

2023 African Light Source Conference



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ASESMA: the second decade and its role in new initiatives for scientific research

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The African School of Electronic Structure Methods and Applications (ASESMA) has built up a network of researchers across Africa with expertise in an area that is now an essential part of research. The focus on computational methods and applications of electronic structure was chosen because it is an important field that is narrow enough to build up a network for joint work and collaboration, yet broad enough to span the range from fundamental physics to applications in materials science, chemistry, biology and many other fields. It is supported by ICTP and other sources and endorsed by IUPAP as a 10-year series of workshops 2010-2020 and renewed for a second decade until 2030. The schools have been held in 5 countries with participants from 29 countries across Africa, and it has led to a number of active research groups, mini-ASESMA meetings on special topics and the US Africa Initiative on Electronic Structure (USAfrI) funded by the American Physical Society.

What is the role of ASESMA for initiatives like The African Light Source? Almost every aspect: a network of scientists with expertise ready for combined theory/experiment collaborations that are essential in all modern research; bringing together scientists in physics, chemistry, materials science and other disciplines; connections to the global community; and more. What is the justification for such bold claims? This talk is about ASESMA, the science, and examples of projects that led to work at light sources in the US and Europe.

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