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GaN as a robust spin-polarized electron source

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It has recently been demonstrated that, as is the case with GaAs, photoemitted electrons from Negative Electron Affinity (NEA) GaN can be spin-polarized. Leveraging the many decades of research performed on NEA GaAs to increase spin-polarization, quantum efficiency and robustness in this proceeding we apply analogous approaches to GaN. In particular we present the development of strained GaN to increase the degree of obtainable spin polarization and present first ever measurements of Sb-based NEA recipes on GaN for robustness against vacuum poisoning.

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