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## **“Detecting neutrinoless Double Beta Decay: current status and future challenges”**

The experimental effort of recent years in constraining neutrino parameters gives us a very interesting scenario for  $0\nu\beta\beta$ -decay. Designing a  $0\nu\beta\beta$ -decay experiment able to access the available parameters region is a challenging task and requires to bring current detector technologies and background reduction techniques to unprecedented performances.

The experimental sensitivity for a  $0\nu\beta\beta$ -decay experiment will be discussed both in zero background and finite background cases. The impact of scaling the experiments in the different cases will be addressed.

The present status of  $0\nu\beta\beta$ -decay searches will be presented highlighting the main characteristics of the most relevant technologies and the latest results.

An overlook of planned experiments will be given, describing the advantages and downsides of upcoming and faraway projects.

Finally, a discussion on the perspectives for a next-next generation of  $0\nu\beta\beta$ -decay experiments will be introduced.