

Session Program

16–19 Dec 2024

**12th International Conference of the African Materials
Research Society (AMRS)**

POSTER SESSION

Monday 16 December

19:00

POSTER SESSION: POSTERS

Session

19:00–19:01

Electronic and Optical Properties for Sn/Ge Substituting Pb atoms in 2D (3AMP)4Pb4I16 Perovskite for Photovoltaic Applications. First Principle Study

Speaker

Mr Frew Asefa

19:01–19:02

Probiotics Formulation and Delivery Using Nanocultures

Speaker

Amy Apgar

19:02–19:03

PILLARED-LAYER Cu/Ce-BIMETALLIC ORGANIC FRAMEWORK FOR ENERGY CONVERSION AND STORAGE IN SUPERCAPACITORS

Speaker

Mr Josephate Bosire

19:03–19:04

Study of Microstructure and Mechanical Properties of a Ti-11Mo-11Nb alloy

Speaker

Lerato Raganya

19:04–19:05

IMPACT OF ACCEPTOR MODIFICATION ON THE PHOTOVOLTAIC CONVERSION EFFICIENCY OF CHROMEN-2-ONE-BASED DYE-SENSITIZED SOLAR CELLS

Speaker

Ms Ruth Iloba

19:05–19:06

Exploring recognition-transduction materials for orthophosphate sensing in surface waters

Speaker

Mr Quintino Medi

19:06–19:07

Development of an electrode material based on ferrite spinel (MnFe2O4) and activated carbon (from biomass) for supercapacitor electrode applications

Speaker

PAPA ALPHA NDIAYE

19:07–19:08

Equivariant Neural Network Potential for Zeolite Topologies

Speaker

Sunday Joseph Ogenyi

19:08–19:09

Identification and characterization of microplastics released from common cups used for hot drinks

Speaker

Ms Jeanne d'Arc Kampire

19:09–19:10**Preparation of activated carbon from disposed surgical face masks for supercapacitor applications****Speaker**

Ms Gorata Pearl Morake

19:10–19:11**SciBridge: Cultivating Intercontinental Collaborations Between U.S. and African Universities for Renewable Energy Development****Speaker**

Saeed Saeed

19:11–19:12**Tandem Dye-Sensitized Solar Based on Hematite and Biosynthesized Nickel Oxide Nanoparticles using Bamboo Shoot Extract****Speaker**

STELLA NASEJJE

19:12–19:13**Exhaled human breath analysis for early detection of tuberculosis and disease monitoring****Speaker**

Atlang Mpolokang

19:13–19:14**QUALITATIVE STUDY OF EXHALED BREATH IN LUNG CANCER PATIENTS****Speaker**

Ms Tlotlo Cassandra Setlhare

19:14–19:15**Enhancement of BiFeO₃ Photocatalyst with Metal Organic Frameworks (MOF) Materials for the Aqueous Degradation of Norfloxacin****Speaker**

Taylor Fisher

19:15–19:16**Synthesis and conversion of lignocellulosic biomass for the development of sustainable energy storage devices****Speaker**

Ibrahima NDAW

19:16–19:17**COMPARISON OF DEPOSITION TECHNIQUES IN ELECTRODE MATERIAL SYNTHESIS FOR SUPERCAPACITOR APPLICATIONS****Speaker**

Ms Hellen Mutua

19:17–19:18**MATERIALS UNDER EXTREME CONDITIONS****Speaker**

Mr Nkurunziza Martin

19:18–19:19**Investigating Energy Collisions and Rate Constants Using Pyrazine as Donor and N₂O as Bath with IR and UV-Vis Laser Systems**

Speaker
Humphrey Lidweye

19:19–19:20

THE GREEN FUSION BLOCK: A Sustainable Solution for Moisture-Related Damages on Building Walls.

Speaker
Ongum Pennuel Wilma-kum

19:20–19:21

LARGE AMPLITUDE ION A COUS TICWAVESIN2COMPONENTPLASMAWITHTSALLISDISTRIBUTED ELECTRON

Speaker
Mr Rukundo Venuste

19:21–19:22

Tracking Electrode Microstructure in-situ via X-ray Microscopy

Speaker
Nancy Muyanja

19:22–19:23

Intrinsic properties of N-rGO/NH₄MnPO₄·H₂O nanocomposite as battery-type electrode material for high-performance supercapatteries

Speaker
Prof. Katlego Makgopa

19:23

Tuesday 17 December

19:00

POSTER SESSION: POSTER SESSION

Session

19:00–19:01 Efficient Ground-State Solver Via Householder Transformation On Quantum Computers

Speaker

Mr Hamzat Akande

19:01–19:02

Cellulose-Supported rGO/WO₃ Nanocomposite Membrane for Photocatalytic Degradation of Organic Dyes under Visible Light Irradiation

Speaker

Anteneh Mersha

19:02–19:03

Developing sustainable, solid-form cementless materials for the stabilisation of clayey soils from the tropics

Speaker

Dr Juvenal Giogetti Deutou Nemaleu

19:03–19:04

First-Principle Study of Graphene/MB₂ (M = Fe, Mo) Vander Waals Hetero-structures as Anode Materials in Rechargeable Lithium-Ion Batteries

Speaker

Liya Gebrehiwot Gebremedhin

19:04–19:05

1D/3D PANI/WS₂ composite for highly selective room temperature sensing of ammonia vapours

Speaker

Dr Siziwe Gqoba

19:05–19:06

Multi-Layered Additive Manufacturing for Device Fabrication

Speaker

Chloe Kekedjian

19:06–19:07

Biocomposite Materials in Agroforestry for Innovations in Sustainable Land Management

Speaker

Mr Jean Damascene NGIRINSHUTI

19:07–19:08

Effectiveness of surface- structure of acrylic acid-grafted pine-magnetite bio-nanocomposites in the removal of dye

Speaker

Kgomotso Mtshatsheni

19:08–19:09

Synthesis and characterization of 3D/2D Sn-based perovskite thin films fabricated by the sequential physical vapor deposition for solar cell applications.

<p>Speaker Alex Sembito</p>
<p>19:09–19:10 Development of an electrode material based on Mg ferrite spinel (MgFe_2O_4) and activated carbon (from peanut shells) for supercapacitor electrode applications.</p> <p>Speaker Mbaye Thiam</p>
<p>19:10–19:11 Development of Composite Materials Based on Zinc Oxide Cobalte (ZnCo_2O_4) and Activated Carbon (AC) Using Extracts of Rice Straw for Supercapacitor Electrode Applications</p> <p>Speaker Mr Badou Sarr</p>
<p>19:11–19:12 Materials for Environment, water and sanitation</p> <p>Speaker Mr Ndayishimiye Eric</p>
<p>19:12–19:13 Surface passivation of methylammonium tin iodide thin films through sequential physical vapour deposition towards stable and efficient perovskite solar cells</p> <p>Speaker Ms Margdaline Musanga</p>
<p>19:13–19:14 Development and characterization of spinel-based composite materials (MnCo_2O_4@g-$\text{C}_3\text{N}_4/\text{C}_60$) from peanut shell wastes extracts for electrochemical capacitors</p> <p>Speaker seynabou Mbodj</p>
<p>19:14–19:15 Determining optical properties of Poly(2,5-benzimidazole).</p> <p>Speaker Ernst Ellis</p>
<p>19:15–19:16 Effect of Tuning Aqueous Interfacial Reactions on Asymmetrical Electric Fields in Cellular Delivery/ Removal</p> <p>Speaker Jebril Thaxton</p>
<p>19:16–19:17 Synergistic 2D CuO/rGO Nanocomposites as Advanced Photocatalysts for Efficient Cr(VI) Detoxification under Visible Light</p> <p>Speaker islam gomaa</p>
<p>19:17–19:18 Influence of Modified Hornification Pre-Treatment on Mechanical Properties of Fiber-Reinforced Cement Composites: Case of Raffia Stalk and Oil Palm Empty Fruit Bunch Spikelet Fibers</p> <p>Speaker YAKUM RENETA NAFU</p>

19:18–19:19

Theoretical and experimental approach study of plant based of copper hydroxide composites and silver nanoparticles synthesis**Speaker**

Dr Sidiki ZONGO

19:19–19:20

Temperature dependence of positive and negative magnetoresistances of tantalum-covered multiwalled carbon nanotubes**Speaker**

Julienne IMPUNDU

19:20–19:21

GREEN SYNTHESIS OF IRON OXIDE NANOFLOAKES AND ITS APPLICATION AS A COUNTER ELECTRODE IN DYE SENSITIZED SOLAR CELL**Speaker**

Dr Emma MUKHOKOSI

19:21–19:22

ENHANCED FLUORIDE REMOVAL EFFICIENCY OF SUSTAINABLE ALKALI-ACTIVATED GLASS-HYDROXYAPATITE COMPOSITE: ADSORPTION BEHAVIOR**Speaker**

Bennet Edem Akorley

19:22–19:23

Smart Materials in Precision Agriculture for Enhancing Crop Production and Resource Efficiency**Speaker**

Mr Jean Damascene NGIRINSHUTI

19:23