

Abstract No. Citr0175

**Local Structure of Fe-doped Semi-insulating GaN**

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Beamline(s): X15B

In many nitride-based devices, e.g., high electron mobility transistors, semi-insulating GaN is needed to ensure sharp current pinch-off. This is typically achieved in high-vapor-phase-epitaxially-grown GaN by doping with Zn to trap residual free carriers. A different approach that offers several advantages over Zn involves Fe doping using metalorganic chemical vapor deposition [1]. Preliminary x-ray absorption measurements from such material indicate that Fe is in the 3+ state, which is desirable for substitution in Ga sites. Further structural characterization is planned.

[1] S. Heikman, S. Keller, S. P. DenBaars, and U. K. Mishra, "Growth of Fe-Doped Semi-insulating GaN by Metalorganic Chemical Vapor Deposition", *Appl. Phys. Lett.* **81**, 439 (2002).