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Advances to Enable $^{69,71}\text{Ga}$ Nuclear Magnetic Resonance of Thin GaN Films

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High-field $^{69,71}\text{Ga}$ Nuclear Magnetic Resonance (NMR) spectroscopy of GaN has recently been shown to be a valuable quantitative characterization technique sensitive to the presence of dopants and defects, polytypes, and distributions of carrier concentrations [1-3]. We report several new approaches that greatly improve the $^{69,71}\text{Ga}$ detection sensitivity and have enabled study of single 3 μm thin films of GaN. NMR investigation of submicron films should now be feasible.

References

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