatography – D.C. Plasma Atomic Emission Spectrometry for the Speciation of Trace Metals, ***Final Technical Report***, U.S. Department of Energy, Contract Number DE-FG05-86ER13589, **1998.**

I.T. Urasa, S.F. Macha, and W.M. El Matty, "Application of Solid Phase Extraction in Metal Speciation"; ***J. Chromatographic Science,*** 1997, **35**, 519-524.

I.T. Urasa and S.F. Macha, "Speciation of Heavy Metals in Soils, Sediments, and Sludges Using D.C. Plasma Atomic Emission Spectrometry in combination with Ion Chromatography, **Int.** ***J. Environ. Anal. Chem.*** 1996, **64**, 83-95.

I.T. Urasa, "Development of new methods for speciation analysis"; In ***Element Speciation in Bio-inorganic Chemistry,*** S. Caroli, Ed., Wiley & Sons, Inc., New York, Chapter 4, **1996.**

I.T. Urasa and W.J. Mavura, "The Influence of Sample Acidification on the Speciation of Iron (II) and Iron (III)", ***Int. J. Environ. Anal. Chem.,*** 1992, 48, (34), 229-240.

I.T. Urasa, and W.J. Mavura, "The Speciation of Iron, Manganese, Phosphorus, and Platinum in Aqueous Solutions by using Ion Chromatography Coupled with Element Selective Detector" ***Journal of Chromatography, 1991***, 547, 211-223.

I.T. Urasa, "Element Selective Detectors for Ion Chromatographic Separations In "***In Advances in Ion Chromatography,*** Vol. 2, P. Jandik and R.M. Cassidy, Eds., Century International, pp. 93-110, **1990**.

I.T. Urasa and S.H. Nam, "Direct Determination of Chromium (III) and Chromium (VI) with Ion Chromatography Using Direct current Plasma Emission as Element Selective Detector," ***J. Chromatographic Science,*** 1989, 27, 30-37.

I.T. Urasa, V.D. Lewis, and J. DeZwaan, "Characterization and Purity Determination of Trans (+) 1,2-diamino-cyclohex-ane platinum (IV) tetrachloride by using Liquid Chromatography with Platinum Selective Detector", ***Anal. Lett.*** **1989,** 22(3) pp. 597-619.
I.T. Urasa, V.D. Lewis, and S.H. Nam, "Speciation of Trace Metals by Ion Chromatography with Element Selective Detectors," ***J. Chromatogr. Sc.*** **1989, 27,** 468-473.

I.T. Urasa, and V.D. Lewis, "Chromatographic Characterization of Platinum-Containing Compounds," ***Virginia Journal of Science,*** **1988,** 39(2), 143.

I. T. Urasa and F. Ferede, "The Use of D.C. Plasma as an Element Selective Detector for Simultaneous Ion Chromatographic Determination of As(III) and AS(V) in the Presence of Other Common Anions," ***Analytical Chemistry,*** **1987**, 59, 1563-1568.

I. T. Urasa In Proceedings of the Water Quality Technology Conference, ***American Water Works Association***, Baltimore, **1987**, pp. 557-575.

I. T. Urasa, Element Speciation Studies, Final Technical Report to National Science Foundation, Project Number RIII83-05293, **1986**.

I.T. Urasa, “Development of Analytical Methods for Trace Element Determination using Direct Current Plasma Atomic Emission Spectrometry”, ***Final Technical Report,*** U.S. Environmental Protection Agency, **1984.**

I.T. Urasa, “Determination of Arsenic, Boron, carbon, Phosphorus, Selenium, and Silicon in natural Waters by Direct Current Plasma Atomic Emission Spectrometry”, ***Anal. Chem***., 1984, **56,** 904-908.

MASTER'S THESES DIRECTED

Chemical Profile of Global Bottled Water Brands, (Wael Dighriri, M.S., May 2020).

Development of Analytical Methods for the Detection and Characterization of Emerging Contaminants, (Dawanna White, M.S. 2012).

Lead (II) PVC Membrane Based Ion Selective Electrode: Increasing Selectivity and Lowering, (Brandy Alford, M.S. 2006).

Evaluation of the State-of-the-Art Analytical Technology for the Study of Pesticides and Other Persistent Organic Pollutants, (Gervas E. Assey, M.S. 2002).

The Influence of Biosolids on Metal Uptake By Plants
(Kefa Onchoke , M.S., 2000).

Mechanistic Studies of Heavy Metal Uptake by Composted Waste Water Sludge (Nixon O. Mwebi, M.S. 1999)

Investigation of the interaction of Wastewater Sludges with Agricultural Soils (Cherese D. Winstead, M.S. 1998)
A Study of the Interaction of Naturally Occurring Polymers with Heavy Metals (Julio C. Arce Mazuera, M.S. 1997**)**

The Speciation of Heavy Metals in Soils, Sediments, and Sludges by Using D.C. Plasma Atomic Emission Spectrometry Coupled with Ion Chromatography (Stephen F. Macha, M.S. 1996

Chitosan as Solid Phase Extraction Material (**Jokoo M. Quaye, M.S. 1994**)
Application of Solid Phase Extraction in Trace Metal and Pesticide Determination (Weam El Maaty, Ph.D., 1994 – Monsoura University, Egypt)

Chromatographic and Spectroscopic Characterization of Isofenphos (Stephanie B. Peebles, M.S. 1990)

The Influence of Acidification on the Speciation of Iron (Ward Mavura, M.S. 1990)

A Study of the Solution Chemistry of Selected Platinum Compounds (Valerie D. Lewis, M.S. 1989)

Speciation of Trace Metals by Using Ion Chromatography with Direct Current Plasma Detection (Sang Ho Nam, M.S. 1989)

An Evaluation of the Factors that Influence Ion Chromatographic Determination of Arsenic, Phosphorus, and Selenium Species (Fernus Ferede, M.S. 1986)

The Fractionation of Magnesium, Calcium, Manganese, and Silicon in Surface Waters (Mark A. Taylor, M.S. 1986).

SELECTED CONTRIBUTED PAPERS

Isai T. Urasa, Abiodun Adibi, Reena Blade, Shauntell Myles, Gabrielle Simms, and Courtney Edwards, **"Factors Influencing the TDML of the Lower Chesapeake Bay"**, Research Symposium, School of Science, Hampton University, Hampton, Virginia, April 18, 2013.

I.T. Urasa, "**Role of Academic Institutions on Science Policy**, Annual Meeting of the national Organization of Black Chemists and Chemical Engineers, Washington, D.C., September 28, 2012.

I.T. Urasa, **"Enhancement of the Chemistry Program by Diversifying the Curriculum**", American Chemical Society Regional Meeting, Richmond, Virginia, October 18, 2011.

I.T. Urasa, "**Strengthening Global Cooperation in Science and Scientific Research**,"

86th Annual Meeting, Virginia Academy of Science, Hampton University, May 23, 2008.

Rukundo A. Kambarami, S. Manyele, A. Kimaro, and I.T. Urasa, **"Evaluation of Wastewater Quality from Wastewater Stabilization Ponds"**, University of Maryland at Baltimore County Poster Presentation, October 13, 2007.

Fulgentia N.Gang, M. J Moshi, P Masimba,. And E. Innocence, A. Kimaro, and I.T. Urasa **"In Vivo Antimalaria Activity of Maranthes *floribunda* root Ethanolic Extract** University of Maryland at Baltimore County Poster Presentation. October 13, 2007.

Malcolm Mitchell, M. Moshi, A. Kimaro, and I.T. Urasa, **"Investigation of an Aqueous Ethanol Extract of Strophanthus eminii for in vivo Antimalarial Activity in Mice**", 15th Research Day Symposium, Hampton University, Hampton, VA March 14, 2008.

Luther Quarles, K. Moshi, A. Kimaro, and I.T. Urasa **"Preliminary chemical characterization and antiviral activity of extracts from marine fungi",** , 15th Research Day Symposium, Hampton University, Hampton, VA, March 14, 2008.

Marques Johnson, Cosam Joseph, A. Kimaro, and I.T. Urasa, ***"Asteranthe lutea* and Its Anti-Fungal Properties",** 15th Research Day Symposium, Hampton University, Hampton, VA March 14, 2008

Regina Joice, Michael A. Kishimba, John A. Mahugija Marco, Isai T. Urasa, **"Organochlorine pesticide residues in drinking water from sites near Vikuge storage site in Coast Region, Tanzania",** International Symposium on Health Disparities: Research Centers in Minority Institutions, San Juan Puerto Rico, December 13-15, 2006.

Buki Kalejaiye, Anthony Ndichu wa Muiru, Toni Ebeigbe, Isai T. Urasa, "**Investigation of the in-vitro vascular effects of *Pyrenacantha Staudtii* on isolated rat aortic smooth muscle",** International Symposium on Health Disparities: Research Centers in Minority Institutions, San Juan Puerto Rico, December 13-15, 2006.

Jaqueena Manahan, Anthony Ndichu wa Muiru, Toni Ebeigbe, Isai T. Urasa, "**In-vivo Effect of *Pyrenacantha staudtii* Extract on Blood Pressure and Heart Rate of Rabbits**", International Symposium on Health Disparities: Research Centers in Minority Institutions, San Juan Puerto Rico, December 13-15, 2006**.**

Bettina Applewhite, Isai Urasa, Cosam Joseph**,** and M.J. Moshi **"Investigation of Tanzanian *Hugonia busseana* as an Antidiabetic Agent",** Annual Meeting of the National Organization for Black Chemists and Chemical Engineers, Orlando, Fla, Spring 2005.

Kia Walcott, Isai T. Urasa, and K.M.M. Hosea "**Studies of Violet Dye Production by Marine Fungus",** Annual Meeting of the National Organization for Black Chemists and Chemical Engineers, Orlando, Fla, Spring 2005.

I.T. Urasa, "**Environmental Chemistry: Practice and Applications" 9th International Chemistry Conference in Africa,** Arusha, Tanzania, August 5, 2004.

I.T. Urasa, **"Research and Study Abroad: A Rewarding Scientific and Cultural Experience**", International Research Experience for Undergraduates Symposium, American Chemical Society national Meeting, Anaheim, California, Spring 2004.

Hakeem Yusuf, and I.T. Urasa, **"The Health Hazard of Water Pollution In a Developing Country: a Case Study of Sugarcane Juice In Dar es Salaam, Tanzania "**Southern California Conference on Undergraduate Research, November 22, 2003.

Tomika Bethea, Khalila Porome, Zaron Johnson, Eric Hayes, and Isai T. Urasa, "**Investigation into Heavy Metal Uptake by Waste Water Sludge**" Virginia Water Research Symposium, Blacksburg, Virginia, October, 2003.

Hakeem Yusuf, Donati Mosha, and I,T. Urasa, **"The Impact of Urban Lifestyles and Water Utilization Practices on the Quality of Water in a Developing Country",** American Chemical Society National Meeting, New Orleans, LA. March 2003.

I.T. Urasa, **Water Resource Issues of Developing Country Communities**, Virginia Water Research Symposium, October, 2002

I.T. Urasa, **Higher Education Partnerships for Developing Countries Water Resource Management**, African Studies Association annual Conference, Washington, D.C. December 5, 2002.

Gervas E. Assey and I. T. Urasa, Virginia Academy of Sciences**, "Evaluation of State-of-the art Analytical Technologies for the Study of Pesticides and Other Persistent Organic Pollutants",** Virginia Academy of Sciences, Hampton, Virginia, May, 2002.

I.T. Urasa, Danielle Ward, D.S. Mosha, **"Water Quality Profile of the City of Dar es Salaam"**, American Chemical Society National Meeting, San Francisco, CA, Spring, 2000.

I. T. Urasa and Nixon O. Mwebi, Gabriela Chytrova**, "Uptake of Heavy Metals by Bio-Solids: Investigation of Attendant Mechanisms"**, Virginia Academy of Sciences Annual Meeting, Old Dominion University, Norfolk, Virginia, May 27th, 1999.

I.T. Urasa and Kefa Onchoke, **"Influence of Bio-solids on Heavy metal Uptake by Plants"**, Virginia Academy of Sciences Annual Meeting, Old Dominion University, Norfolk, Virginia, May 27th, 1999.

I.T. Urasa, Nixon Mwebi, Charese Winstead, **"Heavy Metal Uptake by Bio-solids**", American Chemical Society Regional meeting, Raleigh, N.C., November 7, 1998.

I.T. Urasa, "Cooperative Graduate Degree Program in Chemistry", Symposium Contribution: ***Minorities in Science,*** American Chemical Society Regional Meeting, Raleigh, N.C., November 7, 1998.

I.T. Urasa, J. Greene, K. Onchoke, and D.S. Mosha, **"Water Quality Profile of the City of Dar es Salaam: Physico-Chemical Parameters"**, 1998 National Minority Research Symposium, New York City, November 25, 1998.

I.T. Urasa, D. Ward, and D.S. Mosha**, "Water Quality Profile of the City of Dar es Salaam: Microbiological Evaluation"**, 1998 National Minority Research Symposium, New York City, November 25, 1998.

I.T. Urasa and Nixon Mwebi, **"Uptake of Heavy Metals by Composted Sludges**", American Chemical Society Regional Meeting, Roanoke, Virginia, October 20, 1997.

I.T. Urasa, S.F. Macha, and Dereck Murray, **"Use of Waste Water Sludges for the Immobilization of Heavy Metals"** International Congress on Environment and Climate, Rome, Italy, March 4, 1996.

I. T. Urasa and S.F. Macha **"Use of Waste Water Sludges as Solid Phase Extraction Material"**, Environment Virginia 1996, Virginia Department of Environmental Quality, Lexington, VA April 1996.

I.T. Urasa, **"Undergraduate Research: A Vital Component of a Science Curriculum"**; Third Pan American Congress, San Juan, Puerto Rico, September 13, 1995.

I.T. Urasa and S.F. Macha, **"Solid Phase Extraction Applied in Metal Speciation"**, Second DOE/ BES Research Meeting, Santa Fe, New Mexico, June 1995.

I. T. Urasa and S.F. Macha, **"Use of Waste Water Sludges as Sorbents for Heavy Metals",** Virginia Academy of Science Meeting, Lexington, Virginia, May 1995.

I. T. Urasa, S.F. Macha, **"Use of Waste Water Sludges for the Immobilization of Heavy Metals**", American Chemical Society National Meeting, New Orleans, Louisiana, March 1995.

I.T. Urasa, Jokoo Quaye, and Weaam El-Matty, **"Liquid Chromatography Applied in Metal Speciation**, 40th Canadian Spectroscopy Conference, Halifax, Nova Scotia, August 1994.

I.T. Urasa and S.F. Macha, **"Speciation of Heavy Metals in Soils, Sediments, and Sludges using D.C. Plasma Atomic Emission Spectrometry coupled with Ion Chromatography"**, ACS National Meeting, Washington, D.C., August 1994.

I.T. Urasa, **"Liquid Chromatography Applied in Metal Speciation"**, 1993 DOE/BES Separations Research Conference, Seattle, Washington, October 1993.

I.T. Urasa, **"Element speciation by using chromatographic techniques in combination with spectroscopic techniques**", 20th Annual Meeting of the Federation of Analytical Chemistry and Spectroscopy Societies, Detroit Michigan, October 1993 (invited paper).

I.T. Urasa, and J.Quaye, **"Evaluation of factors affecting the use of chitosan for the determination of lead in environmental media**", Virginia Academy of Sciences Annual Meeting, Old Dominion University, Norfolk, Virginia, May 1993.

I.T. Urasa and J. Arce, "**The use of Chitosan for trace metal determination**, "American Chemical Society National Meeting, San Francisco, California, April 1993.

I.T. Urasa, **"Element Speciation with D.C. Plasma Coupled with Ion Chromatography**", Department of Chemistry, Virginia Tech, Blacksburg, Virginia, April 1993 (invited seminar).

I. T. Urasa, "**Element Speciation by using Ion Chromatography Coupled with Elements Selective Detector**", 21St International Symposium on Environmental Analytical Chemistry, Jekyll Island, Georgia, May 1991.

I.T. Urasa and J. Arce, **"Analytical Applications of Chitin/Chitosan** "Virginia Academy of Sciences Meeting, Blacksburg, Virginia, May 1991.

I.T. Urasa, **"The Speciation of Trace Metals by using Ion Chromatography Coupled with Element Selective Detectors**", 18th International Symposium on Chromatography, the Rai Congress Center, Amsterdam, The Netherlands, Abstract Number TH-P-04.

AREAS OF RESEARCH INTERESTS

Environmental Analytical Chemistry; Environmental Health; Water Resources Research; Development of Analytical Methods with Atomic Spectroscopy and Chromatography; Science Education.

Research Programs

Water Resources Research: There are three research themes that focus on water resources: (1) investigation of microbial mediation in phosphate removal by wetlands, (2) chemical characterization of biosolids and their impact on ground water quality, and (3) studies of emerging contaminants. These research efforts are supported by an analytical facility that consists of state-of-the-art analytical instrumentation for the determination of nutrients (phosphates and nitrates), heavy metals, organic pollutants, pharmaceuticals and personal care product contaminants.

Study of Environmental Processes at the Molecular Level: This research is focused on studying the interaction of chemical species with solid surfaces and the mitigating effects of these interactions on environmental contamination. It looks at environmental processes at the molecular level, seeking to elucidate how the natural environment is affected by contaminants, and how the affected environment can be restored. The materials under investigation include soils and sediments; bio-materials such as plants and bio-solids; natural organic matter; synthetic chelating agents; and naturally occurring polymers.

Heavy Metal Speciation Studies: This work is aimed at investigating the forms in which heavy metals exist in environmental systems and the factors that influence their distribution. The study has led to the development of new analytical methods which have been applied in the elucidation of the toxicity and other biological effects of heavy metals.

Distribution and Fate of Hazardous Substances in Environmental Systems: This research is aimed at studying the chemistry of pesticides, heavy metals, and other toxic substances in environmental systems. By knowing how these materials behave under various conditions, analytical methods for identifying and quantifying them can be developed.

Grants Received (selected examples)

Inquiry-based learning using cultural heritage materials and other locally accessible resources: A professional development program for public school science teachers, National Science Foundation**, $255,728, February 2015 – 2017.**

Water Quality Research: Observing Emerging Water Contaminants **($600,000), U.S.** Department of Education Title III Program, 2009 - 2014**.**

Establishment of a B.S. Degree program in Biochemistry within the Department of Chemistry, **($290,000**, National Science Foundation, 2009 – 2013).

Promoting Minority Student Interest in Science and Scientific Careers Through Forensic Chemistry **($410,000**) U.S. Department of Education – MSEP 2007- present)

Use of Television Drama to attract students into science **($151,000),** NSF 2006-2008.

International Research Training in Natural products and Environmental Health, 1994-Present **($ 3.0 Million)** (NIH)

Study of Environmental Processes at the Molecular Level, 2000-2010, **($500,000**), U.S. Department of Energy**.**

HBCU-MI Environmental Technology & Education Consortium, (> $3.0 Million, U.S. Department of Energy 1994 – 2005.

Planning Grant for Center for Undergraduate Research, **$50,000**), National Science Foundation, 2004-2005.

Cooperative Graduate Degree Program in Chemistry, 1995-2000, ($500,000), National Science Foundation: A program developed in cooperation with Virginia Tech to provide intermediate graduate training at the master's level before embarking on doctoral work. The participating students transfer directly to selected Ph.D. granting institutions upon receiving the master's degree from Hampton.

Acquisition of Teaching and Research Instrumentation, **($292,000**) U.S. Army Office, 1998-2000.

Cooperative Graduate Degree program Training ($310,000) Sloan Foundation 2000 - 2003

Research Careers for Minority Scholars, 1990-1995, **($525,000**): A National Science Foundation supported program to promote undergraduate research and mentoring.

Research Experience and Enhancement, 1990-1993**, ($300,000**): A program supported by Packard Foundation to support undergraduate research

Research Improvement in Minority Institutions, 1982-1985**, ($244,000)**: A National Science Foundation supported program to improve scientific research in minority institutions.

Element Speciation Studies, 1981 – 1983 **($161,000):** U.S. Environmental Protection Agency.

Minority Academic Institutions Traineeship Program, **1987**, **($27,000)**: A program supported by USEPA to strengthen science programs in minority institutions.

Environmental Management Career Opportunities for Minorities, 1990-1995, ($50,000): A program supported by the Department of Energy to promote environmental programs and careers.

Environmental Management Pre-college Analytical Chemistry Program**, 1990-1995, ($75,000)**: A summer program designed to provide pre-college students research experience.

OTHER PROGRAMS AND GRANTSMANSHIP ACTIVITY

- Working Group for Environmental Science and Technology
- Chemical Instrumentation Laboratory Facility
- Water Quality Measurement Laboratory, Certified by EPA, Hampton University

Special Workshop Presentations

"**Careers in Academia: Tips for Success, presented at American Association for the Advancement of Science**", AAAS Fellows workshop, 2007.

"How to Improve Academic Performance", A Student-faculty Panel Discussion, Hampton University Research Day Symposium, School of Science, Spring, 2003.

"**Ethical Issues in the Conduct of Science and Scientific Research**", Hampton University Research Day Symposium, School of Science, Spring, 2002.

"Tips on Developing a Career in Academia", A Workshop for New Faculty Members, Hampton University, Spring, 2002.

"International Education Opportunities", Faculty Institute, Hampton University, Fall 2002.

"Demographic Changes in Global Higher Education", Global Forum, Hampton University Faculty Interest group, Spring 2002

"A Career in Academia: How Do You Start?" National Science Foundation Career Workshop, Fall 1999.

"Minimum Standards for the delivery of Instruction", Hampton University Fall Faculty Institute, 1999.

CONSULTANCY

State of Louisiana Board of Regents: **Southern Review Committee for Academic Programs in Chemistry**, 1991, 2011.

Hercules, Inc., Franklin, Virginia: **The Determination of Trace Elements in Industrial Waste Water**

Pear Corporation, Hampton, Virginia: **The Use of Chitin/Chitosan in Water Chemistry Research**