MAX PLANCK INSTITUTE FOR
SOLID STATE RESEARCH

African Light Source (AfLS) Conceptual Design Report

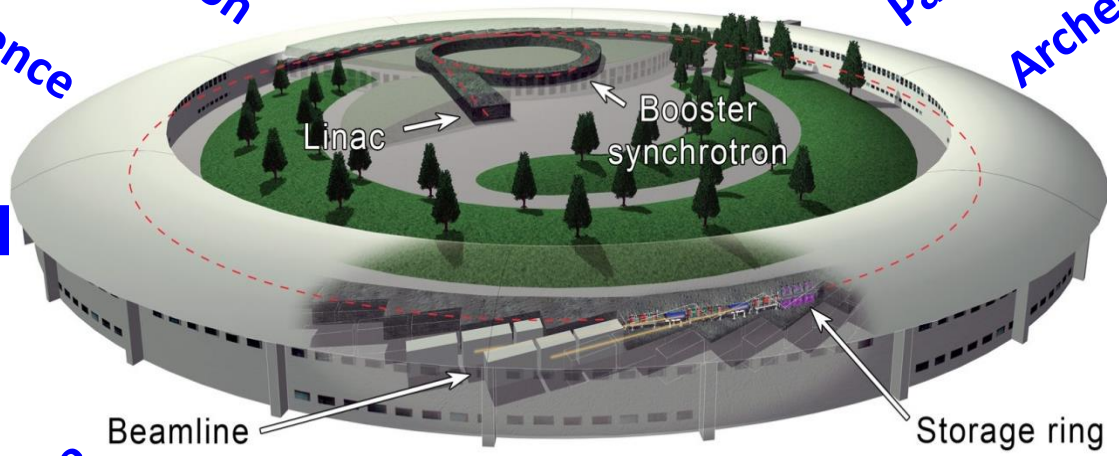
African Synchrotron Light Source Conferences
towards a brighter future

Prosper Ngabonziza

Town Hall AfLS-CDR, 2021-10-11

African Synchrotron Light Source Conferences
towards a brighter future

- Scientific Discoveries
- Industrial Innovations
- Impact on Society
- Capacity Building



Environmental Science
Agriculture
Oil Exploration
Forensic Science
Cultural Heritage
Paleontology
Archeology
Biomedicine
Nanotechnology
Engineering
Physics
Chemistry
Crystallographic Sciences
Material Sciences

Scientific Research: X-rays Enabled Innovative Scientific Discoveries

19 Nobel Prizes Based on X-ray Work

Chemistry

1936: PETER DEBYE

1962: MAX PERUTZ and SIR JOHN KENDREW

1964: DOROTHY HODGKIN

1976: WILLIAM LIPSCOMB

1985: HERBERT HAUPTMAN and JEROME KARLE

1988: JOHANN DEISENHOFER, ROBERT HUBER and HARTMUT MICHEL

1997: PAUL D. BOYER and JOHN E. WALKER*

2003: PETER AGRE, and RODERICK MACKINNON*

2006: ROGER KORNBERG*

Physics

1901: WILHELM RÖNTGEN

1914: MAX VON LAUE

1915: SIR WILLIAM HENRY BRAGG and SIR WILLIAM LAWRENCE BRAGG

1917: CHARLES BARKLA

1924: KARL MANNE SIEGBAHN

1927: ARTHUR COMPTON

1981: KAI SIEGBAHN

Medicine

1946: HERMANN JOSEPH MULLER

1962: FRANCIS CRICK, JAMES WATSON and MAURICE WILKINS

1979: ALAN M. CORMACK and SIR GODFREY N. HOUNSFIELD

** Required synchrotron radiation*

African Synchrotron Light Source Conferences towards a brighter future

The joint virtual event of the
AfLS3-2021 : African Light Source
ePCCr : Pan-African Conference on Crystallography Online
AfPS-2021 : African Physical Society

15-19 November 2021
Hosted by X-TechLab
Africa/Johannesburg timezone

Big Science and Big Goals for Africa

Overview

T1 : AfLS Topics
T2 : ePCCr / AfCA Topics
T3 : AfPS Topics
T4 : Co-convenor Topics

Conference Posters
Timetable
Registration
Call for Abstracts
Author Instructions
Connection Details
Important Dates
Funding Requests
Organising Committees

About AfLS
About ePCCR and AfCA
About AfPS
About the Co-convenors
About X-Tech Lab

Support

The time zone is controlled by you as an Indico Setting (top right). The session times will therefore be shifted if you are not set to Central Africa Time (CAT) = GMT+2.

Welcome to the 2021 joint virtual meeting of the African Light Source (AfLS), the African Physical Society (AfPS), and Pan African Conference on Crystallography (ePCCr), co-convened with several other Pan African professional science societies, all hosted by X-TechLab. We hope that you will join us as we communicate and celebrate Big Science and Big Goals for Africa!

Participating Organisations

As advanced light sources support multiple disciplines, the AfLS conference formally includes participation by the following Pan African scientific societies, which we are proud to count as supporters and partners in our vision to establish an advanced light source on the African continent.

African Astronomical Society
African Inst of Planetary and Space Sciences
African Optics and Photonics Society
African Society for Nanosciences and Nanotechnologies
Federation of African Societies of Chemistry
Federation of African Societies of Biochemistry and Molecular Biology
African Geophysical Society
African Materials Research Society
Biostruct Africa
Federation of African Immunological Societies
Federation of African Medical Physics Organizations

Programme Outline

The meeting program will cover a broad range of topics in four different tracks.

Track 1 : **AfLS** :	14h00 - 19:00 CAT/GMT+2
Track 2 : **ePCCr/AfCA** :	09h00 - 17:00 CAT/GMT+2
Track 3 : **AfPS** :	09h00 - 19:00 CAT/GMT+2
Track 4 : **Co-Convenors** :	09h00 - 19:00 CAT/GMT+2

- **When**: 15-19 November 2021
- **Host**: X-TechLab in Benin (online)
- Website: https://conference.africanlightsource.org/

Looking forward to seeing you all at AfLS3 online conference

What to Expect During AfLS3

- Review the light source based science and further progress the vision of an African Synchrotron Light Source.

- AfLS3 conference will cover topics that include, not limited to: Medical Sciences, Heritage Sciences, Geosciences, Environmental sciences, Energy Sciences, Nano Sciences, Materials Sciences, Mineral Sciences, Accelerator and Detector Sciences, Competitive Industry, Capacity Building and Infrastructures.

- Sessions on the strategy and vision towards an African Synchrotron Light Source (African Ministers Forum, The Vice President of the Republic of Ghana, key supporters,…)

- The Expected Socio-economic benefits of such multidisciplinary infrastructures in Africa

- Extra updated on the Conceptual Design Report (CDR) for AfLS

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Next in-person AfLS4 conference: Kigali-Rwanda 13th-19th November 2022

Current Supporters

ICTP—East African Institute for Fundamental Research
an ICTP Partner Institute

IUPAP

Canadian Light Source | Centre canadien de rayonnement synchrotron

Lightsources for Africa, the Americas, Asia and Middle East Project

IAEA
International Atomic Energy Agency
Atoms for Peace

South African Institute of Physics

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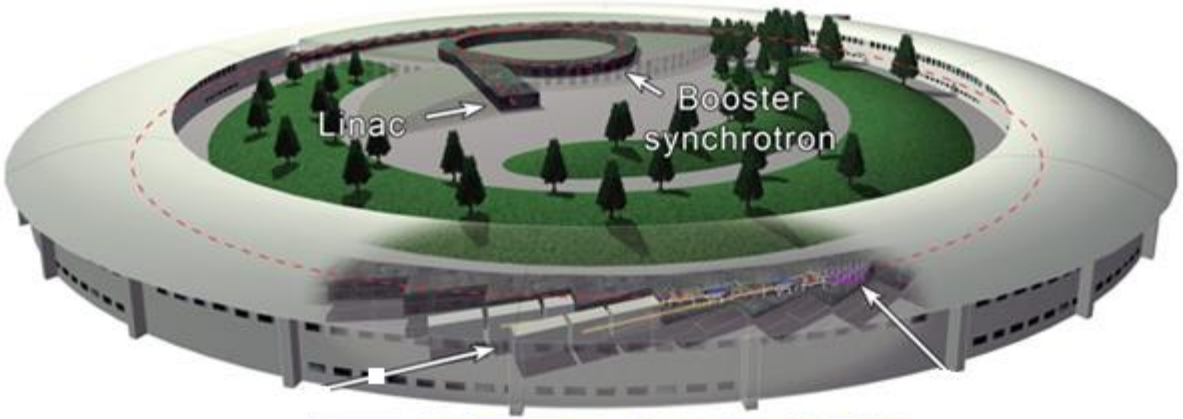
After Conference: Excursion and Visit Rwanda

Looking forward to seeing you all at AfLS4, in Kigali-Rwanda, Nov./2021

Rwanda Convention Bureau

https://rcb.rw/

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