

Our Ref.:

Date: October 29, 2021

COMMUNIQUE ISSUED AT THE END OF THE 5TH INTERNATIONAL CONFERENCE ON NANOTECHNOLOGY WITH THE THEME 'NANOTECHNOLOGY IN AFRICA: CHANGING THE NARRATIVES FOR THE BENEFITS OF MANKIND' ORGANIZED BY LAUTECH NANOTECHNOLOGY RESEARCH GROUP (NANO⁺) HELD ON 26-28 OCTOBER, 2021 VIA HYBRID MODE (PHYSICAL AND VIRTUAL).

Preamble

Nanotechnology Research Group (*NANO*⁺) is a multidisciplinary group of scholars at Ladoke Akintola University Technology (LAUTECH), Ogbomoso, which was formed on 4 September, 2014 to advance the cause of researches in nanotechnology. The group had organized workshops and conferences on nanotechnology in 2017, 2018, 2019 and 2020 which attracted participants from institutions of higher learning, research institutes, agencies of government and private sectors and have been successful at bringing nanotechnology discourse to the fore among the public. Some of the papers presented at previous conferences were published in three academic outlets in Nigeria and United Kingdom.

The 5th workshop/conference on nanotechnology with the theme '**Nanotechnology in Africa: Changing the Narratives for the Benefits of Mankind**' held between 26 and 28 October, 2021, with about one hundred and fifty participants from about fifty institutions in Nigeria, China, Saudi Arabia, Togo, Egypt, United Arab Emirates, Malaysia, Botswana and Tunisia.

At the first day of the event, participants were trained on the synthesis, characterization and applications of nanoparticles which featured two lectures, and practical sessions to synthesize silver, gold, silver-gold alloy, zinc oxide and titanium oxide nanoparticles.

The opening ceremony of the conference on 27 October, 2021 was attended by more than 1000 people that included students from ten invited public and private secondary schools and University staff school. In his welcome speech, the Head of LAUTECH Nanotechnology Research Group, Prof. Agbaje Lateef highlighted the contributions of the research group to nanotechnology R&D in Nigeria, which included the organization of workshops and conferences, facilitation of public discourse of nanotechnology to deepen its understanding, training of manpower and development of curriculum, engagement of the younger generation in its activities on nanotechnology, and unparalled generation of knowledge in terms of publications on nanotechnology in Nigeria through their articles that were indexed in Scopus between 2010 and 2020. The group which has some nano-based products as part of its accomplishments also established the first journal on nanotechnology in the sub-Saharan Africa, '*Nano Plus: Science and Technology of Nanomaterials*,' which is an open access journal. He canvassed for establishment of a national agency for promotion and exploitation of nanotechnology for national growth and development in Nigeria.

The Acting VC and chairman of the occasion, Prof. Mojeed O. Liasu praised the resilience of the group, noting that the members have contributed immensely to the good image of the University and have impacted researchers from more than twenty institutions in Nigeria. He identified with the milestones achieved by the group within seven years of its formation, and promised that the University would continue to support her aspirations; especially the need for the establishment of a centre of excellence in nanotechnology in the University. He was particularly happy that members of the group were in the majority of top researchers in nanotechnology in Nigeria, and changing the narratives in nanotechnology discourse. The Acting VC thereafter unveiled the three published volumes of the journal of the LAUTECH Nanotechnology Research Group, '*Nano Plus: Science and Technology of Nanomaterials*' which was greatly applauded.

In his speech, the honourable minister of science, technology and innovation, Dr. Ogbonnaya Onu, who was represented by the Director, Chemical Technology of Federal ministry of science, technology and innovation, Mr. Mfom. E.J. Bassey commended the efforts of LAUTECH Nanotechnology Research Group on nanotechnology R&D in Nigeria and beyond, noting that the group was not only a pride of

LAUTECH, but also a pride to Nigeria with the promise that the ministry would continue to support the activities of the group. The minister was delighted about the quality of about 130 researches published by the group in enhancing the ranking of LAUTECH and the promotion of the first journal on nanotechnology in the sub-Saharan Africa, 'Nano Plus: Science and Technology of Nanomaterials' which he launched at the 4th international conference on nanotechnology in 2020. While contributing on the renewed mandate of the ministry that incorporates innovation, he said the exploitation of nanomaterials for national growth and development cannot be overemphasized, and pledged that LAUTECH's centre of excellence on nanotechnology would be fully supported by the ministry as requested by the Vice-Chancellor. The minister noted that the memorandum presented by Prof. Agbaje Lateef, at the 19th meeting of national council on science, technology and innovation to stimulate national action on nanotechnology was a step towards mobilizing efforts to full realization of potentials of nanotechnology through improved funding of nanotechnology research. He identified nanotechnology as a key component of technologies for the migration of Nigeria's economy to knowledge-based economy. He therefore announced that the national policy on nanotechnology was under processing at the Federal Executive Council (FEC) to provide national platform on the exploitation of nanotechnology for national growth and development.

Highlights of lectures by guests at the plenary

In their presentations, Prof. Enock O. Dare of Federal University of Agriculture, Abeokuta, Nigeria, Prof. Cherif Dridi of Center of Research on Microelectronics and Nanotechnology, Sousse, Tunisia, Prof. Abdulkareem A. Saka of Federal University of Technology, Minna, Nigeria, Prof. Nouar Tabet of University of Sharjah, United Arab Emirates, Associate Prof. Hassan Soleimani of University Technology PETRONAS, Malaysia and Associate Prof. Osama Darwesh of National Research Centre, Cairo, Egypt highlighted the trends of research activities on nanotechnology, calling on African leaders to mobilize actions to exploit nanotechnology to engender the much needed growth and development in Africa and deliver on the SDGs of UN. Specifically, the speakers canvassed for increased funding and access to nanotechnology infrastructure for advanced researches that can lead to the development of innovative nano-based products in Africa for diverse applications in energy generation and storage, water treatment, environmental rejuvenation, enhanced oil recovery, agriculture, medical diagnostic

tools and sensors among others. More than fifty papers were presented at the conference in different areas of human endeavours at technical sessions.

At the end of the 3-day workshop/conference, the participants agreed that:

- LAUTECH Nanotechnology research group is a prominent group that has provided leadership in nanotechnology discourse in Nigeria, and should be supported by the government and private sector to enhance its activities.
- 2. Nanotechnology is vital to the development of Africa and urged African leaders to mobilize efforts at providing enabling platforms for nanotechnology R&D at regional and national levels.
- 3. Nigeria should leverage on her bilateral and multilateral relationships for nanotechnology engagements with countries such as Malaysia, Egypt, South Africa, Tunisia and UAE.
- 4. The federal ministry of science, technology and innovation should adopt a similar strategy by the Department of science and technology of South Africa to create a funding platform that encompasses tertiary education trust fund (TETFund) for nanotechnology infrastructure and promotion of nanotechnology in Nigeria to herald speedy developments of nanotechnology R&D, as the conference identified dearth of the state-of-the-art equipment as a major impediment to progress in nanotechnology pursuit in Nigeria.
- 5. The progress being made by the federal ministry of science, technology and innovation at evolving a national policy on nanotechnology in Nigeria was commendable and thereby canvassed for its passage without further delays.
- 6. Nigeria should establish a national agency to drive the agenda on nanotechnology R&D.
- 7. The participation of the Federal ministry of science, technology and innovation, National Space Research and Development Agency (NASRDA) and LUBCON Nigeria Limited at the conference was laudable and necessary to stimulate tripartite relationships among academia, government agencies and industries.

Prof. A. Lateef

Head of Research Group

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Prof. M.A. Azeez

Chairman, LOC, 'LAUTECH NANO 2021'

Members: Prof. A. LATEEF (Head of Research Group); Dr. I.C. OLADIPO (Secretary); Prof. T.A. YEKEEN (Financial Secretary); Prof. M.A. AZEEZ; Dr. T.B. ASAFA (Technical Editor); Prof. Y.K. SANUSI; Dr. E.A. ADEBAYO; Prof. M.O. DUROWOJU; Dr. O. ADEDOKUN; Dr. J.A. BADMUS; Dr. M.K. AWODELE