

**DRAFT PROGRAM OF THE DECEMBER 2019  
AFRICAN MATERIALS RESEARCH SOCIETY MEETING**

Please check this draft program and confirm, with an email to [amrs.tanzania.19@gmail.com](mailto:amrs.tanzania.19@gmail.com), that you will be presenting your oral presentation on the date and time listed. A separate email will be sent to attendees with poster presentations. Note that the program will continue to be updated as we get closer to the conference date.

If you will no longer be able to attend the meeting, please send an email to [amrs.tanzania.19@gmail.com](mailto:amrs.tanzania.19@gmail.com).

## PRECONFERENCE WORKSHOPS AND SHORT COURSES

Below, please find a list of the workshops and courses. Click on the links for find more information describing the topics to be addressed.

### **Sunday 8th December**

[Crystallography](#)

[Electrospinning](#)

[Life Cycle Assessment](#)

[Impact of Materials on the Society I](#)

[Electrochemical Energy Technologies I](#)

[Computational Biology and Physics](#)

[Nanoscale Biosensors](#)

### **Monday 9th December**

[Crystallography](#)

[Electrospinning](#)

[Life Cycle Assessment](#)

[Impact of Materials on the Society II](#)

[Electrochemical Energy Technologies II](#)

[Computational Physics and Biology](#)

[Building Materials at the Human Scale](#)

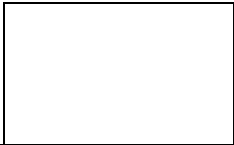
[Electrochemical Impedance Spectroscopy](#)

DAY ONE							
TUESDAY 10TH DECEMBER 2019							
OFFICIAL OPENING NM-AIST CONFERENCE HALL							
	Chair: Prof. Emmanuel Luoga, Vice Chancellor, NM-AIST						
	Rapporteur: Dr. Revocatus Machunda						
08:00 - 08:30	Arrival and registration; set-up posters in Exhibition Hall						
08:30 - 08:50	Welcome address by Prof. Hulda Swai, NM-AIST and AMRS President						
08:50 - 09:00	Welcome address by Prof. Dr. Mohammed Gharib Bilal, Chancellor of NM-AIST						
09:00 - 09:25	Opening Speech by Guest of honor - Her Excellency Samia Suluhu Hassan, Vice President of the United Republic of Tanzania						
09:25 - 09:35	Vote of thanks - Dr. Leonard Akwilapo, Permanent Secretary Ministry of Education, Science, Technology and Vocational Training						
PLENARY PRESENTATIONS 1 NM-AIST CONFERENCE HALL							
	Chair: Prof. Verdiana Masanja, NM-AIST						
	Rapporteur: Dr. Revocatus Machunda						
09:35 - 10:00	Address: Prof. Joseph Mdoe, Deputy Permanent Secretary, Ministry of Education, Science, Technology, and Vocational Training						
10:00 - 10:45	Keynote Address: Prof. John A. Rogers, Northwestern University, USA						
10:45 - 11:15	Group Photo & HEALTH BREAK at Exhibition Hall						
11:15-11:45	Nelson Torto, Executive Director, African Academy of Sciences						
11:45-12:15	Askar Hilonga, Nelson Mandela Institution of Science and Technology						
12:15-12:45	Winston Soboyejo, Worcester Polytechnic Institute, USA - US/Africa Collaborations in Materials Research and Education						
12:45-14:00	LUNCH BREAK						
BREAKAWAY PARALLEL SESSIONS 1							
SESSION	Materials For Health	Sustainable Manufacturing and Construction	Water and Environmental Mitigation Technologies	Nanoscience/ Nanotechnology	Materials For Energy A	Materials For Energy B - JUAMI	Computational Materials Science
	Room 1	Room 2	Room 3	Room 4	Room 5	Room 6	Room 7
14:00-14:30	Gang Bao, Rice University - Nanomaterials for Health Applications	Rostand Moutou Pitti, Université Clermont Auvergne, IRT - Identification of crack front in wooden material by X-ray microtomography	Tunde Ojumu, Cape Peninsula Univ. of Tech. - South African coal fly ash – an abundant resource for materials development	Giovanni Fanchini, Univ. of Western Ontario - Organic flash memory devices from radical polymers and carbon nanomaterials	Kofi Adu, Penn State Univ. - Binderless Carbon Nanotube Flexible Membranes: Architecture, Device and Energy Applications	Simon Billinge, Columbia Univ. and Brookhaven National Lab - Characterizing structure when your material is disordered or nanostructured: yes you can	David Perry, Univ. of Akron - Toward the rational design of organic solar photovoltaics: Application of molecular structure methods to donor polymers
14:30-15:00	Nic Spencer, ETH Zurich - Cartilage, Contacts and Catheters	Samuel Ibekwe, Southern Univ., Baton Rouge - Self-Closure of Fractured Surfaces of a Composite Material during the Healing Process	Habauka Kwaambwa, Namibia Univ. of Science and Tech. - New Insights and Improved Applications of Moringa Seed Proteins in Water Treatment and Colloidal Materials Development	Pierre Mubiayi, Univ. of Witwatersrand - Nanocrystalline materials for photovoltaic applications	Veronica Augustyn, North Carolina State Univ. - Tuning Electrochemical Energy Storage Kinetics in Oxides via Structural Water	Sossina Haile, Northwestern Univ. - JUAMI Mini-Symposium: Influence of Zr-doping on the Surface Chemistry and Reactivity of Ceria	Nelson Dzade, Cardiff Univ. - High Photoresponse of Marcasite–Pyrite Heterojunction and Its Origin: Insights from First-Principles DFT Calculation
15:00-15:15	Joey Chifamba, Univ. of Zimbabwe - Development of an Albinistic actinic damage retarding treatment incorporating Zinc Oxide and Titanium dioxide nanomaterials	Tahiru Azeko, Tamale Technical University - Reprocessing Polyethylene and Phosphogypsum Wastes into Composite Materials for Sustainable Building Applications	Ebenezer Annan, Univ. of Ghana - Local Adsorbents for Fluoride Removal from Ground-drinking Water	Winy Maboya, Vaal Univ. of Tech. - One-step synthesis of carbon nanotubes with secondary growth of carbon nanofibers: effect of chlorine, synthesis time and temperature	Moses Kigozi, AUST - Replacing doping with oxide layers in semiconductors: A review	Matthias Agne, Northwestern Univ. - JUAMI: Strategies to engineer thermal transport through microstructure	George Manyali, Kaimosi Friends University College - High bulk modulus but low Vicker's hardness: A DFT study of mechanical properties of hcp Rhenium
15:15-15:30	Maria Chinyerem Onyekanne, AUST - Mechanical and Thermal Properties of Superparamagnetic Magnetite -Polycaprolactone Nanocomposites for Localized Treatment and Ablation of Breast Tumors	Balakrishnan Subramanian, Addis Ababa Science and Technology Institute - Preparation and Characterization of Ethiopian Natural Sisal Fibre Reinforced Polypropylene Composites	Noor Gulamussen, Eduardo Mondlane Univ. - Softening during ceramic micro filtration for application on water reclamation for cooling	Michael Spencer, North Carolina State Univ. - JUAMI: Nanomanufacturing Transition Metal Oxide/CNT Foam Composite Electrodes via Electrodeposition	Ncholu Manyala, Univ. of Pretoria - Bimetallic Phosphates/Graphene Foam as Enhanced Electrode for Hybrid Supercapacitor	Timothy Tibesigwa, Makere Univ. - JUAMI: Life Cycle Assessment of Biodiesel Production from Jatropa Oil, Castor Oil and Croton Oil in Uganda	Eric Abavare, KNUST - The stability of 3C-SiC(111) on Si(111) interface: first-principals calculations
15:30-15:45	HEALTH BREAK/POSTER SESSION						

SESSION	Materials For Health	Sustainable Manufacturing and Construction	Water and Environmental Mitigation Technologies	Nanoscience/ Nanotechnology	Materials For Energy A	Education and Networking in Materials Science and Engineering - JUAMI	Computational Materials Science
	Room 1	Room 2	Room 3	Room 4	Room 5	Room 6	Room 7
15:45-16:00	Laura Fabris, Rutgers Univ. - Monitoring Communicable and Non-Communicable Diseases with SERS Probes	Said Kenai, Univ. of Blida 1 - Performance of repair mortar with natural fibers	Anita Etale, Univ. of Witwatersrand - Mercury removal from mine drainage contaminated water using thin film nanocomposite membranes	Gunnar Westin, Uppsala Univ. - Complex nano-structured sponges through solution processing	Clive Randall, Penn State Univ. - Cold Sintering: Enabling a New Manufacturing Path to All Solid State Batteries	Veronica Augustyn, North Carolina State Univ. - JUAMI - Building the SciBridge Project via Hands-on Materials Science and Engineering Experiment Kits	Adewumi Popoola, Federal Univ. of Tech. - Akure - The properties of NbRhGe as high temperature thermoelectric material
16:00-16:15		Jennifer Panashe, Ashesi Univ. - Recycling of Plastic Waste Materials: Mechanical Properties and Implications for Road Construction					
16:15-16:30	Dimitri Alexandrov, Ural Federal University - Evolution of crystals in supersaturated solutions with biomedical applications	Abel Olorunnisola, Univ. of Ibadan - Evaluation of Cellulose Pulp-Cement Composite Ceiling Boards Produced with a Locally Developed Roller Press	Usisipho Feleni, Univ. of South Africa - Electro-oxidation of 17 $\alpha$ -Ethinyl Estradiol Using Smart Nanomaterials in Water	Christian Nijhuis, Nat. Univ. of Singapore - Functional Molecular Electronics: Diodes, Memory, and Plasmon Sources	Kent Griffith, Northwestern Univ. - Oxide Materials and Mechanisms to Enable Safe and Energy-dense Fast Charging Batteries	Michael Spencer, North Carolina State Univ. - JUAMI: SciBridge: Preparing the Next- Generation of Scientists through Renewable Energy Kits	Samuel Atarah, Univ. of Ghana - Electronic and structural properties of Nihonium
16:30-16:45		Esther Anosike-Francis, AUST - Natural fibre reinforced building materials : A review				Francis Dejene, Univ. of the Free State - Characterization of titanium dioxide anatase phase synthesized using tetra isopropyl orthotitanate (TIP) and tetra-n-buty orthotitanate (TNB) by wet chemical method.	Jeremy Hitt, Univ. of Pennsylvania - JUAMI: A Low- cost, Open Source Potentiostat for Teaching Electrochemistry
16:45-17:00	Oladiran Abubakre, Federal Univ. of Tech., Minna - Development and characterization of carbon nanotube reinforced natural rubber composite for prosthetic foot application	Sun Hwi Bang, Penn State Univ. - Sustainable cold-sintered composite bricks with locally-accessible materials		Fabian Ezema, Univ. of Nigeria, Nsukka - Irradiation-Induced Effects of 8.0 MeV Carbon Ion (C++) on Nanostructured MnO <sub>2</sub> -NiO-ZnO/GO	Emmanuel Iwuoha, Univ. of the Western Cape - Nanomaterials for Amperometric Sensing, Signalling and Energy Sustainability	Jill Wenderott, Northwestern Univ. - JUAMI - Design and creation of professional development workshops that support women in STEM in Tanzania	Musa Mjankwi , NM-AIST - Unsteady MHD flow of Nanofluid with Variable Properties over a Permeable Horizontal Stretching Sheet under Thermal radiation and Chemical Reaction
17:00-17:15	Ntabeleng Hlapisi, Univ. of Zululand - Encapsulation of Porphyrins with Gold Nanoparticles for the potential treatment of Cancer and Bacterial Infections.	DK Osseo-asare, Penn State Univ. - Cuboctahedral Bamboo-Steel-Resin Composite Construction System for Mobile Architecture		Miron Kagan, V.a. Kotelnikov Institute Of Radio Electronics Of Russian Ac. Sci. - Field Ionization of Boron Acceptrs in CVD-Diamond due to Poole-Frenkel' Effect	Mmantse Diale, Univ. of Pretoria - Mixed cation-anion 3D perovskites for solar cells	Danielle Butts, UCLA - JUAMI Mini Symposium: Increasing girls' participation in higher education through women's health	Keishu Uchimura, JAIST - Ab initio evaluation of thermal conductivity for polymer crystals towards a QSPR
17:15-17:30	Theresa Ezenwafor, AUST - Processing of Magnetite Nanoparticles for Triple Negative Breast Cancer Detection	Mike Otieno, Univ. Witwatersrand - Utilization of kimberlite tailings as aggregates in concrete – strength and selected durability properties		Aleksandr Kisiuk, NUST MISIS - Magnetoelectric Properties of Laminates Based on Y+140 <sup>-</sup> -cut Bidomain Lithium Niobate Crystals	Emmanuel Ollatu, Univ. of Dar Es Salaam - Structure and composition properties of kesterite solar cells absorber with varied sputtering power of the Cu top layer	Brian Iezzi, Univ. of Michigan, Ann Arbor - JUAMI Minisymposium: The Open Computing Facility (OCF) and Life Cycle Assessment	Daniel Shadrack, NM-AIST - A Computational Study of the Role of Solvents and Conformational Fluctuation in Drug Interactions

17:30-17:45

**Emmanuel Arthur, KNUST** - Material Selection for Water Pipe by Multi-Objective Decision-Making Method: The Case of Alternative Materials for PVC Pipes.



18:00

POSTER SESSION

DAY TWO							
WEDNESDAY 11TH DECEMBER 2019							
08:00 - 08:30	Registration						
PLENARY PRESETATIONS 2 NM-AIST CONFERENCE HALL							
	Plenary Session Moderator: Nicholas Spencer						
08:30 - 09:00	<b>Soo Wahn Lee, Sun Moon University</b> - Using microstructure design of Sialon Ceramics for multi-functional properties						
09:00 - 09:30	<b>Paul Weiss, UCLA</b> - Global Opportunities in Nanotechnology						
09:30 - 10:00	<b>Kenneth Ozoemena, Univ. of Witwatersrand</b> - Manganese-Based Next-Generation Electrochemical Energy Storage Systems						
10:00 - 10:30	HEALTH BREAK						
BREAKAWAY PARALLEL SESSIONS 2							
SESSION	Materials For Health	Sustainable Manufacturing and Construction	Materials for Agriculture and the Environment	Nanoscience/ Nanotechnology A	Facilities and Instrumentaion	Materials For Energy	Water & Environmental Mitigation Technologies
	Session chair: Stephen Ojwach						
	Room 1	Room 2	Room 3	Room 4	Room5	Room 6	Room 7
10:30 - 11:00	<b>Alejandro Sosnik, Technion-Israel Institute of Technology</b> - The Potential of Amphiphilic Nanobiomaterials in Drug Delivery and Targeting.	<b>Nima Rahbar, MIT</b> - Bioinspired Design of Next Generation Structural and Thermal Materials	<b>Patrick Sharrock, Paul Sabatier Univ.</b> - Engineering phosphates from recycled animal bones	<b>Fiorenzo Vetrone, Institut National de la Recherche Scientifique</b> - Upconversion Nanoparticles	<b>Greg Boebinger, Florida State Univ.</b> - U.S. National High Magnetic Field Laboratory (MagLab): Energy, Nanoscience, and Medicine	<b>Ange Nzihou, IMT Mines Albi</b> - Biomass and waste valorisation in materials for thermal energy storage (TES) and applications	<b>Wondimagegne Mengistu, Ethiopian Biotechnology Institute</b> - Zeolites for the Purification of Water (Removal of Hardness and Heavy Metal Specifically Cr and Pb)
11:00 - 11:30	<b>Joey Chifamba, Univ. of Zimbabwe</b> - Advances in materials nano functionalization for cancer and CVDs early diagnosis, targeted and triggered drug delivery	<b>Said Kenai, Univ. of Blida 1</b> - Performance of Stabilized Earth with Wheat Straw and Slag	<b>Force Thema, Botswana Univ. of Agriculture and Natural Resources</b> - Bio economy and advanced Agriculture: How establishment of robust bio nanotechnology platform can make it a reality.	<b>Joelle Margot, Université de Montréal</b> - Plasmas : A Unique Tool for the Synthesis and Processing of Thin Films and Nanomaterials	<b>Samuel Chigome, BITRI</b> - Electrospinning for Analytical Device Fabrication	<b>Mohamed Chaker, INRS Canada</b> -Plasma Deposition of Oxide Materials for Photonics and Energy	<b>Mpitloane Hato, Univ. of Limpopo</b> - Facile synthesis of polymer hydrogel nanocomposites as adsorbents with improved performance towards removal of organic pollutants from wastewater
11:30 - 11:45	<b>Yiporo Danyuo, Ashesi Univ.</b> - Drug Release and Laser Application of Nanocomposite Hydrogels on Cancer Cell Viability	<b>Ifeyinwa Obianyo, AUST</b> - Strength and Morphology of Stabilized Lateritic Soil for Sustainable Building Applications	<b>Peter Echassa, Kenyatta Univ.</b> - An Efficacious Supplementary Fertilizer Formulation from Agricultural Farm Biomass	<b>Cecil King'ondou, BIUST</b> - Gas Phase C-N Coupling over Alpha Manganese Oxide Nanomaterials: A Route to Large-Scale Green Synthesis of Imines	<b>Tessema Guebre, National Science Foundation</b>	<b>Abdulhakeem Bello, AUST</b> - High Voltage Hybrid Supercapacitors in Aqueous Electrolyte	<b>Temesgen Girma Kebede, Univ. of South Africa</b> - Removal of pharmaceutical drugs from wastewater using nanofibers
11:45 - 12:00	<b>Wubshet Girma, Wollo Univ.</b> - Heteroatom-doped Carbon Quantum Dots: Microwave-assisted Synthesis and its Biomedical Applications	<b>Emeso Ojo, AUST</b> - Influence of Fibres on Strength and Resistance Curve Behaviour of Extruded Alkali Activated Natural Clays	<b>Joshua Idassi, Empowering Africa Consulting Group</b> - Precision Sustainable Agriculture for Long Term Sustainability of Agriculture and the Environment	<b>Hailemariam Gebru, Technology and Innovation Institute of Ethiopia</b> - Catechol End-Functionalized Polysarcosine for In-situ Synthesis and Stabilization of Silver Nanoparticles	<b>Eric Garfunkel, Rutgers Univ.</b>	<b>Chibueze Amanchukwu, Stanford Univ.</b> - Controlling Lithium-ion Solvation for Improved Lithium Metal Deposition	<b>Emmanuel Nyankson, Univ. of Ghana</b> - Removal of Water-Soluble Dyes and Pharmaceutical Wastes by Combining the Photocatalytic Properties of Ag3PO4 with the Adsorption Properties of Halloysite.

12:00 - 12:15	<b>Stella Dozie-Nwachukwu, Sheda Science and Technology Institute</b> - Prodigiosin induced apoptosis and the cytoskeletal changes on breast cancer cell line MDA-MB-231.	<b>Philbert Nshimiyimana, Institut Zie &amp; Univ. Liège</b> - Effect of production and curing conditions on performances of compressed earth block stabilized with calcium carbide residue: Kaolinite vs quartz-materials	<b>Patrice Okoye, Nnamdi Azikiwe University Awka</b> - Establishing the Feasibility of Substituting Synthetic Preservatives with Natural Phytochemicals in the Food and Allied Industries: Orange Juice Preservation.	<b>Miron Kagan, V.a. Kotelnikov Institute Of Radio Electronics Of Russian Ac. Sci.</b> - Electrical Domains in Short-Period GaAs/AlAs and InAs/AlSb Superlattices	<b>Alain Gibaud, IMMM, CNRS UMR 6283, Le Mans Université</b> - From incoherent to coherent scattering at synchrotron beamlines : the power of 3D tomography	<b>Fabian Ezema, Univ. of Nigeria, Nsukka</b> - Synthesis and Characterization of GO/Mn3O4 Nanocomposite Film Electrode Materials for Supercapacitor Applications	<b>Sean Perry, CSIR - AMD</b> treatment using modified sisal/chitosan nanocomposite as an adsorbent
12:15 - 12:30	<b>Obinna Ofoegbu, Univ. of Agriculture</b> - Fabrication of Chitosan-based Molecularly Imprinted filters With Binding Sites for Nicotine-Phenylalanine Amide Blend, for Sequestration of Carcinogens from Cigarette Smoke.	<b>Mike Otieno, Univ. of Witwatersrand</b> - Curing of slag concretes at low temperatures: effect on strength and durability properties	<b>Mary Afenyie-Abekah, Univ. of Ghana</b> - Design and fabrication of a control system for a photovoltaic-greenhouse solar dryer and performance evaluation of the dryer.	<b>Alexander Temirov, NUST MISiS</b> - Silicon-Carbon Films Synthesis by High-Frequency Deposition		<b>Delvina Tarimo, Univ. of Pretoria</b> - Sulphur-doped reduced graphene oxide material with improved electrochemical performance for supercapacitor applications	<b>Dickson Andala, Multimedia Univ.</b> - Mixed Metal Oxide-Biopolymer Nanocomposites for Anion and Heavy Metal Water Remediation

12:30 - 14:00 LUNCH BREAK

**BREAKAWAY PARALLEL SESSIONS 3**

SESSION	Materials For Health	Sustainable Manufacturing and Construction	COACH Workshop	Nanoscience/ Nanotechnology A	Nanoscience/ Nanotechnology B	Materials for Energy	Water & Environmental Mitigation Technologies
	Room 1	Room 2	Room 3	Room 4	Room 5	Room 6	Room 7
14:00 – 14:30	<b>Naomi Matsuura, Univ. of Toronto</b> - Acoustically activated biomaterials for personalized medicine	<b>DK Osseo-Asare, Penn State Univ.</b> - Peer-to-Peer (P2P) Interclass Open Design and Innovation Network for Upcycling E-waste	<b>COACH Workshop: Prof. Geri Richmond, University of Oregon, USA</b>	<b>Jun Lou, Rice Univ.</b> - The Emergence of Multifunctional Two-Dimensional Materials	<b>Gen Tatara, Riken Cems</b> - Recent developments in nanomagnetism and spintronics	<b>Benjamin Agyei-Tuffor, Univ. of Ghana</b> - Organic and Perovskite Solar Cells: The Influence of Pressure, Substrate and Morphology on interfaces and performance	<b>Qilin Li, Rice Univ.</b> - Multifunctional nanocomposite coatings for desalination and water purification
14:30 – 14:45	<b>Michinao Hashimoto, Singapore Univ. of Tech. and Design</b> - Additive Manufacturing for Fabrication of Microfluidic Devices	<b>Maina Maringa, Central. Univ. of Tech., Bloemfontein</b> - Ameliorating the Effects of High Temperature on Polymers and in Particular Polypropylene in Laser Sinter Additive Manufacturing		<b>Rashidah Akoba, Ithemba Labs &amp; Univ. of South Africa</b> - Preparation and characterization of Nanostructured Black Moly Coatings as selective solar absorbers by wet chemical etching	<b>Anna Krzykawska, Jagiellonian Univ.</b> - All in One: N-Heterocyclic Carbenes for the Self-Assembly of Monolayers of Superior Quality and Stability	<b>Adebayo Fashina, AUST/Gollis University</b> - Exploring the possibility of perovskite solar cells dominating the solar technology market by 2030.	<b>Hlobisile Kgomo, Univ. of South Africa</b> - Removal of selected antibiotics from water using silk fibroin-based adsorbents derived from Argemone mimosae silkworm cocoons
14:45-15:00		<b>Amos Muiruri, Central Univ. of Tech., Bloemfontein</b> - Application of Phenomenological Modelling in the Development of Database for Additively Manufactured Ti6Al4V (ELI): A Review		<b>Maram Ali Ahmed Musa, Universiti Putra Malaysia</b> - Synthesis of Nanocomposite Magnetite/Titania Nanocomposite for photocatalytic and Magnetic application	<b>Krzysztof Jankowski, Jacob of Paradies Univ.</b> - Effect of growth carbon structure as a wire, using in situ HV AC arc discharge.	<b>Julius Mwabora, Univ. of Nairobi</b> -Dye-Sensitized Solar Cells (DSSCs): Theory, Technology and Current Status	<b>Innocent Nkurikiyimfura, Univ. of Rwanda</b> - Wastewater treatment using starch-functionalized magnetite nanoparticles.

15:00 – 15:15	<b>Killian Onwudiwe, AUST</b> - Strain-Displacement Analysis for the Viscoelastic Parameters of Breast Cancer cells Using MATLAB	<b>Tido Tiwa Stanislas, AUST</b> - Impact of hornification treatment in the physico-chemical and mechanical properties of raffia fibre and okra fibres		<b>Honita Ramphul, Univ. of Mauritius</b> - Investigation of sugarcane bagasse derived cellulose-based nanocomposite scaffolds for tissue engineering applications	<b>Piotr Cyganik, Jagiellonian Univ.</b> - Molecule-substrate interface analysis by SIMS	<b>Tumaini Mkwizu, Univ. of Witwatersrand</b> - Mixed Metal Electroceramic Energy Materials: Doping Strategies in Tuning Solid Phase Structure and Electrolytic Effects	<b>Kanayo Oguzie, Federal University Of Technology, Owerri</b> - Electrochemical Degradation of Dye Contaminated Water
15:15 – 15:30	<b>Mervin Meyer, Univ. of the Western Cape</b> - The antimicrobial and immune modulatory effects of bio-inspired nanoparticles produced from indigenous flora of South Africa	<b>Julio Diarte, Penn State Univ.</b> - Tapping into Urban Recycling for Low-cost Materials. Designing Acoustic Panels with Waste Cardboard		<b>Michael Musembi, Univ. of the Free State</b> - Citrate–nitrate auto-combustion synthesis of zinc zirconate ZnZrO <sub>3</sub> nanocomposite	<b>Bathusile Masina, CSIR</b> - Effect of laser wavelength in PLD in the orientation and thermochromic properties of VO <sub>2</sub> (M1) on a glass substrate	<b>Benjamin Ombwayo, Masinde Muliro Univ. of Science And Tech.</b> - Device Simulation of Sb <sub>2</sub> S <sub>3</sub> Solar Cells by SCAPS-1D software	<b>Mary Simiyu, Univ. of Nairobi</b> - Design of Low-cost water Purification System based on Nano-technology
<b>15:30 – 16:00</b>	<b>HEALTH BREAK</b>						
15:45 – 16:00	<b>Nikiwe Mhlanga, Mintek</b> - Application of Ag and Au mercaptobenzoic labelled Surface enhanced Raman Spectroscopy probes for detection of Plasmodium falciparum	<b>Kabiru Mustapha, Kwara State Univ.</b> - Mechanical properties of Calcium carbonate/Eggshell particle filled polypropylene Composites		<b>Giday Welegergs, Univ. of South Africa</b> - Synthesis and optimization of copper oxide (CuO) nanocoatings on copper substrate as selective solar absorbers	<b>Cosmas Muiva, BIUST</b> - Low Cost Synthesis of CuO Nanostructures: Challenges and Opportunities	<b>Joseph Asare, Univ. of Ghana</b> - PEDOT/NiO Composite Hole Transport Layer for Perovskite Solar Cells	<b>Augustine Appiah, Univ. of Ghana</b> - Local Adsorbents for Mercury and Arsenic Removal from Contaminated Water in the Mining Communities in Ghana
16:00 - 16:15	<b>Stephen Ojwach, Univ. of KwaZulu Natal</b> - Palladium(II) complexes of N <sup>N</sup> 2,6-bis(benzazole) ligands: Structural, kinetics of ligand substitution reactions, DNA binding and anti-cancer activity studies	<b>Monnamme Tlotleng, CSIR</b> - LENS manufactured γ-TNB turbine blade using Laser "in situ" alloying approach		<b>Ramakwalah Chokwe, Univ. of South Africa</b> - Preparation and characterization of electrospun nanofiber from Mondia whitei seed extract	<b>Monika Szwed, Jagiellonian Univ.</b> - Preparation of Chemically Inert Carbon Nanomembranes by Electron Irradiation Process	<b>Johannes Awudza, KNUST</b> - Development of Nanomaterials for Solar Cell Applications: Options and Challenges	<b>Gunda Chembea, Taita Taveta Univ.</b> - Redefining the water utilities in Kenya; A case study of TAVEVO
16:15 - 16:30		<b>Ines Ngassam, Univ. of Cape Town</b> - Potential for agro-waste materials to be used for infrastructure in materials in Africa		<b>Ibrahima Ngom, Univ. of South Africa</b> - Biosynthesis of Nickel Oxide Nanoparticles Using Flowers, Seeds, and Leaves Extract of Moringa Oleifera: Structural, Optical, and Morphological Properties	<b>Eduardo Vega, Youngstown State Univ.</b> - Optical and Microstructural Properties of Sputter-Deposited Gallium Oxide Films	<b>David Dodoo-Arhin, Univ. of Ghana</b> - Inkjet-Printed Graphene Electrodes for Dye-Sensitized Solar Cells	
16:30-18:30	<b>THE FUTURE OF WORK AND THE WORKER</b> <b>Panelists:</b> <b>Diran Apelian, Metal Processing Institute, Worcester Polytechnic Institute</b> <b>Martin Burt, Fundacion Paraguaya and Worcester Polytechnic Institute</b> <b>Sajitha Bashir, World Bank Group</b> <b>Ange Nzihou, IMT Mines Albi-Carmaux</b>						



DAY THREE							
THURSDAY 12TH OF DECEMBER 2019							
08:00 - 08:30		Registration					
PLENARY PRESETATIONS 3 NM-AIST CONFERENCE HALL							
08:30 - 09:15		Federico Rosei, INRS-EMT, Univ. du Quebec, Canada - Fabricating, processing and characterizing inorganic, organic and biocompatible nanomaterials					
09:15 - 10:00		Shelley Claridge, Purdue University - Standing, Lying, and Sitting: Phospholipid Striped Phases as Templates for Nanomaterials at Interfaces					
10:00 - 10:30		HEALTH BREAK					
BREAKAWAY PARALLEL SESSIONS 4							
SESSION	Materials For Health	Sustainable Manufacturing and Construction	Water and Environmental Mitigation Technologies	Nanoscience/ Nanotechnology	Materials for Energy A	Materials For Energy B	Computational Materials Science
	Room 1	Room 2	Room 3	Room 4	Room 5	Room 6	Room 7
10:30 - 11:00	Fulvio Ratto, Istituto di Fisica Applicata - Hybrid devices exploiting the photothermal and photoacoustic features of plasmonic systems	Patrick Mensah, Southern Univ. - Study of Thermo-Mechanical Properties of Selective Laser Melting Processed Materials: Aluminum, 316L Stainless	Tom Lindstrom, KTH and SUNY Stony Brook - The World of Nanocellulosic Applications (talk delivered by Benjamin Hsaio)	Giovanni Fanchini, Univ. of Western Ontario - Graphene and two-dimensional (2D) materials for water purification and	Francesca Iacopi, Univ. of Technology, Sydney - Engineering graphene on silicon for electrochemical applications	Jennifer Rupp, MIT - Solid State Ceramic Battery Electrolyte and Low Temperature Cell Processing	Nicola Seriani, ICTP - Ab-initio simulations of water oxidation at a hematite surface
11:00 - 11:15	Abram Madiehe, Univ. of the Western Cape - Peptide-functionalized gold nanoparticles for enhanced targeted drug delivery and efficacy	Eubert Mahofa, Harare Institute of Tech. - Synthesis of bio-lignin based adhesives	Cheruiyot Lagat Silah, Jaramogi Oginga Odinga Univ. of Science and Tech. - Leaching of herbicide metribuzin under field conditions in different types of tropical soils around Lake Victoria basin	Richard Moutloali, Univ. of Johannesburg - Photodegradation Of Organic Dyes Using Cobalt Based Metal Organic Framework (ZIF-67) Catalysts Supported On Graphene Oxide: An Experimental and Theoretical Report	Kandis Abdul-Aziz, Univ. of California, Riverside - Elucidating Structure-Property Relationships for the Rational Design of Nanoparticles on Lanthanide Perovskites	Floyd Lionel Mabiala, iTHEMBA Labs/Univ. of the Western Cape - Pb-Sn binary perovskite solar cells by chemical vapor deposition	Paul Barasa, Mmust - Dynamical and Mechanical stability of FeO <sub>2</sub> at elevated pressures
11:15-11:30		Cecilia China, NM-AIST - Stabilization of hides/skin to get leather by using combination of vegetable tannins from local plants and aluminium sulphate				Lineo Mxakaza, Univ. of Witwatersrand - Preparation of Cu <sub>2</sub> ZnSnS <sub>4</sub> /N-MWCNTs nanocomposite as potential Pt free counter electrode material in dye sensitized solar cells	
11:30 - 11:45	Lucien Weiss, Technion-Israel Institute of Technology - Label-Free Biosensing by Ultrasensitive Supercritical Angle Refractometry	Joshua Asante, Univ. of Ghana - Fabrication and Characterisation of Particle/Cellulose fibre Reinforced Polymer Biocomposites for Packaging Applications	Nura Shanono, Bayero Univ. - Assessing the Impact of Human Behaviour on Water Resource Systems Performance: A Conceptual Framework	Abera Ambaye, Univ. of South Africa - Ultra-sensitivity of Cu-MOF/N-doped graphene oxide composite based screen-printed electrodes for electrochemical detection of Pb (II)	Adewale Adeloye, Umaru Musa Yar'adua Univ. - Effects of extended pi-conjugation bonds on the photophysical and electrochemical properties of Ru(II) polypyridyl complexes as dye-sensitized solar cells (DSSCs)materials	Hezekiah Buay Sawa, Univ. of Dar Es Salaam - Effects of Annealing conditions on the properties of copper Zinc Tin Selenide (CZTSe) absorber layer for thin film solar cells	Kenji Oqmhula, JAIST - Ab-initio Evaluation of Binding Energy in Cyclodextrin Inclusion Complex Systems
11:45 - 12:00	Andrei Turutin, Nat. Univ. of Sci. and Tech. MISIS - Suppression of acoustic noise in magnetoelectric sensors based on bidomain lithium niobate for biomedical applications	Cecilia Wandiga, CSTI - Nairobi - (to be delivered by Esther Obonyo) Regional Growth Opportunities: Using ICT and Circular Bioeconomy Practices to Link Agriwaste as an Industrial Raw Material Input	Hossein Miraji, Univ. of Dodoma - Society Engagement in Low-Cost Percussion Water-Well Drilling Technology for Rehabilitation of Africa Economy: Moving from Theory to Practice	Nandipha Botha, Univ. of the Western Cape - Effects of reaction temperature and cadmium source on the optical, morphological characterization and cytotoxicity studies of CdSe/ZnSe	Raesibe Ledwaba, Univ. of Limpopo - Multiscale Modelling of Spatio-Temporal Dynamics in Li- and Mn-Rich Cathode Materials	Nobanathi Maxakato, Univ. of Johannesburg - Pt-Sn nanoparticles supported on Carbon Nanodots as efficient anode catalysts for direct alcohol fuel cells	Genki Iman Prayago, JAIST - Ground state determination of LiVX <sub>2</sub> system using Diffusion Monte Carlo

12:00 - 12:15	<b>David Obada, Ahmadu Bello Univ.</b> - Direct conversion assisted by compaction and the gradient of mechanical properties of kaolin reinforced hydroxyapatite	<b>David Dodoo-Arhin, Univ. of Ghana</b> - Plastic Fuel Conversion and Characterisation: A Waste Valorization Potential for Ghana	<b>Tatenda Madzokere, Midlands State Univ.</b> - Filtration properties and Anti-biofouling characteristics of Electrospun Nano Silver/Polysulfone –Nanofibrous Membrane for Water Purification	<b>Sixberth Mlowe, Univ. Dar es Salaam</b> - Structural Influence of Single Source Precursor on the Morphology of Lead and Iron Sulfide Thin Films	<b>Ilya Kubasov, NUST MISiS</b> - Low-frequency vibration sensor with a sub-nm sensitivity using a bidomain lithium niobate crystal	<b>Ugochukwu Madukasi, Federal College Of Education, Eha-amufu</b> - Potentials of Biomass for Improved Energy Generation. A Step in Steering West Africa Towards Renewable Energy Use	<b>Kennedy Gitari, Masinde Muliro Univ. of Science and Tech.</b> - Band Structure and Optical Absorption in Copper Oxides
12:15 - 12:30	<b>Isabelle Niyonshuti, Univ. of Arkansas</b> - Synthesis and Characterization of Poly Ethylene Glycol (PEG)-Based Injectable Anionic Hydrogels for Protein Delivery in Wound Healing Applications	<b>Maina Maringa, Central Univ. of Tech., Bloemfontein</b> - The combined effect of mercerisation, silane treatment and acid hydrolysis on the mechanical properties of sisal fibre/epoxy resin composites			<b>Itani Madiba, Univ. of South Africa/ iThemba LABS</b> - Synthesis, modification and radiation of vanadium oxide based thin films for opto-electronic applications	<b>Celine Omondi, Masinde Muliro Univ. of Science and Tech.</b> - Effects of the substrate on the electronic properties of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> films	<b>James Sifuna, Technical Univ. of Kenya/Univ. of Canabria</b> - Construction of a second-principles model for WSe <sub>2</sub>

12:30 - 14:00

LUNCH BREAK

**BREAKAWAY PARALLEL SESSIONS 5**

SESSION	Materials For Health	Mining and Mineral Processing/Sustainable Manufacturing and Construction	Materials for Agriculture and the Environment	Education/Networking In Materials Science & Engineering	Materials for Energy A	Materials For Energy B	Computational Materials Science
				<b>Moderator: Margaret-Anne Wampamba</b>			
	<b>Room 1</b>	<b>Room 2</b>	<b>Room 3</b>	<b>Room 4</b>	<b>Room 5</b>	<b>Room 6</b>	<b>Room 7</b>
14:00 – 14:15	<b>David Obada, Ahmadu Bello Univ.</b> - Facile synthesis and fracture toughness evaluation of catfish bones derived hydroxyapatite.	<b>George Kato, Univ. of Dar Es Salaam</b> - Petrography of the Maruku Sands in Kagera, Tanzania	<b>Alois Ngonyani, Government Chemist Laboratory Authority, Dar Es Salaam</b> - Mixed Iron Oxide Nanoparticle-Based	<b>PANEL ON HIGHER EDUCATION IN AFRICA: Winston Tumps Ireeta, Makerere Univ.</b> - Capacity Building in Materials Science and Solar Energy in Africa;	<b>Clara Santato, Polytechnique Montreal</b> - Towards a circular vision for electronics	<b>Tom Oder, National Science Foundation (US)</b> - Optimization of Ti and Mo contacts for SiC Schottky Barrier Diodes	<b>Nicola Marzari, EPFL</b> - Novel Two-dimensional Materials from High-throughput Computational Exfoliation
14:15-14:30		<b>Kojo Konadu, Kyushu Univ.</b> - Characterization of biotreated natural organic carbon by spectroscopic and thermogravimetric techniques: application to gold extraction from carbonaceous earth materials	<b>Aderonke Omole, Ahmadu Bello Univ.</b> - Investigation of Prospective of Ethanolic Annona senegalensi Extract for Preventing Fungal Pathogen Induction for Enhanced Seed Sprouting	<b>Kevin Jones, Univ. of Florida</b> - The Impact of Materials on Society;			
14:30 – 14:45	<b>Reuben Pfwkwa, Stellenbosch Univ.</b> - Pyrrolidone-based Polymers: Synthesis, Self-assembly and Biomedical Applications	<b>Abraham Ebonu, AUST</b> - Barite as an Industrial mineral in Nigeria: Occurrence, Utilization, Challenges and Future	<b>Martin Eglewogbe, Univ. of Ghana</b> - Room Temperature Gas Sensing Using ZnO <sub>2</sub>	science and technology to current applications in the local scenes.	<b>Balla Diop Ngom, Univ. Cheikh Anta Diop</b> - Novel Green Biosynthesis of Vanadium Pentoxide Using Water Extraction of White Hibiscus Sabdariffa Leaves as Electrode Material for Supercapacitor Applications	<b>Ginena Shombe, Univ. of Zululand</b> - Direct solvent-free synthesis of bare $\alpha$ -NiS, $\beta$ -NiS and $\alpha$ - $\beta$ -NiS composite for high-performance supercapacitors and overall water splitting activity	<b>Ismaila Dabo, Penn State Univ.</b> - Computational Screening of Photocatalytic Materials for Solar-to-Hydrogen Conversion

14:45-15:00		<b>Takalani Madzhivandila, Univ. of Johannesburg</b> - Utilization of South African spent foundry sand in brick manufacturing	<b>Muvhango Rasalanavho, Univ. of Kwazulu-Natal</b> - Mineral and nutritional contents of five species of wild growing mushrooms from South Africa		<b>Brian Owuor, Univ. of Nairobi</b> - Effect of TiO <sub>2</sub> Blocking Layer on Photovoltaic Characteristics of TiO <sub>2</sub> /Nb <sub>2</sub> O <sub>5</sub> Dye Sensitized Solar Cells	<b>Amal Azuha, Shibaura Inst. of Tech.</b> - Quaternary Quasicrystal Alloys for Hydrogen Storage Technology	
15:00 – 15:15	<b>Pamhidzai Dzomba, Bindura Univ.</b> - Formulation of Food-based Alternatives Remedies for Type 2 Diabetes	<b>Farai Banganayi, Univ. of Johannesburg</b> - Optimisation of an Environmentally Friendly Foundry Inorganic binder Core Making Process for the Replacement of an Organic Binder.	<b>Stephen Majoni, BIUST</b> - Assessing the effects of precursor material carbon content on the heavy metal adsorption activity of synthesized zeolites	<b>Kwadwo Osseo-Assare, Penn State Univ.</b> - Sika ano yenam sen sekan. Money is sharper than the sword: On teaching and learning materials engineering with African proverbs	<b>Vianney Andrew Yiga, Makerere Univ.</b> - Thermogravimetric analysis of agricultural residue carbonized briquettes for domestic and industrial applications	<b>Munashe Chikweche, Harare Inst. of Tech.</b> - Quaternary Quasicrystal Alloys for Hydrogen Storage Technology	<b>Cliffton Masedi, Univ. of Limpopo</b> - Beyond Li-ion: Computational Modelling Studies on Stability of Li-S-System
15:15 – 15:30	<b>Willie du Preez, Central Univ. of Technology, Free State</b> - Production of Certified Customised Titanium Medical Implants through Additive Manufacturing	<b>Godfrey Mwendenusu, Univ. of Dar Es Salaam</b> - An Approach to Mineral Prospectivity Through Integrated Studies. Applicability to Kikombo, Dodoma, Tanzania.	<b>Edina Meela, Univ. of Dar Es Salaam</b> - Comparison of tomato shelf life using partial deacetylated chitin nanofibers and chitosan as a coating films		<b>Kwena Modibane, Univ. of Limpopo</b> - Electrocatalytic properties of metal organic framework composites for hydrogen technology	<b>Andrew Eloka-Eboka, Univ. of KwaZulu-Natal</b> - Biodiesel Production in Selected Feedstocks: the impact of hybridization to prominent properties and transesterification processes	<b>Vitalis Anye, AUST</b> - Finite Element Modeling of Nanoindentation of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> thin films for Solar Cell and Light Emitting Device Applications
15:30 - 15:45	<b>Nowsheen Goonoo, Univ. of Mauritius</b> - Seaweed derived polysaccharide-based nanofibrous scaffolds for bone repair: Enhanced in vitro multicellular response and reduced in vivo foreign body response	<b>Stanford Mudono, NUST</b> - A study on the effect of different parameteris on CYANEX 272 viscosity system during cobalt-nickel separation			<b>Elizabeth Dickey, North Carolina State Univ.</b> - Integrating Programming and Data Sciences into the Materials Science Curriculum	<b>Francis Wanjala, Univ. of Nairobi</b> - Solar Thermal Conversion Efficiency of Textured and Untextured Aluminum Substrate Coated with TiO <sub>2</sub> -Bound	<b>Stephen Nyandoro, Univ. of Dar Es Salaam</b> - Castor Oil Bio-diesel Production Employing Castor oil Templated Heterogeneous Acid Catalysts
15:45-16:00	<b>Obinna Ofoegbu, Univ. of Agriculture</b> - Deracination of Chitosan from locally sourced Millipede ( <i>Eurymerodesmus</i> spp.) and Establishment of its spectroscopic and Physico-chemical properties.	<b>Joseph Agboola, Federal Univ. Tech., Minna</b> - Effects of Cooling Rate During Casting on the Corrosion Resistance of 6XXX Aluminum Alloy			<b>Blessing Rikhotso, Univ. of Limpopo</b> - Simulations Synthesis of Na <sub>0.22</sub> TiO <sub>2</sub> Nanosphere at Varied Temperatures: Beyond Li-ion Batteries	<b>Matthias Ugwu, Federal College of Education Eha-amufu</b> - Effects of Palm Kernel ( <i>Elaeis guineensis</i> ) Cake on Sub-Bituminous Coal Briquette for Energy Generation.	<b>Shola Kolawole, AUST</b> - Modeling Studies of Stress Corrosion cracking in a low carbon steel
16:00-16:15	<b>Pamhidzai Dzomba, Bindura Univ.</b> - Formulation of an anti-alopecia cream from <i>dicerocaryum senecioides</i> flavonoids	<b>Arnold Chakona, Harare Institute of Tech.</b> - Production of concrete roof tile using fly ash in partial replacement of cement		<b>Mainak Ghosh, Jadavpur Univ.</b> - Establishing a generic process framework for design and analysis of materials based on visual perception: Study through two cases	<b>Godwin Kalu-Uka, AUST</b> - Benchmarking the potentials of insect biomass both as a renewable energy resource and a high-value carbon resource.	<b>Mesfin Ibido, Dilla Univ.</b> - Determinants of rural household effective demand for biogas technology in southern Ethiopia	<b>Hasani Chauke, Univ. of Limpopo</b> - Molecular dynamics study of Fe <sub>50-x</sub> M <sub>x</sub> Al <sub>50</sub> ternary alloy (M=Ag, Pt, Pd)

16:15 – 16:30	<b>Shingirayi Zengeni, Univ. of Zimbabwe</b> - Enhanced effectiveness of Pt. angolensis-based nano-emulsified system for topical delivery against skin carcinomas	<b>Odette Ngasoh Fayen, AUST</b> - Mechanical Performance of a Novel Epoxy Nanocomposite for Coating Applications			<b>Adeniyi Ogunlaja, Nelson Mandela Univ.</b> - Electrochemical oxidation of dibenzothiophene and 4,6-dimethyldibenzothiophene on a silver-doped polyaniline/carbon electrode	<b>Mmantse Diale, Univ. of Pretoria</b> - Optimization of hematite to improve photocurrents and lifetimes in PEC water splitting	
16:30-16:45							
<b>17:00 - 18:30</b>	<b>POSTER SESSION</b>						

DAY 4						
FRIDAY 13TH OF DECEMBER 2019						
BREAKAWAY PARALLEL SESSIONS						
SESSION	PANEL: African Mining and Minerals Beneficiation Strategy: Challenges and Opportunities	Sustainable Manufacturing and Construction	Education and Networking in Materials Science and Engineering	Nanoscience and Nanotechnology	Materials for Energy	Water & Environmental Mitigation Technologies/ Computational Materials Science
	Room 1	Room 2	Room 3	Room 4	Room 5	Room 6
08:30-09:00	<b>PRESENTATION and DISCUSSION: Beneficiating South Africa's Mineral Resources for Industrial Development</b> - Silethelwe	<b>Esther Obonyo, Penn State Univ.</b> - Drawing Down Building Material Matters at the Human Scale Symposium	<b>Ines Ngassam, Univ. of Cape Town</b> - Shaping and driving the African research agenda – a case for African researchers to be more proactive	<b>Hao Gong, National University of Singapore</b> - Realization and properties of optically transparent and electronically conducting semiconductors	<b>Sarath Witanachchi, Univ. of South Florida</b> - Energy harvesting with Solar and Thermoelectric materials: A novel hybrid concept	<b>Benjamin Hsiao, Center for Integrated Electric Energy Systems, Stony Brook</b> - Sustainable water purification using biomass
09:00-09:15	Chikosha, Dept. of Science and Innovation, Republic of South Africa	<b>Edward Rwegasila, Univ. of Dar Es Salaam</b> - Nanostructured cellulose fibrils from banana rachis prepared through nitro-oxidation: structure and mechanical properties	<b>Margaret-Anne Wampamba</b> - How to get Funded and the Importance of International Collaborations	<b>Ngesa Ezekiel Mushi, Univ. of Dar Es Salaam</b> - Chitin nanofibrils for materials of high mechanical performance	<b>Wycliffe Isoe, Masinde Muliro Univ.</b> - Optical Modeling of TCO Based FTO/TiO2 Multilayer Thin Films for Silicon Solar Cell Application	<b>Giuseppe Pellicane, Univ. of KwaZulu-Natal</b> - Colloidal interactions in molecular simulations of globular protein solutions
09:15-09:30		<b>Jonathan Dessi-Olive, Kansas State Univ.</b> - Design and Construction of the Ekialo Kiona Radio Pavilion, Mfangano Island, Kenya	<b>Teiji Kimball, PHIRST Labs</b> - Owning Our Future - Closing the Technology Void Through Collaborative Applied Project-Based Learning and Robotic 3D Community-Based Laboratory Networks	<b>Amos Kiyumbi, Univ. of Dar Es Salaam</b> - Nanoparticle Synthesis, Characterization And Functionalization	<b>Emmanuel Iwucha, Univ. of the Western Cape</b> - Nanomaterials for Amperometric Sensing, Signalling and Energy Sustainability	
09:30-09:45		<b>Marzieh Kadivar, Univ. of Sao Paulo</b> - (to be delivered by Holmer Savastano) From minimally processed materials to fibers for composite reinforcement – applicability of bamboo in the constructed environment		<b>Pendo Biyamo, Univ. of Dar Es Salaam</b> - Potential Use of Cotton Fabric Waste through Nanotechnology	<b>Stanford Mudono, NUST</b> - Investigation on the potential production of diesel from waste tire.	<b>Kennedy Khaemba, Masinde Muliro Univ. of Science and Tech.</b> - Weyl Chirality in Topological Semimetal Tantalum Phosphide
09:45-10:00		<b>Bathusile Masina, CSIR</b> - Microstructure and mechanical properties of direct laser deposited IN718 specimens				
<b>10:00-10:30</b>	<b>HEALTH BREAK</b>					
10:15-11:45	Discussion on the future of the African MRS					

11:45-12:00	Closing Session - President of the African MRS, Senior Administrators from NM-AIST, Representatives from Tanzania
12:00-13:00	<b>LUNCH</b>
13:00-15:00	African MRS Board meeting

POSTER PRESENTATIONS		
First name	Last name	Poster title
George	Achieng'	Preparation and characterization of fish scales biochar and application in the removal of anionic indigo carmine dye from aqueous solution
Mahmood	Akbari	Electrical tunability of surface tension of Vertical Graphene Nanosheets:
Moussa	Bakayoko	Synthesis and Characterization of Zinc Oxide Nanoparticles in Powders and in Thin Films using Corn Husk extract via green chemistry
Numfor	Bih	The Effect of Natural Fibre Reinforcement on Compressive Strength of Clay and Fly Ash Geopolymer
Numfor	Bih	The Effect of Natural Fibre Reinforcement on Compressive Strength of Clay and Fly Ash Geopolymer
Romang	Bosigo	Effects of Ce doping on the morphological, structural, optical and electrical properties of CuO nanomaterials prepared by hydrothermal synthesis.
Maureen	Chijioke-okere	Synthesis, characterization and photocatalytic evaluation of PES/ZnO-CeO <sub>2</sub> films in the removal of paracetamol in aqueous solution
Admire	Dube	Differential Protein Corona Composition And Binding Kinetics Of Human Serum To PLGA And PCL Nanoparticles
Phindani	Dube	EFFECT OF ANNEALING ON THE MORPHOLOGY AND STRUCTURE OF CuSbS <sub>2</sub> NANOCRYSTALLINE THIN FILMS
Heba	Elfaig	Preparation and characterization of chitosan/silver nanocomposite and its application on Nile water as antibacterial material
Andrew C.	Eloka-Eboka	Effect of pith/fibre separation, binders and hybridization on bagasse briquettes energy density
Adama	FALL	Transformation of Nickel (II) Acetate Tetrahydrate to Nickel Oxide Nanoparticles Synthesized Using Peel of Citrus Sinensis by Green Synthesis Process
Tlotlo	Gabasiane	A Review: Recovery of Iron & Copper from smelter slag
HENOK	GEBRETINSAE	BIOSYNTHESIS OF Ni <sub>2</sub> O <sub>3</sub> NANOCOMPOSITE AS SELECTIVE SOLAR ABSORBERS FOR LOW TEMPERATURE APPLICATIONS
Ruth	Gontse	DETERMINATION OF MINERAL CONTENT IN SUGARBEANS, LENTILS AND GROUNDNUTS SOLD BY THE ROADSIDE
Noor	Gulamussen	Evaluation of Potentialities for Use of Fine Coal Waste as Alternative fine Aggregate in the Production of Building Blocks
Lukman	Ismaila	Blood bank management system for both rural and urban areas (a case study of Nigeria)
Jin-Seung	Jung	Synthesis and Applications of Fe <sub>3</sub> O <sub>4</sub> @TiO <sub>2</sub> -M(M=Ag,Au) for Photocatalytic Activity

Rujeko Viola	Kahiya	Development of a cytotoxic anti-keloid treatment incorporating <i>Eurphobia ingens</i>
Rujeko Viola	Kahiya	Development of a cytotoxic anti-keloid treatment incorporating <i>Eurphobia ingens</i>
Sandrine	Kamdoum Noukelag	Investigation of structural and optical properties of biosynthesized Zincite (ZnO) nanoparticles by using <i>Rosmarinus officinalis</i> (Rosemary) leaves extract.
Lemme P	Kebaabetswe	Synthesis of Lanthanum Oxide (La <sub>2</sub> O <sub>3</sub> ) and Silver Doped Lanthanum Oxide (AgLa <sub>2</sub> O <sub>3</sub> ) Nanoparticles and their toxic effects on bacteria and HeLa cells
Grace	Kinunda	CHITOSAN COATED ACTIVATED CARBON FOR SOFTENING HARD WATER
Amos	Kiyumbi	Plasmonic Resonator in Gold Crystalline Particles: Fabrication and Optical Properties
Raesibe	Ledwaba	Multiscale Modelling of Spatio-Temporal Dynamics in Li- and Mn-Rich Cathode Materials
Ntumba	Lobo	EFFECT OF TiO <sub>2</sub> + Nb <sub>2</sub> O <sub>5</sub> + TiH <sub>2</sub> CATALYSTS ON HYDROGEN STORAGE PROPERTIES OF MAGNESIUM HYDRIDE.
Boitumelo M	Mabakachaba	Mg and C ion implantation on reactive pulsed laser deposited VO <sub>2</sub> THIN FILM
Khomotso	Maenetja	DFT study of SnO <sub>2</sub> surfaces for the discovery of catalysts in Li-air batteries
Nyemaga	Malima	Synthesis and characterization of nanostructured Ni <sub>1-x</sub> CoxFe <sub>2</sub> O <sub>4</sub> (0 ≤ x ≤ 1) solid solutions via solventless thermolysis of molecular precursors
George	Manyali	High bulk modulus but low Vicker's hardness: A DFT study of mechanical properties of hcp Rhenium
Darius	Martin	Development of aptamer-nanoparticles conjugates for the diagnosis of Ebola
Nobanathi	Maxakato	Pt-Sn nanoparticles supported on Carbon Nanodots as efficient anode catalysts for direct alcohol fuel cells
David	Mbaga	Graphite resource potential of Tanzania and its implications towards attaining a Global Green community
Lydia	Mensah	Gel Formation Influence of Aqueous PEO-PPO-PEO F127 Micelles with Added Antibiotics
John	Mmbaga	Synthesis and characterization of zeolite- cellulose acetate nanocomposites for water treatment
Hamza	Mohamed	Expeditious synthesis of monoclinic Clinobisvanite phase BiVO <sub>4</sub> nanorods using fruit extracts of <i>Hyphaene thebaica</i> as bio-reductant revealing enhanced biological properties
Hee	Moon	Removal of rhodamine-B from wastewater using Mongolian anthracite-based activated carbons: Adsorption equilibrium and kinetics
William	Motswainyana	Antibacterial evaluation of Cu and CuO nanoparticles based PSF/PVP composites
Rostand	Moutou Pitti	Design and manufacture of adobe bricks made from clay and sawdust of Gabonese origin
Adama	Mramba	Investigation on the Green Production Of The Industrial Fine Chemicals from the Lignocellulosic Biomass



Kgomotso	Mtshatsheni	GRAFTING OF PINE-MAGNETITE COMPOSITE WITH ACRYLIC ACID FOR REMOVAL OF METHYLENE BLUE DYE
Reneta	Nafu	BLENDED SAND AND PLASTIC PASTE : A PROSPECT FOR CORRUGATED ROOFING SHEET PRODUCTION
Blasius	Ngayakamo	Evaluation of Kalalani Vermiculite for Production of High Strength Porcelain Insulators
Uba	Nwankwo	Anomaly Dc Resistivity of Nickelates Single Layer and Heterostructures Thin Films
Chukwudalu Clare	Nwazojie	EFFECT OF CARBONIZATION TEMPERATURE ON THE MECHANICAL PROPERTIES AND MICRO-STRUCTURE OF BONE-EPOXY COMPOSITE
Leah	Nyangasi	Synthesis and characterization of Pd nanoparticles supported on electrospunTiO <sub>2</sub> nanofiber
Justine	Nyarige	Effects of L-arginine concentration on hematite nanostructures synthesized by spray pyrolysis and chemical bath deposition.
Oluwafemi	Obisesan	NANOPARTICLES: AN ALTERNATIVE TO THE TREATMENT AND MANAGEMENT OF HIV-1/HSV-2 CO-INFECTION
Martin	Onani	Synthesis and Characterisation of Cadmium-free CuInS/ZnS nanocrystals in combination with a [FeFe]-H <sub>2</sub> ase mimic for visible light-driven H <sub>2</sub> production in water
James	Owuor	Effect of polymer blend on release of a hydrophobic drug loaded into PLGA microparticles for Intraarticular delivery.
Resego	Phiri	Influence of deposition parameters on the residual stresses of WC-Wo sputtered thin films
Resego	Phiri	Effect of Heat Treatment Hardening on the Dry Sliding Wear Behaviour of Mild Steel
Bellah	Pule	Electrospun Hydrogel for Biomaterial applications
Esnaider	Rodriguez Suarez	Coal ash obtained from coal tailings for remediation of the Acid Mine Drainage formed in the Benga Mine, Tete, Mozambique
Sheel	Sanghvi	JUAMI Minisymposium: A modular, open-source tube furnace
Dineo	Sebuso	Green synthesis of graphene from waste biomass: corn husk
Besabakhe	Skhosane	Effect of niobium (Nb) on mechanical properties of laser coated Nitinol (NiTi) used for surface modification of TC4 alloy
Imani	Sospeter	Quantum Chemical Study of Structure, Vibrational Spectra and Thermodynamic Properties of Ionic Clusters Existing in Vapours over Strontium Dichloride
Fikre	Urgessa	Polymer translocation through a nanopore under a pulling force:- A 3D Langevin dynamics simulation study
Thokozani	Xaba	Decomposition of Bis(N-benzyl-salicydenaminato)zinc(II) Complex for the Synthesis of ZnO Nanoparticles to Fabricate ZnO-Chitosan Nanocomposite for Removal of Iron(II)Ions from Wastewater