## The Design and Status of nEXO: a Next-Generation Neutrinoless Double-Beta Decay Experiment

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The determination of the Majorana nature of the neutrino is the chief goal of the proposed next generation of neutrinoless double-beta decay ( $0\nu\beta\beta$ ) experiments. By achieving a sensitivity on the rate of  $0\nu\beta\beta$  in 136Xe of 1.9 × 1025 years, the predecessor to nEXO, EXO-200, has demonstrated the feasibility of using 136Xe for potentially observing neutrinoless double-beta decay. Building on the proven methods of EXO-200, the nEXO collaboration plans to use 5-tonnes of liquid Xe enriched in 136Xe in a single monolithic time projection chamber. The primary focus of design is to achieve a sensitivity to the  $0\nu\beta\beta$  of 136Xe of 1 × 1028 years within 10 years of data taking thereby allowing the experiment to probe the effective Majorana neutrino mass allowed by the inverted neutrino mass hierarchy. Initial design and current R&D efforts will be presented.

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