



## Botswana International University of Science & Technology

### RESEARCH FLASH

June 2021  
Issue 33

## ANNOUNCEMENTS

### PROF. C. KING'ONDU WINS THE PRESTIGIOUS FLAIR COLLABORATION RESEARCH GRANT



*Prof. Cecil King'ondu (FLAIR fellow)*



*Mavis K Gabookolwe, MSc Student,*

Prof. Cecil King'ondu (FLAIR fellow) and his MSc Student, Mavis K Gabookolwe are working on a collaborative research between the Botswana International University of Science and Technology (BIUST) and the University of Manchester, UK, titled "Capacitive Sequestration of Arsenic and Lead from Groundwater in Okavango Delta, Botswana". The latter is represented by Prof. Robert Dryfe.

The proposed project involves synthesis of novel capacitive deionization electrode materials for removal of Arsenic and lead from groundwater in Botswana. The long-term goal of this collaborative research is to develop effective and affordable

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capacitive deionization (CDI) systems for selective removal of As and Pb from ground water. Synthesis of the electrode materials and their CDI performance testing will be carried out at BIUST while characterization of the electrode materials and some of the performance tests will be conducted at the University of Manchester, UK. This collaborative work will lead to joint scientific publications in peer reviewed journals and joint patents and research grants. The collaboration will also increase BIUST global visibility and provide a great opportunity for Professors King'ondeu and Dryfe and their graduate students to share research resources, techniques, and expertise that will finally help in coming up with new innovative ideas around electrode materials synthesis and CDI configurations leading to development and roll out of effective and affordable CDI units that will provide clean water to the society. Moreover, this collaboration will be leveraged in establishing a memorandum of understanding between the BIUST and the University of Manchester for partnership in future wider projects.

## MR. K. TLOTLENG AND MR. L. MOHUTSIWA ATTEND DARA TRAINING PROGRAM UNIT 2 AND 3



*Mr. K. Tlotleng and Mr. L. Mohutsiwa*

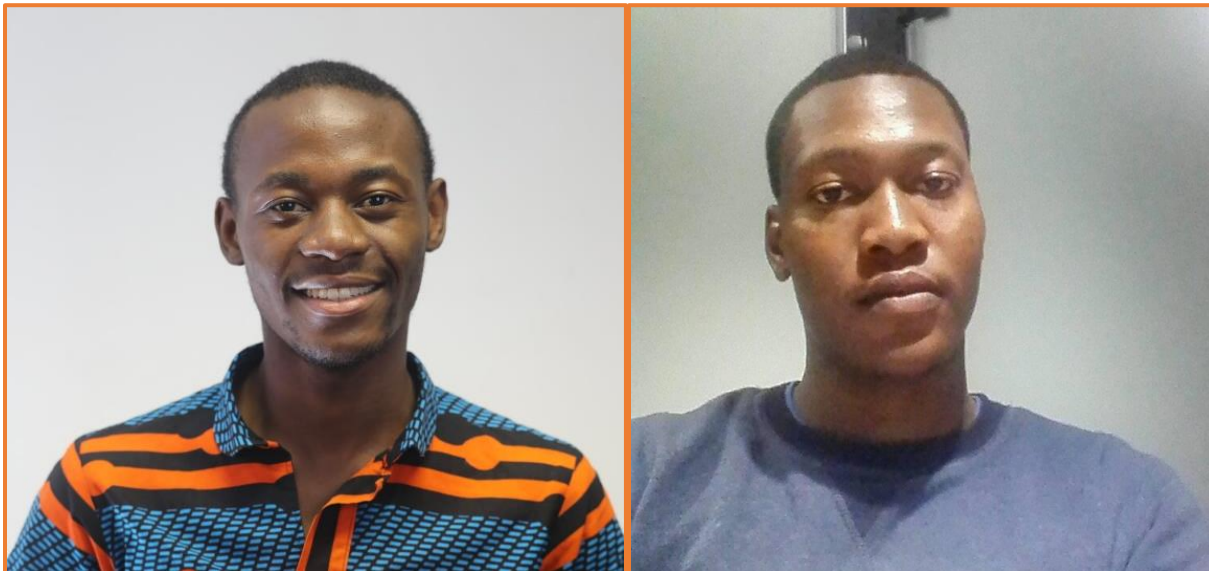
Two postgraduates' students Mr. Kaloso Tlotleng and Mr. Lucky Mohutsiwa went to Ghana for a 2 weeks Development in Africa with Radio Astronomy (DARA) Training Program Unit 2 and 3. This is part of BIUST Square Kilometer Array project which aims to educate us with knowledge in Radio Astronomy as preparation to build a large Radio Telescope.

The DARA basic training is divided into four units in which each unit is held at a different African Very Long Baseline Interferometry Network (AVN) member country with the selected students from those countries forming a cohort. For UNIT1 which was held in Namibia, the goal was to equip the student with basic knowledge of astronomy and astrophysics. UNIT 4 was held in Botswana and it was aimed at teaching state-of-the-art software that are used in receiving, processing and interpreting radio telescopic data. Due to Covid-19 situations, UNIT 2 and UNIT 3 had to be merged into 1, which the BIUST cohort attended at Ghana Radio Astronomy Observatory (GRAO) in Accra, Ghana

for two weeks. The aim of this unit is to equip the student with hands-on skills on how to operate a radio telescope. Different critical parts of the telescope are extensively studied. “We learn each stage that the radio signal follows as it hits the telescope to when it is interpreted or identified” Mr Mohutsiwa proclaims. In summary the DARA training is about interacting with and learning the hardware and the software parts of the radio telescope.

Botswana is one of those selected countries (AVN member) thus, the BIUST cohort will be able to apply knowledge and skills attained from DARA training to contribute to the project of setting up the telescope which will be connected to other telescopes erected in other member countries, forming a long baseline. BIUST will lay the groundwork for this development and has been designated as Botswana's host institution for the African Very Long Baseline Interferometry Network (AVN) and Square Kilometer Array (SKA) projects.

## MR V. NTOMBELA AND J. MORAKE WINS ELBM SCHOLARSHIPS TO KENYA AND NIGERIA



*Mr J. Morake and Mr V. Ntombela*

Mr Morake and Mr Ntombela were recently awarded ELBM Scholarships funded by the Intra Africa Scheme of the Culture Executive Agency of the European Commission to study Mechanical Engineering at Jomo Kenyatta University of Agriculture and Technology (JKUAT), Kenya, and Federal University of Petroleum Resources Effurun (FUPRE), Nigeria, respectively. Mr Morake is enthusiastic to pursue research in engineering because he would like to develop a strong footing in manufacturing engineering to be innovative and solve industrial challenges with his expertise.

The ELBM scholarship is an opportunity to acquire expertise from international grounds to shape and build industries with the highest level of management in Botswana. The

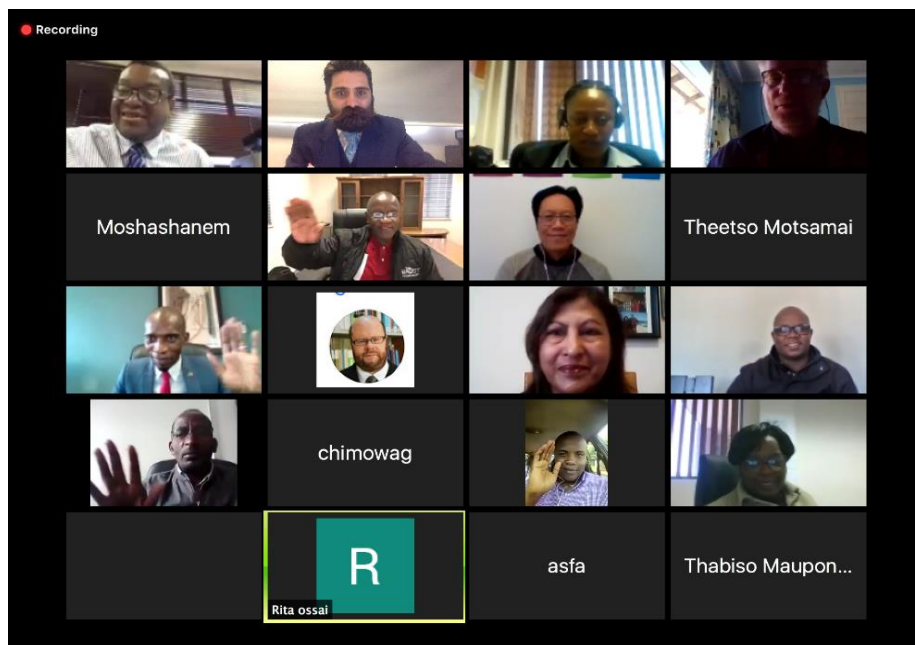


manufacturing sector is a major driver of growth in the development of human, social, economic, and environmental areas of sustainability. However, lack of advanced knowledge and expertise in this respective field has caused a major drawback in Botswana and Africa at large. The raw materials are in abundance but the skills to transform them to finished or semi-finished products are very scarce. As a result, Mr. Morake and Mr Ntombela are determined to use the knowledge and skills acquired from this program to setup large manufacturing facility aimed at fabricating components upon their return to Botswana.

## AMBASSADOR JAN SADEK LAUNCHES PAN AFRICAN PLANETARY AND SPACE SCIENCE NETWORK (PAPSSN)



### PAN AFRICAN PLANETARY SPACE SCIENCE NETWORK LAUNCH



#### *PAPSSN Launch Attendants*

The Pan-Africa Planetary and Space Science Network was launched on June 25, 2021, by Ambassador Jan Shadek - Head of European Union Delegation to Botswana and SADC. The launch was graced by several speakers amongst them Permanent Secretary Ministry of tertiary Education, Vice chancellor Professor Otlogetswe Totolo, University of Witwatersrand partner representative professor Andrew Chan and Dr Fulvio Franchi, PAPSSN project Coordinator.

Ambassador Jan indicated in his launch, that the project has been funded with tune of 18 million pula by European Union as recognition for Botswana through BIUST in leading this precious project on space science. The newly recognised African Space Strategy and recently adopted by space African Union, Space science have many opportunities which will be key to address African problems. The first call of scholarship is astronomy, Astro physics, space, and planetary sciences with 7 PhD slots, 6 Master's Degree and 5 Staff exchange scholarship. The PAPSSN project is financed by the Intra-Africa Mobility Scheme of the Education Audio-visual and Culture Executive Agency of the European Commission.

PAPSSN Project Coordinator Dr. Franchi when Giving his Remarks, he highlighted that aim of the project is to create mobility to support students and academic staff to support their work in one of the five partnering institution in the broad field of STEM, with particular focus in planetary space science. He indicated that the project has three main pillars namely Astronomy and Astro physics, space science and technology and Data science, with overall objective to support the creation of young and skilled community of scientists that can fit on the growing planetary science labour markets and can fit in large project coming to Africa.

**DEPUTY MANAGING DIRECTOR: STRATEGY  
& PARTNERSHIPS AT THE SARA0 GAVE A TALK ON  
“SEARCH FOR THE ORIGINS OF THE UNIVERSE”- THE  
STORY OF THE SQUARE KILOMETRE ARRAY**



*Dr. Adrian Tiplady the Deputy Managing Director: Strategy & Partnerships  
at the South African Radio Astronomy Observatory (SARA0)*

Dr. Adrian Tiplady the Deputy Managing Director: Strategy & Partnerships at the South African Radio Astronomy Observatory (SARAO) gave a talk on “Search for the origins of the universe”- The story of the square kilometre array (SKA) on Thursday 10th June 2021.

Dr. A. Tiplady holds a PhD in radio astronomy (with specialisation in radio pulsars), with Honours degree in telecommunications, and a Bachelor’s degree in Physics Et Electronics, Computer Science, and Musicology & Compositional Techniques. Adrian joined the South African SKA Project Office (as it was known then) in 2005 as an Assistant Project Scientist and has held several very diverse roles since from the very technical field of radio frequency Interference engineering to broader management roles in strategic planning and risk management. He was principally involved in the preparation of Africa’s 2012 successful bid to host the SKA, the establishment of a legally protected radio astronomy advantage area in the Karoo, and since 2012 has been supporting the South African Department of Science and Innovation (DSI) in the negotiation and establishment of the SKA inter-governmental treaty organisation. Adrian is an invited member to the European Science Foundation Expert College of Reviewers, the European expert Committee on Radio Astronomy Frequencies (CRAF), the international Scientific Committee on the Allocation of Frequencies for Radio Astronomy and Space Science (IUCAF) and is currently involved in the development of a National Open Science Policy in South Africa.

The presentation looked at the many facets of the SKA and MeerKAT projects from scientific discovery, to cutting edge technology, to the opportunities for real socio-economic impact that have arisen. The Square Kilometre Array (SKA) project is borne from a global vision to design and construct the most powerful and technologically advanced cm-wavelength radio telescope in the world. This next-generation scientific facility, being design and delivered through a global partnership, faces a monumental scientific task: to begin answering some of the more fundamental questions about the laws of physics. What is the nature of dark energy, and dark matter? How did the galaxies evolve? As a pathfinder to the scientific and technical challenges of the SKA, the MeerKAT radio telescope (located in the Karoo region of South Africa) has commenced scientific operations after several years of innovative technology development. Its many surprising scientific discoveries already gives a glimpses of what the SKA may unexpectedly find. The MeerKAT has not only been a scientific project it has become a key catalyst for the development of a knowledge economy, and a vehicle for socio-economic development.

## ***FUNDING OPPORTUNITIES***

### **Call for innovative COVID relief solutions for local communities: Norsad/BIUST Partnership – DEADLINE EXTENDED**

Norsad Finance Limited (Norsad) is pleased to announce a call for innovative and practical relief solutions **to alleviate disruptions experienced by completing classes in Primary and Secondary (Standard 7, Form 3 and 5) Government schools due to COVID 19**. These solutions should be targeted at supporting students in rural areas who may not have easily access to resources such as the internet. Norsad is looking for a solution that is practical to implement, whose effectiveness can be monitored, and is focused on improving pass rates of completing classes.

#### **Objectives of the Call**

- i. The primary objective of this call is for Norsad to facilitate the implementation of one (1) project in a chosen school in Botswana (whether Primary or Secondary). Excluding Schools in Gaborone and greater Gaborone Region.
- ii. The project should address the need that exists in government schools following the outbreak of Covid-19.
- iii. The project should CLEARLY demonstrate that the issue it aims to resolve has arisen as a result of Covid-19.
- iv. The winning participants will be actively involved in the implementation and introduction of the solution to beneficiaries (the schools).

#### **Eligibility**

- i. The applicant must be a registered BIUST postgraduate student.
- ii. Research must involve a team of researchers comprising registered undergraduate and postgraduate students of BIUST.
- iii. Evidence of approval from supervisor to be provided at submission.

#### **Application Process**

Applicants are advised to apply online via the Pure Portal at the following link:  
<https://biust.pure.elsevier.com/admin/editor/dk/atira/pure/modules/fundingopportunity/external/model/fundingopportunity/editor/fundingopportunityeditor.xhtml?id=31123445>

**Closing Date: 23 July 2021**

## African Research Initiative for Scientific Excellence Pilot Programme (ARISE-PP) Grants

The ARISE pilot programme is aligned to the EU and the AU priorities of cooperation, through the Pan-African Programme, with the aim of building the capacity of at least 40 emerging African researcher leaders across 40 African countries. The ARISE grantees will be awarded grants of up to €500,000 to start their own independent research teams and deliver cutting-edge research in any area of scientific endeavour, over a period of five years.

### Eligibility

The call is open to African researchers with 2-7 years of post-PhD research experience, a scientific track record showing great promise, and an excellent research proposal to conduct cutting-edge research at an African university or research institution.

**Closing date: 30 July 2021**

More information on this call is available at <https://www.aasciences.africa/call/arise>

## Call For Proposals for Setting Up and Managing of Covid-19 Vaccination Centers, Training, And Recruitment of Vaccinators in African Union Member States

Africa CDC, African Union, and the Mastercard Foundation invite proposals from implementing partners to support the establishment COVID-19 vaccination centres in African Union Member States. The main objective of this assignment is to support African Union Member States to set up and manage COVID-19 vaccination centres, conduct training, and recruit vaccinators in African Union Member States to enable them to vaccinate at least 60% of their population with safe and effective COVID-19 vaccines by the end of 2022.

**Bidders are required to provide the following documents:**

- Submission of a Funding Application Form, short Concept Note, Full Technical proposal, and detailed budget in the format provided in the bid document.
- Organisational documentation as requested in the Application Guidelines and Application Form.

Bid opening will take place on | **30 July 2021**, at 1500hrs Addis Ababa time, in the presence of bidders or bidders' representatives. A Zoom link will be shared.

Bid submissions and any questions should be addressed to: [SLLapplications@africa-union.org](mailto:SLLapplications@africa-union.org) and copied to [SLLpartners@mastercardfdn.org](mailto:SLLpartners@mastercardfdn.org)



Interested organisations can collect bid documents from: <https://africacdc.org/bids/>

## Call for the AAS Affiliates 2021

The AAS Affiliates Programme seeks early and mid-career scientists who demonstrate excellence in their development and application of science in Africa. These individuals become 'Affiliate of the AAS' for a period of five years during which they receive individualized professional development support and join a wider community of science leaders on the African continent.

### Eligibility

- Must be an African national.
- Must have obtained their PhD in the last ten years.
- Must have substantial postdoctoral research experience.
- Must be aged 40 years and below by the 31st of December of that year. Individual considerations will be made for female candidates above 40 years who have had career interruptions.
- Must be residing in or affiliated with an African higher education or research institution.
- Female candidates and candidates from under-represented disciplines and countries are especially encouraged to apply.

**Closing date: 23 July 2021**

For further information visit: <https://www.aasciences.africa/calls/call-aas-affiliates-2021>

## TWAS Seed Grant for New African Principal Investigators (SG-NAPI)

The TWAS Seed Grant for New African Principal Investigators (SG-NAPI) was launched in 2021 to strengthen the capacity of African countries lagging in science and technology. The programme is aimed at young scientists who are getting established in their country or about to return home to an academic position. Under this scheme, grants are awarded to promising high level research projects in Agriculture, Biology, Chemistry, Earth Sciences, Engineering, Information Computer Technology, Mathematics, Medical Sciences and Physics carried out in African countries lagging in science and technology. The programme is fully funded by the German Ministry of Education and Research (BMBF - Bundesministerium für Bildung und Forschung).

### Eligibility

Principal Investigators must be nationals of an eligible country, must hold a PhD and have good research experience. The grant should operate within a university or a research institution in one of the African countries lagging in science and technology.

PIs must be 40 or under and must have obtained their PhD within the last five years in a country other than their home country.

Furthermore:

- The PIs must have returned to their home country within the last 24 months.
- The PIs must hold, be offered or be in the process of accepting a position at an academic and/or research institution (including international research centres) in their home country.
- The PI must be national of an eligible African country that is lagging in science and technology.

Applicant may apply for only one programme per calendar year in the TWAS and OWSD portfolio and must (at the time of application) not have an active research grant with TWAS or OWSD Early Career Women Scientists (ECWS) Fellowship.

*Applications from women scientists and those working in Least Developed Countries are especially encouraged.*

**Closing date: 27 July 2021**

For further information visit: <https://twas.org/opportunity/seed-grant-new-african-principal-investigators-sg-napi>

## ISBM Doctoral Support Award Competition

The ISBM Doctoral Support Award Competition is held annually to support candidates in accredited doctoral programmes. Dissertations in any area of business-to-business (industrial) marketing or in any of the methodological areas that support advances in business marketing will be considered. Consideration will be given to proposals that address the areas.

of (1) Marketing's Role in B2B Innovation, (2) B2B Buying Behaviour and (3) B2B Customer Analytics.

### Eligibility

Eligible applicants are PhD students in marketing. ISBM also encourages applications from students in economics, management science, organisational psychology, statistics, anthropology and other disciplines whose developments help advance our understanding of the operation of the business marketplace.

**Closing date: 15 September 2021**

For further information visit: <https://isbm.org/doctoral-support-award-competition/>

## ICE Research and Development Enabling Fund

The Institute of Chartered Engineers (ICE) is an international membership organization which promotes and progresses civil engineering. The ICE Research and Development Enabling Fund is designed to help civil engineers develop new and innovative ideas and to tackle problems in design or construction. Funding is intended to be flexible and readily accessible, to help the engineering community tackle key issues and contribute to ICE's business plan. The priority themes for the 2021 Call for Applications include:

- Net Zero Carbon
- The UN Sustainable Development Goals
- Social Value

Applications are also accepted for projects outside of these themes, for example a technical project or new invention, research to update good practice guidelines, projects to raise the profile of civil engineering or deliver other benefit to civil engineers.

### Eligibility

Application is open to anyone engaged in civil engineering infrastructure, from anywhere in the world. Applicants can be members or non-members of ICE. Applicants may be at any stage in their career and engaged in any sector of civil engineering, including academics, industry, procurement, legal experts, architects and surveyors.

### Closing date: Not Specified

For further information visit: <https://www.ice.org.uk/about-ice/what-we-do/research-and-development-enabling-fund>

## Theo and Friedl Schöller Fellowships

Theo und Friedl Schöller Stiftung (Theo und Friedl Schöller Foundation) promotes research and teaching in the field of economics. Its research centre, the Dr Theo and Friedl Schöller Research Center for Economy and Society in Nuremberg supports top-level research in economic sciences. Based on the strategic scientific focus of the Department of Economics and Social Sciences at the Friedrich Alexander Universität Erlangen Nürnberg (FAU - Friedrich Alexander University of Erlangen-Nuremberg) 'Creating Cohesion - Shaping Change - Implementing Innovation, the Foundation's annual grants support international research networks and local research collaboration. The Schöller Senior Fellowship promotes an internationally renowned senior scholar to carry out research at one of the institutes or chairs of the FAU's School of Business, Economics and Society (WiSo). The Schöller Fellowship for Early Career Scientists supports promising doctoral as well as post-doctoral researchers to collaborate with the institutes and/or chairs of the department.

**Eligibility**

Eligible candidates are outstanding doctoral, postdoctoral, habilitated and senior researchers in the field of economic and social sciences. Outstanding researchers from Germany and abroad may apply for a Fellowship. Applicants must be willing to engage in an on-site dialogue in Nuremberg and collaborate with the institutes and/or chairs of the FAU's Department of Economics and Social Sciences.

**Closing date: 31 December 2021**

For further information visit: <http://www.schoeller-forschungszentrum.de/en/application/>

## DAAD Postdoctoral Fellowships in Sub-Saharan Africa

The German Academic Exchange Service (DAAD) invites applications for its postdoctoral fellowships in sub-Saharan Africa. These enable postdoctoral researchers from sub-Saharan Africa to conduct cooperative research at selected universities within the region. Projects may be carried out in any subject area with strong relevance to national or regional development.

Current or prospective teaching or research staff at a sub-Saharan university or research institution, holding a PhD degree, may apply. Applicants should have completed their PhD degree less than six years ago and must be invited by a host institution. Candidates must be nationals of a sub-Saharan African country.

**Closing date:** You can apply for this opportunity at any time. Applicants should refer to the deadline information indicated by the specific institution.

For more information visit: <https://www2.daad.de/deutschland/stipendium/datenbank/en/21148-scholarship-database/?detail=57191387>

## PURE ALERTS!!!!

Researchers are advised that the 2021/22 milestone reports will be due in a week. All researchers are requested to submit their reports in the correct format before the deadline.

For more information on the reporting template and guidance on the online report submission please contact Ms. Neo Joel @ [joeln@biust.ac.bw](mailto:joeln@biust.ac.bw)

	PERIOD	DUE DATE
QUARTER 1	1 <sup>st</sup> Apr 21 -30 <sup>th</sup> Jun 21	17 <sup>th</sup> July 21
QUARTER 2	1 <sup>ST</sup> Jul 21- 30 <sup>th</sup> Sep 21	16 <sup>th</sup> Oct 21
QUARTER 3	1 <sup>st</sup> Oct 21- 31 <sup>st</sup> Dec 21	22 <sup>nd</sup> Jan 22
QUARTER 4	01 <sup>st</sup> Jan 22-31 <sup>st</sup> Mar22	16 <sup>th</sup> April 22



## ***BIUST Staff (in bold) Recent Publications***

	Journal Articles	Authors	Date	Source title & Link
1.	Investigation of survival/hazard rate of natural ester treated with al <sub>2</sub> o <sub>3</sub> nanoparticle for power transformer liquid dielectric	<b>R. A. Raj, S. Ravi, A. Yahya, M. Mosalaosi</b>	Mar-2021	Energies, 14(5), 1510 10.3390/en14051510
2.	Complete genome sequence of an antimicrobial-producing Bacillus velezensis Sam8H1 isolate from the Makgadikgadi salt pans of Botswana	<b>G. Modikwe, L. Manoharan, G. Mabutho, K. Lebani, L. Lebogang, N. Zhou</b>	Apr-2021	Microbiology Resource Announcements, 10.1128/MRA.00175-21
3.	Reference frame independent twin field quantum key distribution with source flaws	<b>Comfort Sekga, Mhlambululi Mafu</b>	Apr-2021	Journal of Physics Communications. 5, 4, 20 p., 045008, 10.1088/2399-6528/abf472
4.	Convergence theorems of common solutions of variational inequality and f-fixed point problems in banach spaces	<b>G. B. Wega, Z. H. Habtu</b>	Apr-2021	Applied Set-Valued Analysis and Optimization. 3, 1, p. 55-73 19, 10.23952/asvao.3.2021.1.06
5.	Application of stage condensation of tar during pyrolysis of high ash semi-bituminous-Morupule mine coal	<b>Leonard Akofang, Paul Serban Agachi</b>	May-2021	DRC sustainable Future. 2, 1, p. 4-10 7,
6.	A computational study of the s <sub>2</sub> state in the oxygen-evolving complex of photosystem ii by electron paramagnetic resonance spectroscopy	<b>Bernard Baituti, Sebusi Odititse</b>	May-2021	Molecules, 10.3390/molecules26092699
7.	Sub-national analysis and determinants of numbers of antenatal care contacts in Nigeria: assessing the compliance with the WHO recommended standard guidelines	<b>Fagbamigbe, A. F., Olaseinde, O. &amp; Setlhare, V.</b>	May-2021	BMC Pregnancy and Childbirth. 21, 1, 19 p., 402., 10.1186/s12884-021-03837-y
8.	Sun-induced fluorescence and near-infrared reflectance of vegetation track the seasonal dynamics of gross primary production over Africa	Getachew Mengistu, A., <b>Mengistu Tsidu, G.</b> , Koren, G., Kooreman, M. L., Folkert Boersma, K., Tagesson, T., Ardö, J., Nouvellon, Y. & Peters, W.	May-2021	Biogeosciences. 18, 9, p. 2843-2857 15, 10.5194/bg-18-2843-2021
9.	Preventable multiple high-risk birth behaviour and infant survival in Nigeria	Salawu, M. M., Afolabi, R. F., Gbadebo, B. M., Salawu, A. T., <b>Fagbamigbe, A. F. &amp; Adebowale, A. S.</b>	May-2021	BMC Pregnancy and Childbirth. 21, 1, 12 p., 345, 10.1186/s12884-021-03792-8
10.	Security of quantum-key-distribution protocol by using the post-selection technique	<b>Comfort Sekga, Mhlambululi Mafu</b>	May-2021	Physics Open. 7, 100075, 10.1016/j.physo.2021.100075
11.	Next Generation Sequencing of Near-Full Length Genome of Norovirus GII.4 from Botswana	Kgomotso Makhaola , Sikhulile Moyo , <b>Lemme P. Kebaabetswe</b>	Jun-2021	Next Generation Sequencing of Near-Full Length Genome of Norovirus GII.4 from Botswana

12.	Hydroclimate changes in eastern Africa over the past 200,000 years may have influenced early human dispersal	Schaebitz, F., <b>Asrat, A.</b> , Lamb, H., Cohen, A.S., Foerster, V., Duesing, F., Kaboth-Bahr, S., Opitz, S., Viehbergh, F., Vogelsang, R., Dean, L., Leng, M.J., Junginger, A., Bronk Ramsey, C., Chapot, M.S., Deino, A., Lane, C.S., Roberts, H.M., Vidal, C., Tiedemann, R., Trauth, M.H.	Jun-2021	Nature: Communications Earth and Environment, 2:123.
13.	Advanced Hyperspectral Analysis of Sediment Core Samples from the Chew Bahir Basin, Ethiopian Rift, in the Spectral Range from 0.25 to 17 $\mu\text{m}$ : Support for Climate Proxy Interpretation.	Arnold GE, Foerster V, Trauth MH, Lamb H, Schaebitz F, Asrat A, Szczech C, Günter C	Jun-2021	Frontiers Earth Science 9:606588. doi: 10.3389/feart.2021.606588
14.	Optimal control of the spread of Meningitis: in the presence of behaviour change of the society and information dependent vaccination	Yetwale H. Workineh and <b>Semu M. Kassa</b>	Jun-2021	Commun. Math. Biol. Neurosci, 2021:29. Doi: 10.28919/cmbn/5575
15.	A review on cooperative robotic arms with mobile or drones bases.	<b>Ramalepa, L. P., &amp; Jamisola, R. S.</b>	Jun-2021	International Journal of Automation and Computing, 1-20. <a href="https://link.springer.com/article/10.1007/s11633-021-1299-7">https://link.springer.com/article/10.1007/s11633-021-1299-7</a>
16.	A survey of social media use in emergency situations: A literature review	Abdulhamid, N. G., Ayoung, D. A., Kashefi, A. & <b>Sigweni, B.</b>	Jun-2021	Information Development. 37, 2, p. 274-291 18, 10.1177/0266666920913894
17.	Shear-augmented solute dispersion during drug delivery for three-layer flow through microvessel under stress jump and momentum slip-Darcy model	<b>Bashaga, G. &amp; Shaw, S.</b>	Jun-2021	Applied Mathematics and Mechanics (English Edition). 42, 6, p. 901-914 14 p., 10.1007/s10483-021-2737-8
18.	A new Lindley-Burr XII power series distribution: model, properties and applications	<b>Makubate, B., Gabanakgosi, M., Chipepa, F. &amp; Oluyede, B.</b>	Jun-2021	Heliyon, 7, 6, 10.1016/j.heliyon.2021.e07146
19.	The effect of molybdenum content on the microstructural evolution and tensile properties of as-cast Ti-Mo alloys	Moshokoa, N. A., Raganya, M. L., Machaka, R., Makhatha, M. E. & <b>Obadele, B. A.</b>	Jun-2021	Materials Today Communications. 27, 10 p., 102347., 10.1016/j.mtcomm.2021.102347
20.	Self-Medication Practices and Associated Factors in the Prevention and/or Treatment of COVID-19 Virus: A Population-Based Survey in Nigeria	Wegbom, A. I., Edet, C. K., Raimi, O., <b>Fagbamigbe, A. F. &amp; Kiri, V. A.</b>	Jun-2021	Frontiers in Public Health. 9, 606801., 10.3389/fpubh.2021.606801
21.	Role of immunotherapy in tumor-immune interaction: Perspectives from fractional-	<b>Ndenda, J. P., Njagarah, J. B. H. &amp; Shaw, S.</b>	Jul-2021	Chaos, Solitons and Fractals. 148, 13 p., 111036.,

	order modelling and sensitivity analysis			10.1016/j.chaos.2021.111036
22.	Thermal limits and preferences of large branchiopods (Branchiopoda: Anostraca and Spinicaudata) from temporary wetland arid zone systems	<b>M. Tladi, R. Wasserman, C. Nyamukondiwa</b>	Jul-2021	Journal of Thermal Biology, 10.1016/j.jtherbio.2021.102997
23.	Model-Based and Model-Free Control of DC-DC Converters with High-Order Dynamics and Limited Measurements	Loranca-Coutino, J., Mayo-Maldonado, J. C., Escobar, G., Villarreal-Hernandez, C. A., <b>Maupong, T. M.</b> , Valdez-Resendiz, J. E. & Rosas-Caro, J. C.	Aug-2021	IEEE Transactions on Industrial Electronics, 10.1109/TIE.2020.3001845
24.	Thermo-fluidic significance of non Newtonian fluid with hybrid nanostructures	Nayak, M. K., Pandey, V. S., <b>Shaw, S.</b> , Makinde, O. D., Ramadan, K. M., Ben Henda, M. & Tlili, I.	Aug-2021	Case Studies in Thermal Engineering, 26, 101092. 10.1016/j.csite.2021.101092
25.	Correlation between residual stresses and the tribological behaviour of Inconel 625 coatings	<b>Oladijo, O. P., Collieus, L. L., Obadele, B. A. &amp; Akinlabi, E. T.</b> ,	Aug-2021	Surface and Coatings Technology. 419, 8 p., 127288., 10.1016/j.surfcoat.2021.127288
26.	Convergence theorems for a fixed point of $\eta$ -demimetric mappings in banach spaces	Shahzad, N. & <b>Zegeye, H.</b>	Aug-2021	Applied Set-Valued Analysis and Optimization. 3, 2, p. 193-202 10, 10.23952/asvao.3.2021.2.04
27.	Hydrothermal and entropy production analyses of magneto-cross nanoliquid under rectified Fourier viewpoint: A robust approach to industrial applications	<b>Shaw, S.</b> , Nayak, M. K., Dogonchi, A. S., Chamkha, A. J., Elmasry, Y. & Alsulami, R.	Aug-2021	Case Studies in Thermal Engineering. 26, 22 p., 100974., 10.1016/j.csite.2021.100974
	<b>Conference Papers</b>	<b>Authors</b>	<b>Date</b>	<b>Source title</b>
1.	Paleo-ENSO influence on African environments and early modern humans.	Kaboth-Bahr, S., Gosling, W.D., Vogelsang, R., Bahr, A., Scerri, E.M.L., <b>Asrat, A.</b> , Cohen, A.S., Düsing, W., Foerster, V.E., Lamb, H.F., Maslin, M.A., Roberts, H.M., Schäbitz, F., Trauth, M.H.	Jun-2021	Proceedings of the National Academy of Science (PNAS), 118 No. 23 e2018277118.

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