



**SOLID STATE QUANTUM ELECTRONICS**  
MAX PLANCK INSTITUTE FOR SOLID STATE RESEARCH



# **A Possible Pan-African Consortium Membership of an International Synchrotron**

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# Locations of different synchrotron light sources

- More than 50 advanced light sources are in operation, construction or planning.
- There is **none in the entire continent of Africa**



# What about African countries membership to AdLS

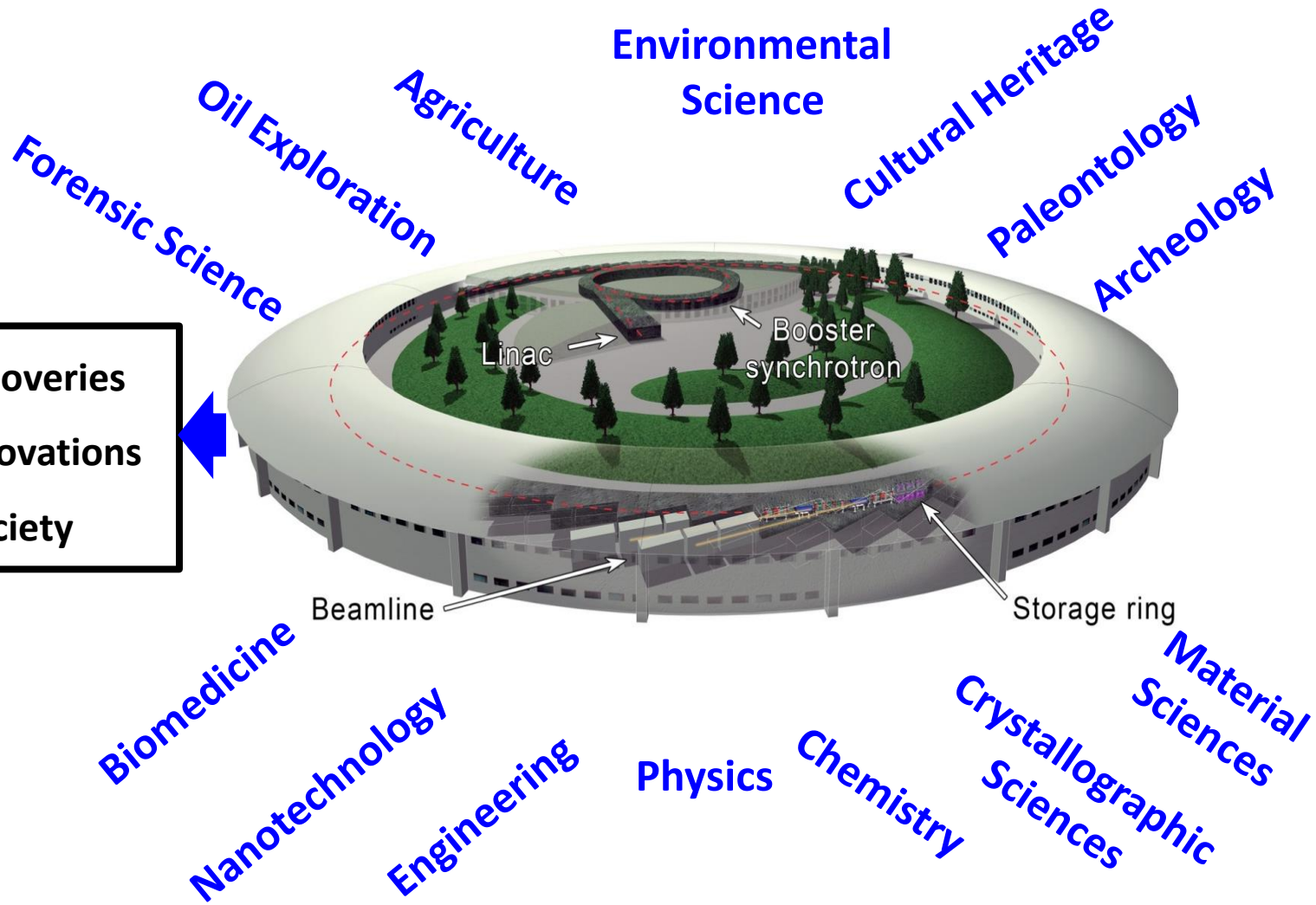
- Egypt is the only African country that is a full member of an international synchrotron SESAME
- South Africa is the only one in formal scientific relationship with ESRF



# What about African scientists using AdLS

- African scientists participate in research at synchrotrons by performing experiments at synchrotron facilities outside Africa,
- Sufficient access to synchrotron light sources will be an absolute necessity for Africa countries to be competitive socially, politically and economically in the years to come,
- In the last decade, African scientists using international synchrotrons grew steadily (The African Review of Physics **13**, 0019 (2018))
- **While working on a Pan-African AdLS, we can already start exploring possible Pan-African consortium full membership to already working international synchrotrons.**

# Pan-African consortium full membership



- Scientific Discoveries
- Industrial Innovations
- Impact on Society

# Steps towards an international synchrotron in a Pan-African Consortium Membership

- Having one voice on country and regional level:
  1. Current and future AdLS users establishing working groups
  2. Initiating collaborations, trainings and mini-workshops
  3. Preparing joint funding proposals
- Preparing a science case clearly demonstrating potential benefits and opportunities for African countries, scientists and industries for joining an international synchrotron in a Pan-African Consortium Membership

