



# Botswana International University of Science & Technology

## RESEARCH FLASH

March 2022  
Issue 42

## ANNOUNCEMENTS

### BIUST-CIPA SIGN MoU



*Prof Abraham Atta Ogwu addressing attendees during the BIUST- CIPA MoU signing*

Botswana International University of Science & Technology (BIUST) and the Companies and Intellectual Property Authority (CIPA) signed a Memorandum of Understanding on March 31<sup>st</sup>, 2022. The event was held at BIUST and streamed live for all stakeholders. During the occasion, the Deputy Vice Chancellor for Research, Development & Innovation, Prof. Abraham Ogwu, highlighted the importance of commercialization of knowledge and the need to protect such knowledge from those who seek to benefit from the creativity and ideas of others. He highlighted the importance of institutions such as CIPA in facilitating the process of intellectual property thus enforcing and ensuring that an organization, such as BIUST, its ideas or inventions are legally protected.

## DARA BOTSWANA COHORT COMPLETES TRAINING



*Left to Right Sitting row: Ms. Katlego Keganne-BIUST), Ms. Kene Dongwana (UB), Mr. Motheo Sepako (BIUST)*

*Left to right standing: Mr. Mothisi Madiba (BIUST), Mr. Onkabetse Sengate (Tutor), Thebe Mogalakwe, Mr. Tumisang Mello, Dr Ceren Ulusoy UNIT 4 (BIUST)*

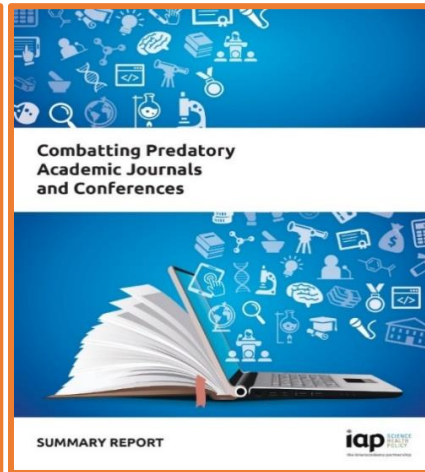
Since its inception, DARA has organised various units and intensive workshops with partner countries in Africa to fill the educated local personal in the country. Botswana is one of eight SKA (Square Kilometer Array) partner countries on the African continent. Botswana's role in building the SKA is extremely important as a precursor (African Very Long Baseline Interferometry Network-AVN) to this project

The students of the recent Botswana cohort learned and gained experience in the steps of analysing radio telescope data as well as operation of 32-m Radio Dish located in Ghana. 2021-2022 UNIT 2/3 (February 2022) and UNIT 4 -UNIT 1(November-December 2021) trainings were conducted in Ghana (hosted by Ghana Space Science and Technology Center) and BIUST (hosted by Department of Physics and Astronomy, Coordinated by Dr Ceren Ulusoy), respectively. The courses were delivered by radio astronomy experts from the project partners in the UK, local partners in the host countries (Dr Ulusoy for Botswana) and South Africa. Recently, the latest cohort in Botswana is comprised of 5 students from UB and BIUST. The five are Tumisang Mello (BIUST), Thebe Mogalakwe (BIUST), Mothusi Madiba (BIUST), Kene Dongwana (UB) Sepako Motheo (BIUST).

PEER REVIEWED TECHNICAL REPORT BY BIUST'S PROF.  
ASFAWOSSEN ASRAT



*Prof A. Asrat*



The InterAcademy Partnership (IAP) hosted an online seminar to launch a report on a project “*Combatting Predatory Academic Journals and Conferences*” on March 16<sup>th</sup>, 2022. The project is led by an independent working group of international experts nominated by academies around the world. BIUST’s Prof. Asfawossen Asrat Kassaye, is a member of the working group. The IAP study set out to improve the understanding of what constitutes predatory practices, gauge their prevalence and impact, identify their root causes, and review efforts to address them.

For further information on the report visit:

<https://www.interacademies.org/project/predatorypublishing>

Full online seminar link: <https://www.youtube.com/watch?v=G88WvDjv7n4&t=4s>

## WEBINAR: FET SEMINAR SERIES (MEIE) SEMINAR SERIES



*Prof Rodrigo Jamisola*

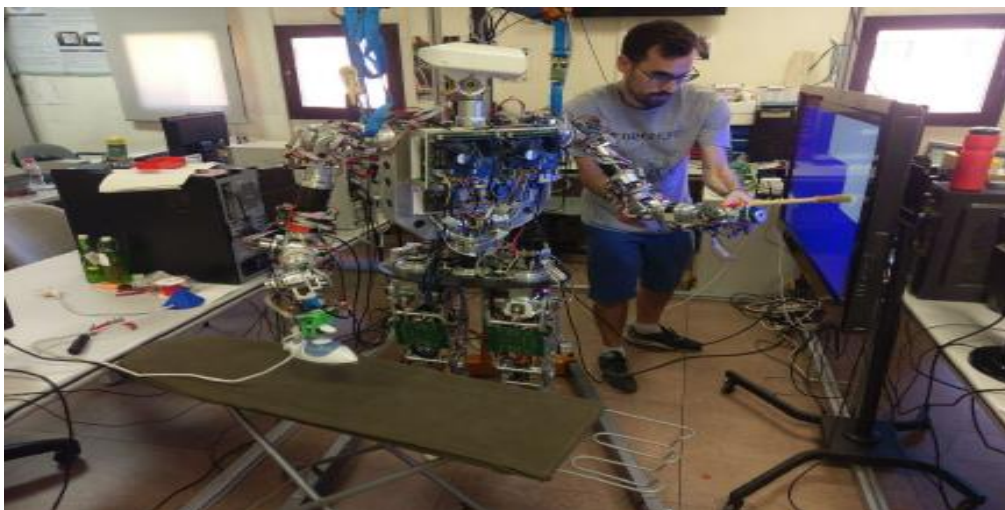


*Dr Raul Fernandez Fernandez*

Prof Rodrigo Jamisola of the Department of Mechanical Energy & Industrial Engineering hosted Dr. Raul Fernandez Fernandez from Universidad Carlos III de Madrid, Spain through the staff exchange programme collaboration between Universidad Carlos III de Madrid and Botswana International University of Science and Technology, funded ERASMUS+ International Credit Mobility Programme. The webinar was held on March 24<sup>th</sup> and featured a talk on “*Neural Policy Style Transfer: How to Transfer Styles to Robot Trajectories as a Way to Achieve Action Generalization*”.

For further information visit:

<https://drive.google.com/file/d/1fkB0ww6tOyUAhV34yyU2ojCXnyoCW-Py/view?usp=sharing>



*Fig. 1. Learning from Demonstration via kinesthetic learning using TEO the humanoid robot from UC3M of a paint action*

## MR CALISTUS RAMOTOROKO UNDERTAKES A CASE STUDY IN KASANE



*Mr Calistus Ramotoroko onsite in Kasane as part of the case study*

BIUST's Mr Calistus Ramotoroko, a PhD candidate with the department of Physics & Astronomy, with this research work focusing specifically on exploration geophysics. His research work took to the north-eastern region of Botswana, where the Chobe River meets the Zambezi, is a geothermal hot spot - the Kasane Hot Springs. His study explores the use of geothermal energy as alternative energy source in bid to shift away from the over-resilience on energy generated from fossil fuels. This alternative source is a better option due to its environmental friendliness while being commercially viable.

Mr Ramotoroko indicated that despite decades of research, the well-known Kasane hot springs remain largely unexplored. The first insights into this system will be revealed by collecting airborne magnetic and electrical resistivity data, which will be used to create resistivity and magnetic susceptibility models. The hot springs in Kasane have inspired awe and scientific curiosity for more than a century. Geochemical and hydrological data, the presence of springs on the banks of the Chobe River, and the lack of mapped faults shape the dominant concept that thermal fluids reside in reservoirs beneath our feet. The ultimate source of thermal fluids is believed to be copious rainfall, which geochemical studies have shown seeps through faults to deeper depths. There it is likely heated by the underlying granitic intrusive bodies before returning to the surface as thermal fluids and interacting with rocks and shallow groundwater to alter its chemistry. However, this concept lacks the exact size and depth of the geothermal reservoir. Our team therefore committed to ongoing research to assess the geothermal potential of the Kasane Hot Spring

For further information visit: <https://www.seequent.com/oasis-montaj-to-find-geothermal-for-africa/>

## VIRTUAL LAUNCH OF THE STATISTICAL SERVICE UNIT

BIUST's department of Mathematics and Statistical Sciences hosted a virtual launch for the Statistical Services Unit (SSU), a centre within the department. The centre, which was established in 2020, aims to promote more effective links between academic mathematicians, statisticians, applied researchers, and the public. Additionally, the centre also aims to create a BIUST statistical analysis and data science capacity by providing advice and technical services within the University. This will be implemented by offering services including statistical analyses, collaboration skills, short-course training, proper data application and manipulation, and the use of data-driven solutions for sustainable development. Furthermore, the SSU aims to Foster mutually beneficial contacts between the University and the wider community in dealing with real-world issues in a practical and robust manner.

For further enquires contact on: [ssu@biust.ac.bw](mailto:ssu@biust.ac.bw)

## GET INSPIRED with Ms Keletso Masisi



This month's Q&A for the Get Inspired feature is postgraduate student with the department of Biological Sciences Ms Keletso Masisi. She is currently a Master's student.

### *Personal and Academic Background*

I obtained my undergraduate degree at the University of Botswana with a Bachelor of Science in Biological Sciences. Additionally, I have other engagements including being the SANBio student ambassador (Botswana). Being an ambassador has helped me advocate for solution-based research, bio-entrepreneurship, and research collaboration in Southern Africa. Furthermore, I am also a SynBio Africa Youth Fellow. Being part of the SynBio Africa team has allowed me to engage in promoting biosecurity in Africa. As a fellow I am engaged in platforms that allow me to share my research outputs with other youth scientists.

### *Journey in BIUST*

I joined BIUST in 2018. It was an enlightening experience particularly when it came to the student-lecturer relationship. The environment was such that one could easily engage with module lecturers. This made the whole coursework enjoyable. In addition, I got to engage in innovative research with brilliant minds.

### *Experience with funding*

The student initiation grant is a great initiative particularly in jump starting postgraduate research. It allowed me to commence my research and finally complete all my research objectives.

### *Advice to Upcoming Researchers*

Apply yourself fully and trust in your abilities. There shouldn't be too much of a lag between identifying your goals/objectives and the execution of the goals that you have set out for yourself. Hard work coupled with focus and willingness to learn always pays off. Through it all, don't forget to cultivate your enthusiasm throughout the execution process.

### *COVID-19 Impact on Research Performance*

COVID-19 had a direct impact on my research performance as I had to pause my lab work with the lockdown situation. However, it did turn out to be a blessing in disguise since my colleagues and I were part of the personnel engaged in the sanitizer production project that was of benefit to the BIUST community and greater Palapye.

### *Point of View on Work-Life Balance*

Scheduling "Me" time is absolutely essential as this is the time when I recharge. I enjoy cooking, particularly trying new recipes. I also find yoga helpful when I want to rejuvenate. The motto I live by is "the grass is greener where you water it", focus on cultivating your abilities and less on what the next person is doing.

## **FUNDING OPPORTUNITIES**

### **ICCR Scholarship 2022-2023**

Indian council for cultural relations with a big motto of governing the scholarship programs of the Government of India. It annually donates a total of 3940 scholarships under 26 different types of schemes to foreign students from about a total of 140 countries throughout the world. Out of these total schemes, six of them are funded by ICCR from its own grant and the other schemes are administered on the behalf of MEA and the ministry of Ayush.

For more information visit: <https://scholarshiplogin.in/iccr-scholarship/>

## TWAS-Mohammad A. Hamdan Award

Starting from year 2020, this award is named after TWAS's late Vice President for the Arab Region, Prof. Hamdan. As a Member of our Academy since 1988, Prof. Hamdan was deeply committed to the cause and objectives of TWAS and for many years he actively supported us and held the position of TWAS Vice-President for the Arab countries on the TWAS Council. His true commitment to the cause and mission of TWAS in sustaining scientific capacity building in the developing world was so strong that he endowed a large sum to TWAS to establish an award in his name.

The award is given every two year and consists of **USD 5,000 and a certificate.**

### Eligibility

- The award recognizes a mathematical scientist working and living in Africa or Arab regions.
- The award will be given for outstanding mathematical work (pure, applied, probability, statistics).
- Eligible candidates are national of an African or Arab country, who have been living and working there for a minimum of two years immediately prior to their nomination.
- Fellows of TWAS are not eligible.
- Self-nominations and nominations from jury members will not be considered.

### Selection

Selection is made on scientific merit. A pre-screening of the nominees will be done at TWAS, the nomination dossiers of the qualified candidates will then be submitted to the jury members for their evaluation.

**Closing date: 20 April 2022**

## Research Fellowship Program 2023 Announcement

**For further information visit:** <https://twas.org/opportunity/twas-mohammad-hamdan-award>

The Matsumae International Foundation (MIF) has announced its annual full fellowship for overseas young researchers with focus on natural science, engineering, and medicine.

### Eligibility

Applicants of non-Japanese nationality who meet all the following requirements are eligible to submit application documents.

- Obtain an invitation (acceptance) letter from a host institution in Japan prior to application.
- Hold Ph.D. (Doctoral degree).
- Must be at the age of 49 years old or younger at the time of application.
- Must have sufficient the English or Japanese language's ability.
- Should not have past or current experiences of staying in Japan (other than short-term stays such as for sightseeing or conferences)



- Applicants must have an occupation in their home countries, return there upon completing their fellowship tenure, and should contribute to **development of their own country**.

**Closing date:** Call will officially open 1 April 2022 and close 30 June 2022

**For further information visit:** [Fellowship Announcement | The Matsumae International Foundation \(mif-japan.org\)](#)

## Queen Elizabeth Commonwealth Scholarships (QECS) 2022-2023 for Masters (Fully Funded)

Applications are now open for the QECS. The QECS offers a unique opportunity to study a two-year Master's degree in a low or middle-income Commonwealth country. The scholarship is aimed at students who are committed to creating change in their communities. They also offer a life-changing opportunity to experience a new country and culture, to broaden horizons, and to build a global network that will last a lifetime.

### Eligibility

- Citizen of a Commonwealth country
- Applicants must apply for QECS award in a country other than their home country/country of citizenship.
- There is no upper age limit to be eligible for a QECS award
- You must have already completed your degree and have graduated with an equivalent of 2:1 at the time of application. As part of the application process, you will be asked to provide a copy of your transcript and degree certificate.
- The QECS awards are only hosted by low and middle-income countries. Therefore, these awards will not be hosted in Canada, the UK or Australia.

**Closing date:** 24 May 2022

**For further information visit:** <https://opportunitydesk.org/2022/04/04/queen-elizabeth-commonwealth-scholarships-qecs-2022-2023/>

## Georg Forster Research Fellowship (HERMES) 2022 for Postdoctoral Researchers to Study in Germany

Through the Georg Forster Research Fellowship, the Alexander von Humboldt Foundation sponsors researchers with above average qualifications and from all fields. These researchers must come from developing and transition countries-excluding China and India.

### Eligibility

- Doctorate or comparable degree completed less than four years prior to the date of application. Candidates who have nearly completed their doctoral studies are eligible to apply provided that they submit the manuscript of their dissertation or publications containing the results of their dissertation, however, at earliest, 6 months prior to the completion of their dissertation.

- Academic publications reviewed according to international standards and printed in journals and/or by publishing houses.
- Choice of research outline of major relevance to the future development of the candidate's country or region of origin.
- Confirmation that research facilities are available and mentoring agreement and a detailed expert's statement by an academic host at a research institution.
- Expert reviews from the doctoral supervisor and one other academic qualified to give well-founded comments on the applicant's qualification, preferably including reviewers not working at the applicant's own institute
- Necessary language skills: humanities or social sciences and medicine: good knowledge of German if it is necessary to carry out the research successfully; otherwise, a good knowledge of English; natural sciences and engineering: good knowledge of German or English.
- Citizenship as well as principal place of residence and work in a developing country, emerging economy, or transition state.

**Closing date: 30 June 2022**

**For more information visit;** <https://www.opportunitiesforafricans.com/georg-forster-research-fellowships-hermes-2022/>

## \$20,000 Funding available to Improve Production and Distribution of Food, and Promote Public Health

The Conservation, Food and Health Foundation seeks to protect natural resources, improve the production and distribution of food, and promote public health in Asia, Africa, Latin America, and the Middle East. The foundation helps build the capacity of organizations and coalitions with grants that support research or improve the learning and generation of local solutions to complex problems. The foundation supports projects that demonstrate local leadership and promote professional development in the conservation, agricultural, and health sciences; develop the capacity of local organizations; and address a particular problem or question in the field. It prefers to support projects that address under-funded issues and geographic areas.

### Fields of Interest

The foundation supports special projects and programs of non-governmental organizations in three areas: conservation, food, and health. Examples of areas of interest within these fields follow but are not meant to be exclusive.

#### I. Conservation

Conservation grants help improve ecological and environmental conditions in low- and middle-income countries. The foundation supports field research and related research activities, training, and technical assistance efforts that:

- help conserve ecosystems and protect biodiversity
- train local leaders in conservation and protection of resources, with an emphasis on technical and scientific training

#### II. Food

Food grants help research-based efforts to improve food and nutrition security and improve natural resources and ecosystems. Areas of interest include projects that:

- promote or develop specific sustainable agriculture practices with potential to advance science and practice in other countries.
- test and refine innovative education and training interventions for small scale farmers; and
- Advance new approaches to control pests and diseases affecting important food crops in low-income countries.

### III. Health

The foundation supports public health programs that focus on populations rather than individuals. It funds programs that emphasize disease prevention and health promotion over those that emphasize disease diagnosis, treatment, and care. It supports research, technical assistance, and training projects that:

- improve public health through community-based efforts that address health promotion, disease prevention, family planning, and reproductive health; and
- increase the understanding and treatment of neglected tropical diseases

**Closing date: 01 July 2022**

**For further information visit:** [The Conservation, Food & Health Foundation \(grantsmanagement08.com\)](http://grantsmanagement08.com)

## 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>

## PROSPECTIVE CALL: Seed Grant for New African Principal

With the support of the German Federal Ministry of Education and Research (BMBF), The World Academy of Sciences (TWAS) launches a new programme to strengthen the capacity of African countries lagging in science and technology. The new 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, and Mathematics, Medical Sciences and Physics carried out in African countries lagging in science and technology identified by TWAS.

### Eligibility

- Applying *Principal Investigators* must be nationals of an eligible country, who holds a PhD and has 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. The PI must be 40 or under. Any applicant turning 41 in the year of application is not eligible.
- The PI must have obtained their Ph.D. within the last 5 years in a country other than their home country.
- The PI must have returned to their home country (refer to list in the guidelines) within the last 36 months or will return home before the end of 2021.
- The PI must hold, be offered or be in the process of accepting a position at an academic and/or research institution (including international research centers) in their home country.
- The PI must be national of an eligible African country that is lagging in science and technology (refer to list in the guidelines).
- Applicant 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.
- The applicant must submit a strong Research Proposal
- Please be advised that applicants may apply for only one programme per calendar year in the TWAS and OWSD portfolio. Applicants will not be eligible to visit another institution in that year under the TWAS Visiting Scientists the Visiting Professor programmes. One exception: The head of an institution who *invites* an external scholar to share his/her expertise under the TWAS Visiting Professor programme or the TWAS Visiting Expert programme may still apply for another programme.

**Deadline: *Call will open in 2022***

For further information visit: [Seed Grant for New African Principal Investigators \(SG-NAPI\) | TWAS](#)

## Science For Africa Foundation (SFA Foundation)



The **Science for Africa Foundation (SFA Foundation)**, a pan-African, non-profit, charitable organization, that aims to support, strengthen, and promote science and innovation in Africa. The goal of the SFA Foundation is to support African scientists in addressing the continent's most pressing challenges and developmental needs through science and innovation programmes

[www.biust.ac.bw](http://www.biust.ac.bw)

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and their outcomes. SFA Foundation is the new home of Africa's leading scientific research and policy programmes. The Nairobi-based non-profit has recruited a talented team of professionals who bring continuity to the design and management of science and innovation programmes. This dedication positions SFA Foundation to continue to seamlessly support world-class science and use its vast experience to enable the growth of discovery and translational sciences that benefits communities in Africa.

To learn more about the foundation visit: <http://www.scienceforafrica.foundation/>

## ***PURE-PROFILE UPDATES***

Academic staff as administrators of their PURE Profiles are advised to update their titles/designation upon promotion or appointment on PURE. Click on the following to view full presentation Guide on how to edit the Pure Profile:

[https://docs.google.com/presentation/d/1ioak4S5qo7NM05oN\\_CHB011IClkWDXQs/edit?usp=sharing&oid=104584763792788069826&rtpof=true&sd=true](https://docs.google.com/presentation/d/1ioak4S5qo7NM05oN_CHB011IClkWDXQs/edit?usp=sharing&oid=104584763792788069826&rtpof=true&sd=true)

## BIUST Academics' Recent Research Contribution

	Book/Book Chapter	Authors	Date	Source title & Link	
1.	Cybersecurity Capabilities in Developing Nations and Its Impact on Global Security	Dawson, M., <b>Oteng, T</b> and <b>Maupong, T.</b>	Feb 22	IGI Global DOI: <a href="https://doi.org/10.4018/978-1-7998-8693-8">https://doi.org/10.4018/978-1-7998-8693-8</a>	
	Journal Contribution	Authors	Date	Source title & Link	Journal Ranking (h-index)
1.	Recent Observed Changes in Extreme High-Temperature Events and Associated Meteorological Conditions over Africa	Iyakaremye, V., Zeng, G., Ullah, I., Gahigi, A., <b>Mumo, R.</b> , and Ayugi, B.	Jan 22	International Journal of Climatology. 1- 16. <a href="https://doi.org/10.1002/joc.7485">https://doi.org/10.1002/joc.7485</a>	166
2.	Prioritization of Pavement Segments Maintenance Using Analytical Hierarchy Process - Case study: Palapye, Botswana	<b>Mayunga, S.</b> and <b>Koketso, S.</b>	Jan 22	International Journal of Science and Research, 11(1). 1523-1530. <a href="https://doi.org/10.21275/SR2124162519">https://doi.org/10.21275/SR2124162519</a>	18
3.	Chickpea chlorotic stunt virus: a threat to cool-season food legumes	<b>Abraham, A.</b> and Vetten, H.J.	Jan 22	Archives of Virology, 167(1). 21-30. <a href="https://doi.org/10.1007/s00705-021-05288-4">https://doi.org/10.1007/s00705-021-05288-4</a>	110
4.	Rational homotopy type of mapping spaces between complex projective spaces and their evaluation subgroups	<b>Gatsinzi, J-B.</b>	Jan 22	Communications of the Korean Mathematical Society, 37(1). 259-267. <a href="https://doi.org/10.4134/CKM.S.c200431">https://doi.org/10.4134/CKM.S.c200431</a>	15
5.	Genetic Diversity and Population Structure Analysis of Grass pea (Lathyrus Sativus L.) Accessions Collected from North-Western Ethiopia Using SSR Markers	Mekonen, D.A., <b>Abraham, A.</b> , Oselebe, H., Afiukwa, C., Ilesenmi, O and Abebe, T.D.	Jan 22	Genetic Resources and Crop Evolution, 69.1247-1260. <a href="https://doi.org/10.1007/s10722-021-01302-5">https://doi.org/10.1007/s10722-021-01302-5</a>	66
6.	Climate finance readiness: A review of institutional frameworks and policies in Kenya	Kiremu, M., Scrimgeour, F., Mutege, J. and <b>Mumo, R.</b>	Feb 22	Sustainable Environment, 8(1). <a href="https://doi.org/10.1080/27658511.2021.2022569">https://doi.org/10.1080/27658511.2021.2022569</a>	29
7.	Multiple Causalities Due to Ethion Pesticide Poisoning: A Case Report	<b>Phokedi, G.N.</b> , Mugoma, S. Patlakwe, T. and <b>Tsenang, M.</b>	Feb 22	American Journal of Biomedical Science & Research, 15(3). 352. <a href="https://doi.org/10.34297/AJB.SR.2022.15.002120">https://doi.org/10.34297/AJB.SR.2022.15.002120</a>	

8.	On the use of intertemporal models to analyse how post-loss and post no-loss insurance demands differ	<b>Mumo, R., Njagaraha, J.B.H.,</b> Kiremu, M. and Watt, R.	Feb 22	Cogent Economics & Finance, 10(1). <a href="https://doi.org/10.1080/23322039.2022.2035493">https://doi.org/10.1080/23322039.2022.2035493</a>	16
9.	Characteristic Spectral Features of Terra Preta (TP) in the 5-15 Terahertz Range	<b>Lepodise, L. M.,</b> Lewis, R. A., Constable, E., Pogson, E., Joseph, S. D. and Horvat, J.	Feb 22	Applied Spectroscopy, 76(3). 300-309. <a href="https://doi.org/10.1177%2F00037028211060384">https://doi.org/10.1177%2F00037028211060384</a>	110
10.	Detection of Enteric Viruses from Wastewater and River Water in Botswana	<b>Tubatsi, G. and Kebaabetswe, L. P.</b>	Feb 22	Food and Environmental Virology. <a href="https://doi.org/10.1007/s12560-022-09513-4">https://doi.org/10.1007/s12560-022-09513-4</a>	32
11.	Spectral Angle Mapping and AI Methods Applied in Automatic Identification of Placer Deposit Magnetite Using Multispectral Camera Mounted on UAV	Sinaice, B. B., Owada, N., Ikeda, H., Toriya, H., Bagai, Z., <b>Shemang, E.,</b> Adachi, T. and Kawamura, Y.,	Feb 22	Minerals, 12(2). 268. <a href="https://doi.org/10.3390/min12020268">https://doi.org/10.3390/min12020268</a>	35
12.	Orbital controls on eastern African hydroclimate in the Pleistocene	Lupien, R.L., Russell, J.M., Pearson, E.J., Castañeda, I.S., <b>Asrat, A.,</b> Foerster, V., Lamb, H.F Roberts, H.M., Schäbitz, F., Trauth, M.H., Beck, C.C., Feibel, C.S. and Cohen, A.S.	Feb 22	Scientific Reports, 12. 3170. <a href="https://doi.org/10.1038/s41598-022-06826-z">https://doi.org/10.1038/s41598-022-06826-z</a>	213
13.	Reconstructing the Environmental Context of Human Origins in Eastern Africa Through Scientific Drilling	Andrew S. Cohen, A.S., Campisano, C.J., Arrowsmith, J.A., <b>Asrat, A.,</b> Beck, C.C., Behrensmeier, A.K., Deino, A.L., Feibel, C.S., Foerster, V., Kingston, J.D., Lamb, H.F., Lowenstein, T.K., Lupien, R.L., Muiruri, V., Olago, D.O., Owen, R.B., Potts, R., Russell, J.M., <b>Schaebitz,</b>	Feb 22	Annual Reviews of Earth and Planetary Sciences, 50. 451-76. <a href="https://doi.org/10.1146/annurev-earth-031920-081947">https://doi.org/10.1146/annurev-earth-031920-081947</a>	158

		F., Stone, J.R., Trauth, M.H. and Yost, C.L.			
14.	Radial Casting Algorithm for Extraction of Man-Made Features from High Resolution Digital Satellite Imagery	<b>Mayunga, S.</b>	Mar 22	International Journal of Intelligent Information Systems, 11(1). 7-13. <a href="https://doi.org/10.11648/j.ijis.20221101.13">https://doi.org/10.11648/j.ijis.20221101.13</a>	55
15.	Review of Meteorological Drought in Africa: Historical Trends, Impacts, Mitigation Measures, and Prospects.	Ayugi, B., Eresanya, E., Onyango, A.O., Ogou, F. K., Okoro, E. C., Okoye, C. O., Anoruo, C. M., Dike, V. N., Ashiru, O. R., Daramola, M. T., <b>Mumo, R.</b> and Ongoma, V.	Mar 22	Pure and Applied Geophysics. <a href="https://doi.org/10.1007/s00024-022-02988-z">https://doi.org/10.1007/s00024-022-02988-z</a>	87
16.	Enhanced ethanol sensing response of nanostructured Ce-doped CuO thin films	<b>Bosigo, R., Lepodise, L.M., Chimowa, G.</b> and Muiva, C.	Mar 22	Materials Chemistry and Physics, 280. 125841. <a href="https://doi.org/10.1016/j.matchemphys.2022.125841">https://doi.org/10.1016/j.matchemphys.2022.125841</a>	152
17.	Influence of environmental viral load, interpersonal contact and infected rodents on Lassa fever transmission dynamics: Perspectives from fractional-order dynamic modelling	<b>Ndenda, J.P., Njagarah, J.B.H.</b> and Shaw, S.	Mar 22	AIMS Mathematics, 7(5). 8975-9002. <a href="https://doi.org/10.3934/math.20222500">https://doi.org/10.3934/math.20222500</a>	15
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