

Letters of Interest Submission



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“African Light Source: recognition and demand”

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The impact of advanced light sources on science and society in the developing world on addressing national and global concerns cannot be underestimated. Through collective brainpower and constructive partnerships and collaborations, establishment of light sources has begun in developing countries decades ago, now in operation, with upgrades, besides new facilities those are either under construction or in the planning phase. They provide free access to scientific user communities that is exclusively based on the scientific excellence and merit. In this context, “light sources operate in a democratic mode, conventionally attained by using scientific cooperation to promote understanding between people from different traditions, religions, races, and political systems –Herman Winnick”.

No one can argue that Africa is facing many challenges. Some are common, but others are still unique. This has shed its light on all aspects of life including science and technology and the future of the young generations including many African scientists and diasporas. In this regard, the African Light Source (AfLS) can play a crucial role in the region, for the African community and elsewhere. Therefore, and in an attempt to grow various communication channels with established light sources facilities, a recent Memorandum of Understanding, MoU, has been signed in 2020 between the AfLS Foundation and SESAME, the Synchrotron-light for Experimental Science and Applications in the Middle East. SESAME pursue to establish the Excellency of Science and technology, besides, functioning as bridge between its diverse culturally and politically divergent societies, building a stronger community that will be able to deal with scientific challenges and hopefully beyond. Similar to SESAME, the AfLS can open wide doors to scientists from all over the world to demonstrate their capacity and to overcome traditional and technical obstacles as much as they can. From this perspective, it can –and will- show credible contributions in improving and advancing societies.

Among many other applications, taking human health as an example, advanced light sources do tackle human health in a multifold approach from understanding, to prevention, and consequently to treatment. From studying the molecular basis of diseases to the development of diagnostic methods that leads to early preventive actions, or treatment by innovative therapies relying on complementary information on relevant subjects. Furthermore, they can shed light on cultural heritage resources and unique archaeological findings. With this, they advance not only scientific discoveries but also the predictable economic strength by developing different industries taking into account the scarce resources and incomes.

Herewith, the concrete vision that Africa, too, should take its equivalent position as a co-leader within the global scientific arenas becomes stronger even more. Also, as the necessity of initiating ASFAP (African Strategy for Fundamental and Applied Physics) has become essential for Africa, the implementation of the AfLS is further witnessed with no single doubt. Reasons comprise establishing world-class large scale infrastructure, creating a healthy environment for joint collaborations, attracting scientists working abroad in an attempt to diminish the brain drain gap, as well as, addressing local and/or regional concerns (health, environment, water, human heritage, etc.).

This Letter of Intent is to highlight the importance of an African Light Source establishment to fulfill its community’s demands, as well as, its major challenges and concerns in conjunction with the ASFAP Light Sources Working Group strategy. The African Light Source Foundation seeks instituting a synchrotron facility in Africa being the only continent that is left so far without such an advanced technology. Above all, and as perceived; human capacity building, diaspora networking, brain-drain reversal - are all foreseen. And the impact will robustly go beyond any “national” science, with no borders and with no personal labels.

Primary Category

Light Sources

Secondary Category

Light Sources

Subgroup categories

LightSources—InfraredSpectroscopy

Did you / will you submit this LOI to another category?

NO

Additional Information

Almost relevant to all categories.

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