

Pan Africa Chemistry Network



SUSTAINABLE WATER CONFERENCE

25th-28th August 2009

Pre-conference WORKSHOP on
GREEN CHEMISTRY and SUSTAINABILITY

25th August 2009

UNIVERSITY OF NAIROBI
CHIROMO CAMPUS

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Preliminary programme

GREEN CHEMISTRY and SUSTAINABILITY WORKSHOP

Tuesday 25th August 2009: GREEN CHEMISTRY and SUSTAINABILITY WORKSHOP	
12.00 noon – 1.10 pm	Lunch
1.10 pm – 1.30 pm	Opening Ceremony Professor Shem Wandiga, Chair PACN Kenya hub Dr John Clough, Syngenta, UK Dr Alejandra Palermo, RSC
	Session: Sustainable Chemistry Session chair: Jacob Midiwo, University of Nairobi, Kenya
1.30 pm – 2.05 pm	Plenary 1: Professor Yonas Chebude , <i>Addis Ababa University, Ethiopia and Chair PACN Ethiopia hub</i> Title: Sustainability in Chemistry Education
2.05 pm – 2.40 pm	Plenary 2: Professor Tom Welton , <i>Imperial College, UK</i> Title: Creating Less Waste
2.40 pm – 3.15 pm	Plenary 3: Dr Pete Licence , <i>Nottingham University, UK</i> Title: Supercritical Fluids: Green Chemistry under Pressure
3.15 pm – 3.35 pm	Coffee/Tea
	Session: Green Chemistry and Sustainability—case studies Session chair: Rodney Townsend, RSC, UK
3.35 pm – 4.10 pm	Plenary 4: Dr Mashimbiye Mahlori , <i>Department of Science and Technology, South Africa</i> Title: An overview of Green Chemistry in South Africa
4.10 pm – 4.45 pm	Plenary 5: Professor Neil Coville , <i>Witwatersrand University, South Africa</i> Title: Green Chemistry and metal complexes/materials
4.45 pm – 5.00 pm	Discussion
7.30 pm – 9.30 pm	Welcome Dinner (by invitation only) Venue: Vice Chancellor's parlour

SUSTAINABLE WATER CONFERENCE

Wednesday 26th August 2009: SUSTAINABLE WATER CONFERENCE	
8.00 am – 9.00 am	Registration
9.00 am – 11.30 am	<p>Opening Addresses:</p> <p>Prof George Magoha, <i>Vice Chancellor, University of Nairobi</i> Dr Joe Wanjui, <i>Chancellor, University of Nairobi</i> H.E. Joaquim Chissano, <i>Former President of Mozambique and Chairperson, Africa Forum for Former African Heads of State and Government</i> Mr David Osborne, <i>UNEP</i> Mr Mike Mack, <i>Chief Executive Officer, Syngenta</i> Dr Sally Kosgei, <i>Minister for Higher Education, Science and Technology</i> Government of Kenya official t.b.c.</p> <p>Vote of thanks: Dr Richard Pike, <i>Chief Executive Officer, RSC</i></p>
11.30 am – 12.00 am	Tea/Coffee
	<p>Session Chair: Shem Wandiga, University of Nairobi, Kenya Venue: Millennium Hall 1</p>
12.00 am – 12.35 pm	<p>Plenary 1: Swaminathan MS, <i>M S Swaminathan Research Foundation, India</i></p> <p>Title: Building a Sustainable Water Security System</p>
12.35 pm – 2.00 pm	Lunch break
	<p>Session 2: Water usage for human consumption, industry, recreation and agriculture Session Chair: Neil Coville, Wits University, South Africa</p>
2.00 pm – 2.35 pm	<p>Plenary 2: Eric Odada, <i>Geology Department, University of Nairobi, Kenya</i></p> <p>Title: Managing freshwater resources in Africa: Are we asking the right questions in the quest for solutions?</p>
2.35 pm – 2.50 pm	<p>Short Lecture 1: Du Plessis J.A., <i>Department of Civil Engineering University of Stellenbosch, South Africa</i></p> <p>Title: Sustainability through integrated decision making in water demand management</p>
2.50 pm – 3.05 pm	<p>Short Lecture 2: Eneh O. Cyprian, <i>Institute for Development Studies, University of Nigeria, Enugu Campus, Nigeria</i></p> <p>Title: Safe water scarcity: the implications for Nigeria's development</p>
3.05 pm – 3.20 pm	<p>Short Lecture 3: Spangenberg Alfredo, <i>CSI Ingenieros, Soriano Montevideo, Uruguay</i></p> <p>Title: Local-driven design & management of compact water supply solutions addressing the needs of small communities in Angola</p>
3.20 pm – 3.35 pm	<p>Short Lecture 4: Ihsan Mustafa, <i>Agricultural Research Corporation, Water and Land Research Center, Sudan</i></p> <p>Title: Effect of water stoppage on growth and yield of guar (<i>Cyamopsis tetragonoloba (L.) Taub.</i>) under Sudan Gezira conditions</p>
3.35 pm – 4.10 pm	Plenary 3: Steve Ntifo , <i>Environment and Science Adviser, Water UK, London</i>

	Title: Water policy and strategy – implications for our changing societies and environment
4.10 pm – 4.30 pm	Discussion
4.30 pm - 4.50 pm	Tea/Coffee
4.50 pm – 6.00 pm	Flash presentations Session chair: Jacob Midiwo, University of Nairobi, Kenya Alejandra Palermo, Royal Society of Chemistry
	Mary Edema , <i>Department of Chemistry, University of Benin, Benin City, Nigeria.</i> Charles Nguta , <i>Department of Chemistry, Egerton University, Egerton, Kenya</i> Preshanthie P. N. , <i>Pollution Research Group, School of Biological and Conservation Sciences, University of KwaZulu – Natal, South Africa</i> Chipompo, E. , Lusaka, Zambia Ashagrie Gibtan , <i>Department of Biology, Addis Ababa University, Addis Ababa, Ethiopia</i> HJ du Toit , <i>University of Stellenbosch, South Africa</i> Lawrence Batch , <i>Combined Joint Task Force Horn of Africa (CJTF-HOA) Water Program, Djibouti</i> Zaranyika M.F. , <i>Department of Chemistry, University of Zimbabwe, Mount Pleasant, Harare, Zimbabwe</i> Oduor F.D.O. , <i>Department of Chemistry, University of Nairobi, Kenya</i> Thumakele Gosa , <i>University of Stellenbosch, South Africa</i> Kariuki D. K. , <i>Department of Chemistry, University of Nairobi, Kenya</i> Fred K. Segor , <i>Department of Chemistry, Moi University, Eldoret, Kenya</i> Kenfack Siméon , <i>Centre Régional pour l'Eau Potable et l'Assainissement à faible coût (CREPA), Ouagadougou – Burkina Faso</i>
6.00 pm – 8.00 pm	Cocktail Venue: Chiromo Club

Thursday 27th August 2009	
	Session: Water Quality and Contamination Session Chair: Erick Odada, University of Nairobi, Kenya
8.30 am – 9.05 am	Plenary 4: Paul J. Worsfold , <i>School of Earth, Ocean and Environmental Sciences, University of Plymouth, England</i> Title: Rapid analytical techniques for monitoring the impact of nutrients on water quality
9.05 am – 9.20 am	Short Lecture 5: Oyeyiola A.O. , <i>Department of Chemistry, University of Lagos Akoka- Yaba, Lagos, Nigeria</i> Title: Chemometric analysis of potentially toxic metals in sediments of the Lagos lagoon system
9.20 am – 9.35 am	Short Lecture 6: Madadi O.V. , <i>Department of Chemistry, University of Nairobi, Kenya</i> Title: Spatial and temporal distribution of organochlorine pesticide residues in water, sediments, weeds and fish from river Sio drainage basin of lake Victoria
9.35 am – 9.50 am	Short Lecture 7: Hayder Abdelgader , <i>Agricultural Research Corporation, Wad Medani, Sudan</i> Title: Contamination of water in Sudan: Current status and future prospects
9.50 am – 10.05 am	Short Lecture 8: Rose Alani , <i>Department of Chemistry, University of Lagos, Nigeria</i> Title: Spatial distribution of persistent organic pollutants and food web bioaccumulation in invertebrates and fish from the Lagos lagoon, Nigeria
10.05 am – 10.20 am	Short Lecture 9: Sila Nzung'a , <i>Department of Plant and Microbial Sciences, Kenyatta University, Kenya</i> Title: Physico-chemical and microbial quality of selected domestic water sources in Kithimani location, Yatta district and its treatment options
10.20 am – 10.40 am	Tea/Coffee
	Session: Water Quality and Contamination Session Chair: Richard Pike, Royal Society of Chemistry
10.40 am – 11.15 am	Plenary 5: Alison Sapiets , <i>Syngenta International, UK</i> Title: Water, agriculture and risk – how do scientists ensure a sustainable future?
11.15 am – 11.30 am	Short Lecture 10: Mdoe J. E. G. , <i>Department of Chemistry, University of Dar es Salaam, Tanzania</i> Title: Quality of groundwater from shallow wells and boreholes of selected squatter settlements in Dar es Salaam city, Tanzania
11.30 am – 11.45 am	Short Lecture 11: Kowino I.O. , <i>Department of Pure and Applied Chemistry, Masinde Mukiro University of Science and Technology, Kakamega, Kenya</i> Title: Advanced nanoremediation procedures for the removal of heavy metal pollutants in soils and water
11.45 am – 12.45 pm	Poster session 1
12.45 pm – 2.00 pm	Lunch break
	Session: Sustainable Water Management and Treatment

	Session Chair: Alison Sapiets, Syngenta International, UK
2.00 pm – 2.35 pm	Plenary 6: Rodney Townsend , <i>European Technology Platform for Sustainable Chemistry, UK and Royal Society of Chemistry</i> Title: Using Water Stressed Environments To Stimulate Sustainable Innovation
2.35 pm – 2.50 pm	Short Lecture 12: Gachanja A. , <i>Department of Chemistry, Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya</i> Title: Water purification using natural plant coagulants (<i>Moringa Oleifera</i> seeds and <i>maerua documbens</i> root)
2.50 pm – 3.05 pm	Short Lecture 13: Chikumbusho Kayira , <i>Department of Chemistry, Chancellor College, Zomba, Malawi</i> Title: Defluoridation of groundwater using raw bauxite
3.05 pm – 3.20 pm	Short Lecture 14: Tavengwa Bunhu , <i>Department of Chemistry, University of Fort Hare, South Africa</i> Title: Development of PMMA-grafted lignocellulose/clay nano-composites for the removal of heavy metals and chlorinated organics from water
3.20 pm – 3.35 pm	Short Lecture 15: Kayem G. J. , <i>Water Treatment and Filtration (Chem. Eng.) Group, Department of Process Engineering, ENSAI, University of Ngaoundere, Ngaoundere, Cameroon.</i> Title: Removal of arsenic (v) from water using natural pozzolan materials
3.35 pm – 3.50 pm	Short Lecture 16: Charles Onindo , <i>Department of Chemistry, Kenyatta University, Nairobi, Kenya</i> Title: The water hyacinth <i>Eichhornia crassipes</i> as a biosorbent for lead (II) removal: kinetic and equilibrium studies
3.50 pm - 4.10 pm	Tea/Coffee
	Session: Sustainable Water Management and Treatment Session Chair: Zaranyika M.F., University of Zimbabwe, Zimbabwe
4.10 pm – 4.25 pm	Short Lecture 17: Feleke Zegwe , <i>Department of Chemistry, Addis Ababa University, Addis Ababa, Ethiopia.</i> Title: Development of household water defluoridation process for developing countries
4.25 pm – 5.05 pm	Plenary 7: Simon Cook , <i>Basin Focal Projects, CGIAR Challenge Programme on Water and Food</i> Title: The global food and water crisis: How does it appear in African basins?
7.00 pm – 9.00 pm	CONFERENCE BANQUET Venue: Rangers Restaurant

Friday 28th August 2009	
	Session: Climate Change and Water Session Chair: Laban Ogallo, ICPAC, Nairobi, Kenya
8.30 am – 9.05 am	Plenary 8: Alfred Opere , <i>Meteorology Department, University of Nairobi, Kenya</i> Title: Impacts of Climate Change on Water Resources
9.05 am – 9.20 am	Short Lecture 18: Lohdip Y.N. , <i>Department of Chemistry, University of Jos, Nigeria</i> Title: Climate change and dam drying: A case study of three communities in Langtang South Local Government Area of Plateau State, Nigeria
9.20 am – 9.35 am	Short Lecture 19: George Bepete , <i>Wits University, South Africa</i> Title: A blue age for a green rural Zimbabwe
9.35 am – 9.50 am	Short Lecture 20: Kenneth K Odero , <i>Climate XL Africa, Nairobi, Kenya</i> Title: Implications of a changing climate on water quality and availability in the Lake Victoria region
9.50 am – 10.05 am	Short Lecture 21: Njogu P. M. , <i>Institute for Energy and Environmental Technology, Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya.</i> Title: Threats and challenges facing lake Naivasha ecosystem and its catchment
10.05 am – 10.20 am	Short Lecture 22: Daniel Nyanganyura , <i>International Council for Science Regional Office for Africa (ICSU ROA), Pretoria, South Africa</i> Title: Impact of climate change on rainfall and water resources in Africa: ICSU ROA Project
10.20 am – 10.40 am	Tea/Coffee
	Session: Water Quality and Contamination Session Chair: Lohdip Y.N., University of Jos, Nigeria
10.40 am – 11.15 am	Plenary 9: Shem O. Wandiga , <i>Department of Chemistry, University of Nairobi, Kenya</i> Title: Declining water quality in river basins
11.15 am – 11.30 am	Short Lecture 23: Jonnalagadda S.B. , <i>School of Chemistry, University of KwaZulu-Natal, Chiltern Hills Durban, South Africa.</i> Title: Catalysed ozonation for water treatment and value added products
11.30 am – 11.45 am	Short Lecture 24: Mavura W. J. , <i>Department of Chemistry, Egerton University, Egerton, Kenya</i> Title: The use of a local plant, <i>Maerua Subcordata</i> extract as a water clarifying agent: Investigation of chemical and biochemical properties
11.45 am – 12.45 pm	Poster session 2
12.45 pm – 2.00 pm	Lunch break
	Session: Sustainable Water Management and Treatment Session Chair: Jonnalagadda S.B., University of KwaZulu-Natal, SA
2.00 pm – 2.35 pm	Plenary 10: Kevin G McGuigan , <i>The Royal College of Surgeons, Ireland</i>

	Title: Solar disinfection - sustainable remediation of biologically contaminated drinking water using natural sunlight
2.35 pm – 2.50 pm	Short Lecture 25: Oyaro Nathan , <i>Department of chemistry, Jomo Kenyatta University of Agriculture & Technology, Nairobi, Kenya</i> Title: The potential of <i>Zea Mays</i> , <i>Commelina Bengelensis</i> , <i>Helianthus Annuus</i> and <i>Amaranthus Hybridus</i> for phytoremediation of waste water
2.50 pm – 3.05 pm	Short Lecture 26: Yogeshkumar Naik , <i>Department of Environmental Science & Health, National University of Science & Technology, Bulawayo, Zimbabwe.</i> Title: Biomonitoring: new sensor technologies for environmental water monitoring
3.05 pm – 3.20 pm	Short Lecture 27: Kithinji J.P. , <i>Department of Chemistry, University of Nairobi, Kenya</i> Title: Characterization and evaluation of activated carbon produced from various agricultural wastes in Kenya for water treatment
3.20 pm – 3.55 pm	Plenary 11: Ruth Mitei , <i>Catholic Relief Services, Nairobi, Kenya</i> Title: Point of use Water Treatment Options for Pastoral Communities
3.55 pm – 5.00 pm	Panel Discussion and Closing Ceremony
	Emerging trends in Water research and Technology Session Chair: Alejandra Palermo, Shem Wandiga & John Clough Tea/Coffee will be served (back room)