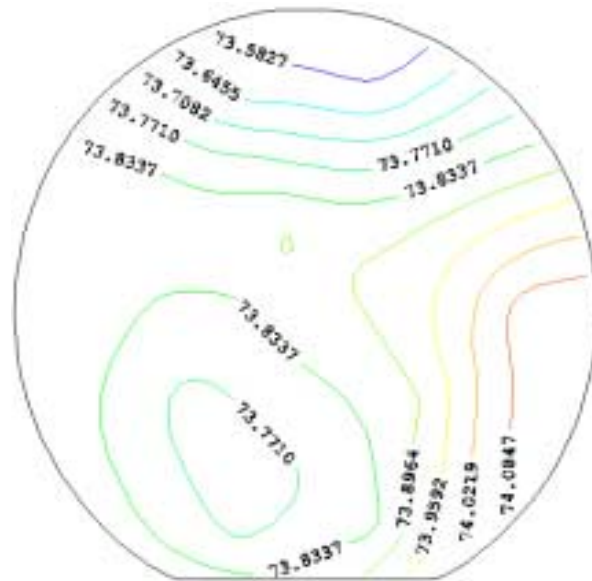


## **IntelliEPI: InP HBTs - Carbon Doping using CBr4**

***IntelliEPI has successfully developed carbon doping capability using CBr4 gas source***

- ***Reproducible InGaAs carbon doping up to  $1E20\text{ cm}^{-3}$***
- ***Excellent InGaAs material quality (mobility and x-ray FWHM)***
- ***No memory effects***
- ***Across 4in wafer uniformity (<0.5%)***
- ***GaAs carbon doping up to  $1E20\text{ cm}^{-3}$***

# IntelliEPI: CBr<sub>4</sub> Carbon Doping of P-type InGaAs



### Statistical Summary

Number of Test Points	36
Average Value	73.8482
Maximum Value	74.1416
Minimum Value	73.521
Sample Spread (%)	0.84
Std Dev Value	0.1379
Wafer Uniformity Value (%)	0.19

Magnetoresistance measurement using Leighton shows the resistivity across 4" wafer grown from a 4x4 MBE system. The film thickness and the hole mobility is 350 nm and 60 cm<sup>2</sup>/Vs, respectively.

