

EDITORIAL

Life, though not as we used to know it, is gradually returning to normal (perhaps, near normal) with the vaccination initiative put in place by many countries against COVID-19. In Nigeria, although the acceptance of the vaccine is still very low, Nigerians seem to have quickly moved on from the scourge. With the daily report of new cases as low as 14 in the second quarter of the year, there seems to be a silver lining in sight at last. Economic activities are beginning to recover from the shutdown occasioned by the pandemic as people return to their normal businesses, in spite of the looming third wave of the pandemic. But it is not only the economy that is recovering. Academic activities in Nigeria are also returning to normalcy following the protracted industrial action by the Academic Staff Union of Nigerian Universities (ASUU). With the initially hazy reopening of schools in general and universities in particular in the first quarter of the year, there has been an upsurge in academic activities in Nigerian institutions in a bid to recover the lost time.

The Nigerian Young Academy (NYA) is not left out in this quick recovery as many of the members and fellows are attaining great academic and research feats in spite of the inhibiting conditions and limited research funding. With the scientific/research challenges and economic implications of the COVID-19 pandemic biting harder, it is time to take a look on how to use the limited funds available for research in order to maximize research output and productivity.

Research funding in Nigeria is mainly undertaken by the Tertiary Education Trust Fund (TETFUND). In this edition of the NYA newsletter, we present the Academy's position on the operation of the TETFUND in Nigeria. While assessing its strengths and weaknesses, the Academy makes recommendations to improve the efficiency and productivity of the funding body/scheme.

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NIGERIAN YOUNG ACADEMY: A POSITION PAPER ON STRENGTHENING THE IMPACT OF THE TERTIARY EDUCATION TRUST FUND (TETFUND) IN NIGERIA



Introduction: The Education Trust Fund (ETF) was set up under the Education Tax Act No. 7 of 1993 as amended by Act No. 40 of 1998, with a mandate to operate as an intervention fund to all levels of public education (Federal, State and Local). It was later repealed and replaced with Tertiary Education Trust Act of 2011. The core mandate of TETFUND is to administer and disburse funds to Federal and State tertiary educational institutions, specifically for the provision or maintenance of:

1. Essential physical infrastructure for teaching and learning;
2. Instructional material and equipment;
3. Grants for research and publication;
4. Academic staff training and development; and
5. Any other need which, in the opinion of the Board of Trustees, is critical and essential for the improvement of quality and maintenance of standards in the higher educational institutions.

Impact of TETFUND on the Nigerian educational system: highlights of some of the strengths and weaknesses in its operations and suggestions for improvement

Nigeria's educational system has benefitted tremendously from the interventional support of TETFUND over the years. There are undeniable evidence(s) of TETFUND intervention projects in virtually all government-owned tertiary institutions (GOTI) in the country. TETFUND-funded infrastructural development such as the building and renovation of lecture rooms, theatres, laboratories, staff offices, health centres, etc, abound in many GOTI, even though these facilities are still below the minimum for efficient educational service delivery. TETFUND has provided library materials and resources (books, e-books, subscription to international databases, journals and educa-

tional software) as well as laboratory equipment for science programmes. Clearly, without TETFUND funding, many GOTI would be in critical state of disrepair and infrastructural obsolescence. In this sense, TETFUND has performed admirably much better than many government agencies. However, there is an urgent need to review some of the inadequacies of the agency to improve its service delivery to the Nigerian tertiary educational system and national development.

The starting point is to implement a proper monitoring and evaluation of the processes leading to the award of contracts and supervision during construction and installation of facilities. No doubt, these infrastructures are essential to efficient teaching and learning. As earlier indicated, most Federal and State-owned tertiary institutions have witnessed upsurge of developmental projects in this regard due to TETFUND intervention. However, whether these projects meet the minimum global standard in terms of quality is another question. The structures in most cases may be sufficient in number, but how durable are they and the facilities installed in them?

A good number of the newly constructed physical structures in most tertiary institutions that have benefitted immensely from TETFUND are deteriorating in no time. These occurrences become worrisome, especially when one sees that bigger structures built in the 1960s, or during the pre-colonial era are still standing strong despite not being regularly and adequately maintained. Then, the question of where the handlers of the newly constructed structures got it wrong becomes pertinent. Often times, many of the infrastructural projects are either executed by non-professional contractors or with substandard materials, hence, raising

concerns about durability and efficiency. For example, there have been many cases of freshly built/renovated classroom facilities being collapsed or destroyed at first use.

TETFUND should be stricter in making sure that beneficiaries adhere to standard practices before the benefits are made accessible to them. In addition, it may be adequate to constitute a special task force with members nominated by the National Universities Commission (NUC) that will monitor and ensure that the quality of projects in tertiary institutions during and after construction is not compromised. Members of this special committee should enforce as part of the conditions of award of contracts to contractors, warranty of a reasonable number of years. The committee should compose of mainly practitioners in the fields of building and engineering, quantity surveying and law.

On academic staff training and development (ASTD), the Fund has done greatly well in sponsoring members of staff of tertiary institutions to foreign and local universities to acquire training for the benefit of the country. Although, observation of the approach currently being used with the value it has added to the system suggests that not much in terms of technological advancement, economic development and increased educational standard have been achieved by TETFUND. Most ASTD scholars (especially in science and engineering) find nothing to do with the knowledge they acquire due to insufficient research facilities in specialized research areas. This partly explains why Nigeria is still rated low in terms of socio-economic development despite the huge amount of money that have been invested into academic staff training and development. To solve this problem, TETFUND can identify Universities in Nigeria with specific areas of strength and fortify them further. An intensive and all-inclusive thorough survey can be carried out on the Federal and State-owned Universities

in Nigeria to know their areas of strength. This survey would be to primarily determine which University is doing well in what discipline according to the global standard. A method that can be employed to measure the performance (or areas of strength) is the use of the total SCOPUS-indexed publications of each faculty within each university in the last three years or adopt the recently introduced U-index by some NYA and FNYA in their 2019 book "Globalisation and Sustainable Development: Research and Researchers' Assessments, 'Publish or Perish', Journal Impact Factor and Other Metrifications". Centres of Excellence (CoEx) could then be established accordingly, to deepen the strengths of each institution. This is similar to what the World Bank has been doing in the last decade. A home-grown solution of this nature will be better focused and more relevant to domestic educational and developmental needs.

On the aspect of disbursement of the ASTD allocation based on the TETFUND guidelines for accessing ASTD, the present ratio of 50%, 40% and 10% for foreign, local and benchwork respectively, is satisfactory. However, there is a need for a clearly stipulated time frame after which the ratio will gradually adjust in favour of local scholars. This is because, it is expected that, after a period of time of an effective ASTD operation, the Nigerian Universities should have had enough foreign trained reputable scholars that would greatly participate in the local training of the next generation of Nigerian scholars. The locally trained scholars are therefore expected to be "world-class".

TETFUND intervention in the area of research and scientific publication is still lagging behind and requires urgent review. Both the Institution-Based Research (IBR) and National Research Foundation (NRF) grants are poorly implemented and are underperforming. The policy/practice of flat allocation to Universities or Polytechnics or

Colleges of Education irrespective of their needs and student carrying capacities is inefficient. A situation where a university with 50,000 students gets the same funds with another with 20,000 students is structurally defective.

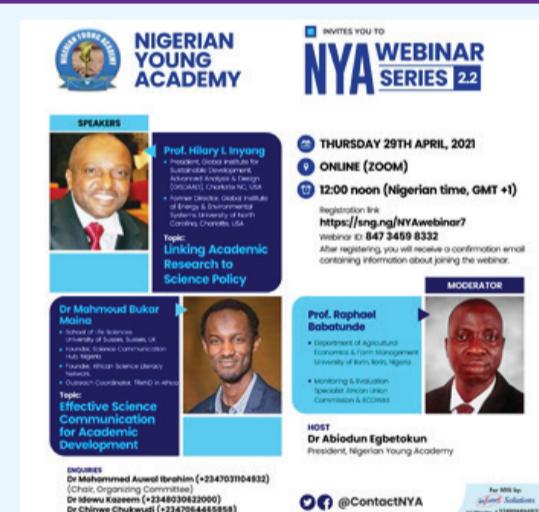
TETFUND funding is not easily accessible by beneficial GOTI. The process is cumbersome and fraught with needless bureaucracy, as a result, many GOTI are unable to access the fund on a yearly basis even in the face of daunting needs. The selection process of scholars for TETFUND ASTD funding by the GOTI appears to be non-transparent and characterized by partisan considerations and not purely on merit.

The present structure of TETFUND management is a recipe for inefficiency to thrive, as appointment of members into the board of trustees is politically inclined. Such positions are supposed to be occupied by Nigerian academics who have distinguished themselves in their respective fields at home and abroad. It will benefit the country greatly if the positions can be advertised and competed for by Nigerian academics with international recognition. The appointment of members into the board of trustees should be based on academic achievements and not political affiliations.

Conclusion: Some areas of operations of the Fund that need to be reviewed with possible solutions have been suggested. It is hoped that these suggestions will be taken and implemented accordingly, so that the long awaited industrial and technological revolution in Nigeria can become a reality within the shortest possible time.

Acknowledgement: This brief was developed on behalf of the NYA by a team of members and fellows including: T. G Jaiyeola (Chair), C. U Chukwudi, M. A Ibrahim, S. O Sanusi and A. O Morakinyo.

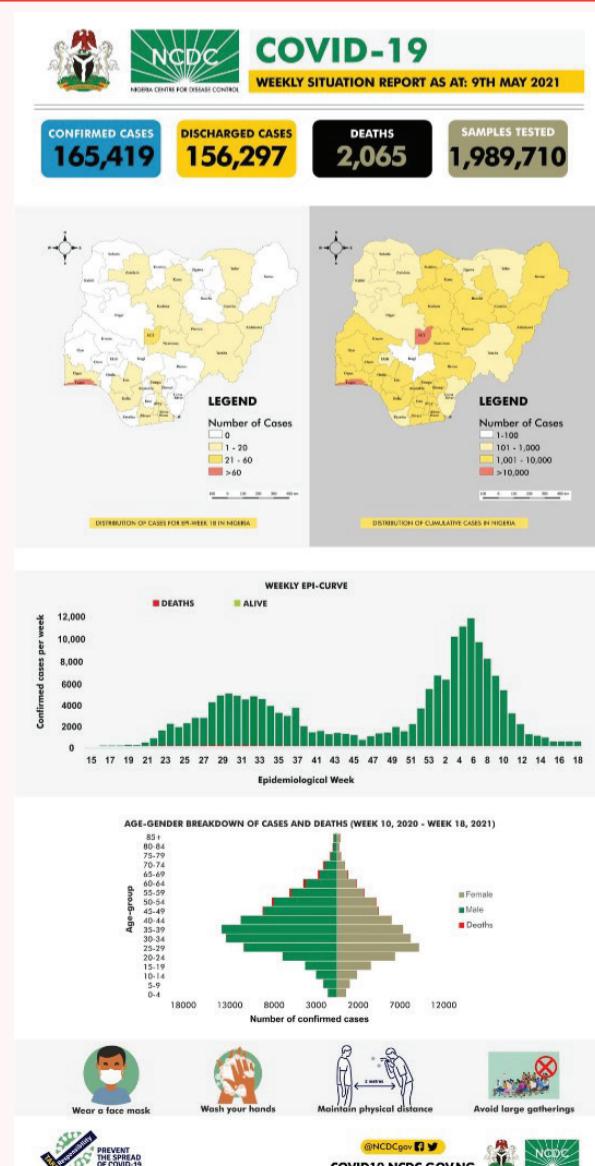
NYA HOLDS WEBINAR SERIES 2.1 and 2.2



The NYA has kicked off series 2 of her now bi-monthly webinars, with the first one (2.1) held on Thursday, 25th February, 2021, on the theme "Systematic Review and Meta-Analysis as Veritable Tools in Research". The speakers were Dr Kingsley Ukwaja (MNYA) of the Department of Internal Medicine, Alex Ekwueme Federal University Teaching Hospital, Abakaliki and Dr Ismaeel Yunusa of the College of Pharmacy, University of South Carolina, USA. Out of 199 registered participants, 122 attended the live webinar. The NYA webinar series 2.2 was also held on 29th April, 2021. While Prof Hilary Inyang of the Global Institute for Sustainable Development, Advanced Analysis & Design (GISDAAD), Charlotte NC, USA spoke on the topic "Link-

ing Academic Research to Science Policy", Dr Mahmood Bukar Maina of the School of Life Sciences, University of Sussex, UK and Founder, Science Communication Hub, Nigeria & African Science Literacy Network spoke on the topic "Effective Science Communication for Development". Out of 102 registered participants, 42 attended the live webinar. As usual, the webinars were streamed live on the Academy's social media handles. It should be recalled that the NYA webinar series is as an alternative platform for the usual Workshops and Seminars previously organized by the NYA as part of her outreach and advocacy programs, which could no longer hold physically due to COVID-19 restrictions.

COVID-19 STATE OF THE NATION



MEMBERS AND FELLOWS' NEWS

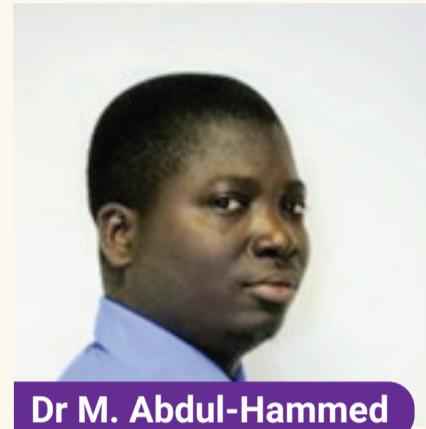
Appointments and Promotions

It has been a very productive first quarter of the year for the NYA, with many of her members and fellows appointed or promoted to various offices. A member, Dr Idika K Idika, was promoted to the rank of Professor in the Department of Veterinary Parasitology & Entomology, University of Nigeria, Nsukka. Two fellows of the NYA were recently promoted to the rank of Reader/Assoc. Professor: Dr Misbaudeen Abdul-Hammed of the Department of Pure and Applied Chemistry, Ladoke Akintola University of Technology, Ogbomoso,

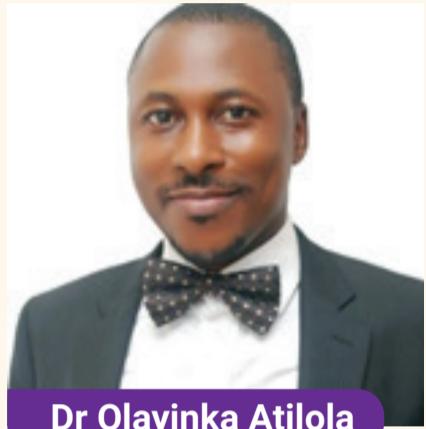
and Dr Olayinka Atilola of the Department of Behavioural Medicine, Lagos State University. In addition, two members of the NYA, Drs Anthony Ugbenyan and Cosmos Ogbuka were also promoted to the rank of Reader/Assoc. Professor in the Department of Biochemistry, Edo University, Iyambo and the Department of Electrical Engineering, University of Nigeria, Nsukka respectively. Dr Ogbuka is also the Director of Computer Communications Centre, University of Nigeria, Nsukka.



Prof I. K. Idika

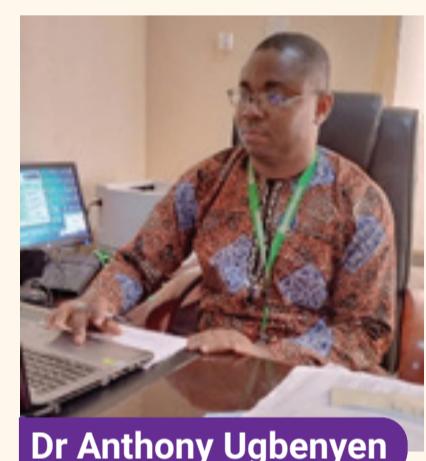


Dr M. Abdul-Hammed



Dr Olayinka Atilola

In another development, a member of the NYA, Dr Chinwe Chukwudi, has been selected as one of the 10 new fellows to be hosted by the National Institute of Health (NIH) for the second cohort of the African Postdoctoral Training Initiative (APTI). Dr Chukwudi is a senior lecturer at the Department of Veterinary Pathology and Microbiology, University of Nigeria, Nsukka, and currently serves in the Executive Committee of the NYA as the publicity secretary. Another member, Dr Olumuyiwa Adegun has been selected for the sixth cohort of the Affiliates Membership Programme of The African Academy of Sciences (AAS). Dr Adegun is a Senior Lecturer in the Department of Architecture, Federal University of Technology, Akure. Nigeria. Another member, Dr Udochukwu



Dr Anthony Ugbenyan



Dr Cosmas Ogbuka

Bola Akuru of the Department of Electrical Engineering, University of Nigeria, Nsukka, was also awarded a prestigious TWAS-DFG fellowship at the Institute for Drive and Power Electronics, Leibniz University Hannover, Germany. Furthermore, two fellows of the NYA Prof. Akhere Omonkhuwa and Dr Oyetunde Oyeyemi were recently awarded Africa Research Excellent Fund (AREF) Grant of €10,000 to organize AREF-Excellent Leadership Development Training Workshop for Young Nigeria Scientists.



Prof. Akhere Omonkhuwa



Dr Olumuyiwa Adegun



Dr Oyetunde Oyeyemi



Dr Chinwe Chukwudi

In a related development, some of the members and fellows of the NYA made the list of SciVal top 500 authors for scholarly output in Nigeria over the period of 2015-2020. They include the following:

SciVal S/N	Name	NYA status
23	Edeki Sunday Onos	Member
26	Usikulu Mojisola R	Fellow
61	Adefegha Stephen Adeniyi	Member
77	Lukman O. Olasunkanmi	Member
149	Mohammed Auwal Ibrahim	Member
174	Dr. (Mrs) Busari Ayobami	Member
220	Aliyu Muhammad	Member
279	Olubunmi Atolani	Fellow
297	Olayinka Atilola	Member
387	Orji Anthony	Member
391	Oyetunde Oyeyemi	Fellow

FELLOWSHIPS, GRANTS & AWARDS

Fellowships

The Fulbright Visiting Scholar Program

Nigerian applicants are invited for The Fulbright Visiting Scholar Program (FVSP) tenable at U.S Institutions. Two categories of grants are offered under The Fulbright Visiting Scholar Program: Research Grants and Program and Curriculum Development Grants. Applications must be completed online at <https://apply.iie.org/fvsp2022>. The deadline to submit application and all supplementary documents is **June 1st**. For more information on how to apply please visit: <https://ng.usembassy.gov/education-culture/exchange-programs/fulbright-african-research-scholar-program-arsp/>

The Center for African Studies Postdoctoral Research Fellowship Program

Harvard University Center for African Studies is offering postdoctoral candidates position to conduct independent research, publish, and increase knowledge in their fields of study that will be beneficial to the African continent and to prepare them to be successful in their chosen career paths. The program offers 18-month postdoctoral fellowships with 12 months spent at the scholars' home institution and six months spent in stipend-supported residency at Harvard University. Interested candidates are required to submit an online proposal by **May 17, 2021 at 11pm ET**. For more information on how to apply please visit: <https://africa.harvard.edu/african-studies-postdoctoral-fellowship-program>.

Africa Science Leadership Programme (ASLP)

The ASLP is an initiative of the University of Pretoria in partnership with the Global Young Academy and is funded by Robert Bosch Stiftung. It serves early- to mid-career researchers in basic and applied science, engineering, social sciences, arts, and the humanities. The programme aims to grow mid-career African academics in the areas of collective leadership, team development, engagement, and collaboration, with the intention of enabling them to solve the complex issues that face both Africa and the global community. Visit <https://www.future-africa.science/index.php/application/aslp> to apply. Applications close **May 31, 2021**.

Newton International Fellowships

These fellowships are for non-UK scientists who are at an early stage of their research career and wish to conduct research in the UK. Applications for the natural and physical sciences should be submitted through the Royal Society's grants management system Flexi-Grant®, while applications for the humanities and social sciences should be made to the British Academy. Applications close at **3pm on Wednesday 16 June 2021**. See <https://royalsociety.org/grants-schemes-awards/grants/newton-international/> for details.

2021 AAAS-TWAS Course on Science Diplomacy

TWAS and AAAS (The American Association for the Advancement of Science) are accepting applications for the 2021 AAAS-TWAS course on science diplomacy. The workshop will take place online from **30 August to 3 September 2021**. To strengthen the connection between scientists and governmental officials, policymakers and diplomats, applications to attend the course are being invited from 'participant pairs'. Both participants in the participant pair should be living and/or working in the same country. For full details on the application process and eligibility requirements, please see: <https://twas.org/opportunity/2021-aaas-twas-course-science-diplomacy>. Deadline is May 31, 2021.

Grants and Awards

AAAS David and Betty Hamburg Award for Science Diplomacy

The award recognizes an individual or a limited number of individuals working together in the scientific and engineering or foreign affairs communities who are making an outstanding contribution to furthering science diplomacy. The award recipient receives a monetary prize of \$10,000, a commemorative plaque, complimentary registration for the AAAS Annual Meeting and reimbursement for travel and hotel expenses to attend, worldwide promotion of their achievements through AAAS communication channels, and the opportunity to publish in *Science & Diplomacy* about their work. All details about the award including how to submit a nomination can be found at: <https://www.aaas.org/awards/science-diplomacy/about>. The call is open until **30 June 2021**.

Elsevier Foundation Chemistry for Climate Action Challenge

Do you have an idea for a chemistry project tackling climate action? You are invited to submit it to the Elsevier Foundation Chemistry for Climate Action Challenge for the chance to receive €25,000. The challenge is open to individuals or organizations around the world for projects in any field of green and sustainable chemistry linking to SDG13 Climate Action. Projects must be applicable in developing countries, and have a strong Gender Equality focus. Full information is available at: <http://www.elsevierfoundation.org/greenchem/>. The deadline for submissions is **August 1, 2021**.

Merck research grants program 2021

Merck is offering a series of research grants to stimulate innovative research in challenging areas of future importance. Grants of 40,000 € - 450,000 € per year for up to 3 years are available in the areas of drug discovery, real time testing and sensors, nanoparticle for nucleic acid delivery, digital innovation, bioelectronics, sustainability, media recycling for cultured meat, and organoids. The deadline to submit online application is **31st August, 2021**. For more information on how to apply please visit: <https://www.merck-group.com/en/research/open-innovation/2021-research-grants.html>

Research Grants on Education: Small

The Small Research Grants Program supports education research projects that will contribute to the improvement of education, broadly conceived, with budgets up to \$50,000 for projects ranging from one to five years. Spencer Foundation is calling for proposal from Principal Investigators (PIs) to apply for a Small Research Grant on Educa-

tion through an online application form. The deadline to submit online application is **4th June, 2021**. For more information on how to apply please visit: https://www.spencer.org/grant_types/small-research-grant

Wellcome Early-Career Awards

This scheme offers funding for early-career researchers from any discipline who are ready to develop their research identity. Through innovative projects, they will deliver shifts in understanding that could improve human life, health and wellbeing. By the end of the award, they will be ready to lead their own independent research programme. Up to £400,000 of research funding is available for 5 years, but may be less for some disciplines, and longer if held on a part-time basis. Applications open on **August 2021 and closes on November 2021**. For more information on how to apply please visit: <https://wellcome.org/grant-funding/schemes/early-career-awards>

Wellcome Career Development Awards

This scheme offers funding for mid-career researchers from any discipline who have the potential to be international research leaders. They will develop their research capabilities, drive innovative programmes of work and deliver significant shifts in understanding that could improve human life, health and wellbeing. Research funding is available for 8 years, but may be less for some disciplines, and longer if held on a part-time basis. Applications open on **August 2021 and closes on November 2021**. For more information on how to apply please visit: <https://wellcome.org/grant-funding/schemes/career-development-awards>

NAS CORNER

NIGERIAN ACADEMY OF SCIENCE CELEBRATES WOMEN IN SCIENCE

THE NIGERIAN ACADEMY OF SCIENCE

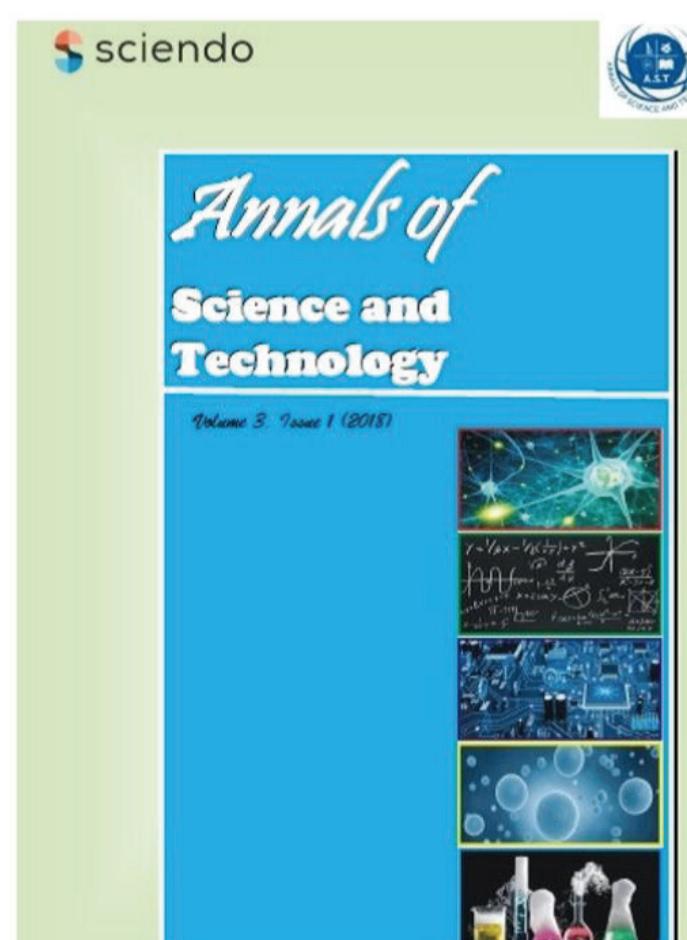
Women in Science and Nigeria's Development

Summit Report



that Nigerian women scientists have played and should play in Nigeria's development, as well as strategies for empowering them. The report is available to download here: <https://nas.org.ng/2021/03/08/women-in-science-and-nigeria-s-development-summit-report/>.

AST PLATFORM



Call for submission of manuscripts

The Annals of Science and Technology (AST), a journal of the Nigerian Young Academy (NYA), hereby calls for the submission of manuscripts for publication in its next issue.

The journal is indexed and abstracted by many reputable outlets including Google Scholar, EBSCO Discovery Service, J-Gate, ReadCube, Baidu Scholar, CNKI Scholar (China National Knowledge Infrastructure), Naviga (Softweco), KESLI-NDSL (Korean National Discovery for Science Leaders), Naviga (Softweco), Promi Central (ExLibris), Summon (Serial Solutions/ProQuest), TDNet and WorldCat (OCLC).

AST publishes both theoretical and experimental high quality articles twice in a year. It publishes research articles, state of the art reviews and short communications in the field of biological, health, chemical, mathematical and physical sciences, as well as engineering and technology. More information on the journal such as submission guidelines can be found in the link below;

<https://www.degruyter.com/view/j/ast>