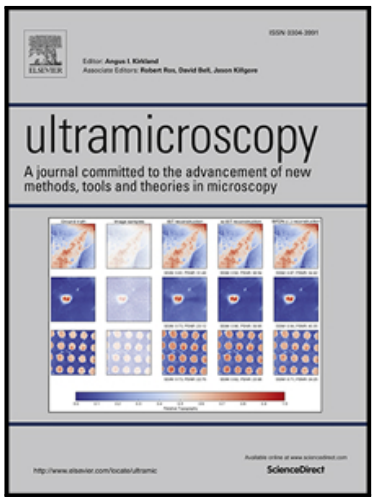

Compositional Accuracy of Atom Probe Tomography Measurements in GaN: Impact of Experimental Parameters and Multiple Evaporation Events

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Highlights:

- The composition of GaN measured by Atom Probe is biased.
- The main parameter influencing the compositional bias is the surface electric field.
- The deficiency of Ga at high field is interpreted in terms of preferential evaporation.
- The deficiency of N at low field is investigated through the study of multiple evaporation events.
- The detected dissociation of molecular ions can produce neutral N, but in moderate quantities.
- Further mechanisms of neutral N production are proposed.