Supporting Information

Dependence of defect structure on In concentration in InGaN epilayers grown on AlN/Si (111) substrate

Arun Malla Chowdhury, [,1,2] Deependra Kumar Singh,[1] Basanta Roul,[1, 3] K K Nanda[*,1, 4, 5] and*

S B Krupanidhi[,1]*

1. Materials Research Centre, Indian Institute of Science, Bangalore-560012, India.

2. Department of Physics, Syamsundar College, University of Burdwan, East Bardhaman, West Bengal 713424, India.

3. Central Research Laboratory, Bharat Electronics, Bangalore 560013, India.

4. Institute of Physics, Bhubaneswar, Odisha - 751005, India.

5. Homi Bhabha National Institute, Mumbai, Maharashtra - 400094, India.

Corresponding Authors

[*]E-mail: nanda@iisc.ac.in

[*]E-mail: sbk@iisc.ac.in

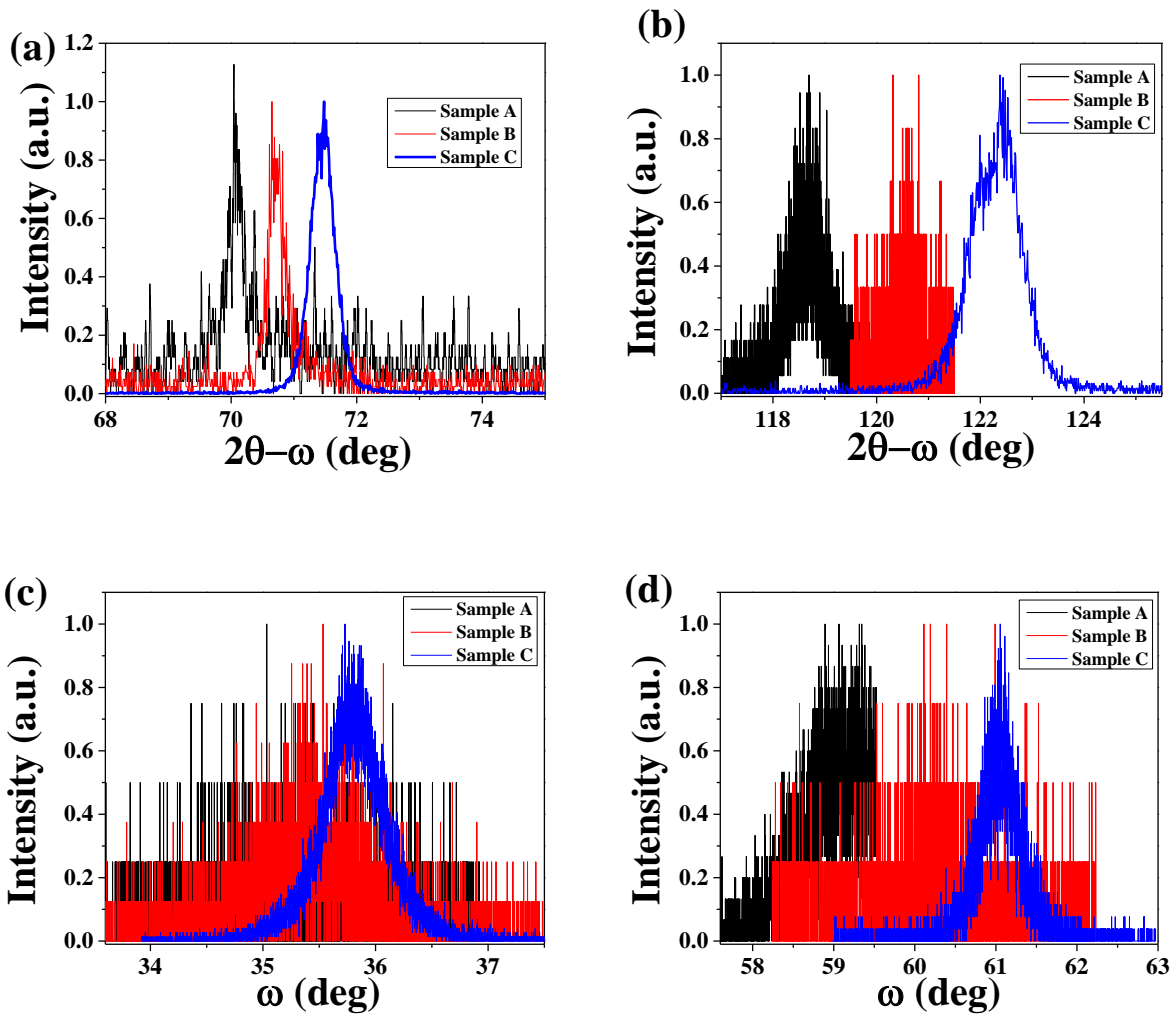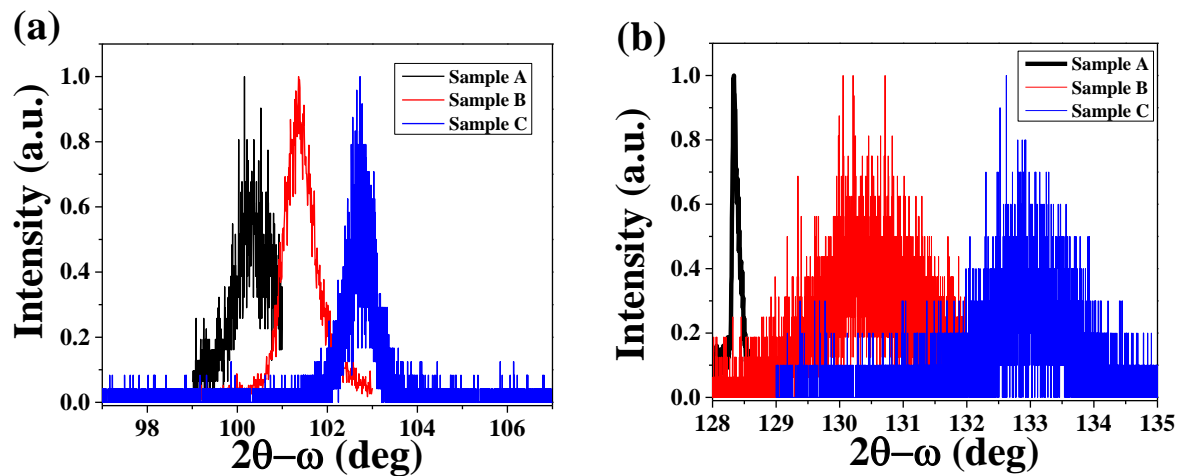[*]Email: amchowdhury@iisc.ac.in

Figure S1. (a) HRXRD scan of (0004) planes. (b) HRXRD scan of (0006) planes. (c) Rocking curve scans of (0004) planes. (d) Rocking curve scans of (0006) planes.
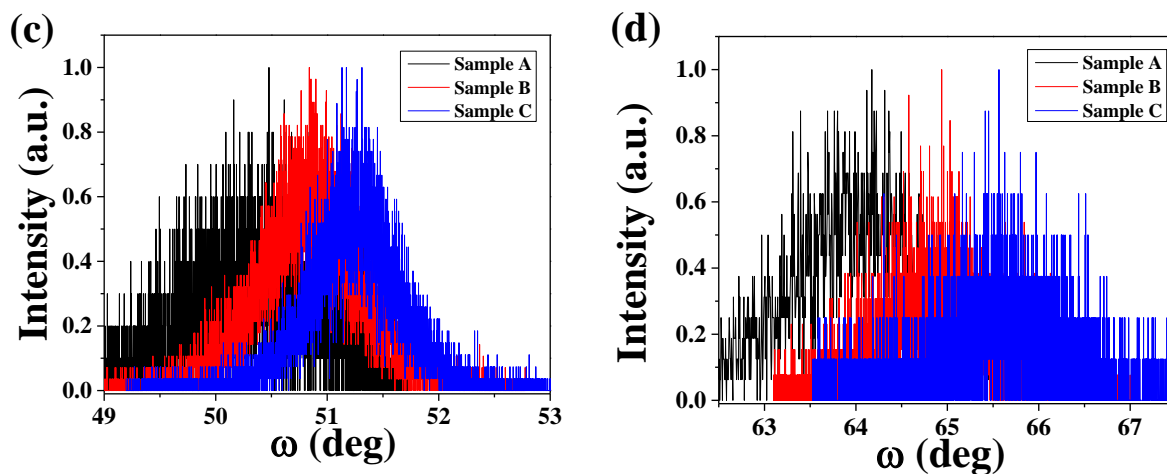
Figure S2. (a) HRXRD scan of (105) planes. (b) HRXRD scan of (205) planes. (c) Rocking curve scans of (105) planes. (d) Rocking curve scans of (205) planes.
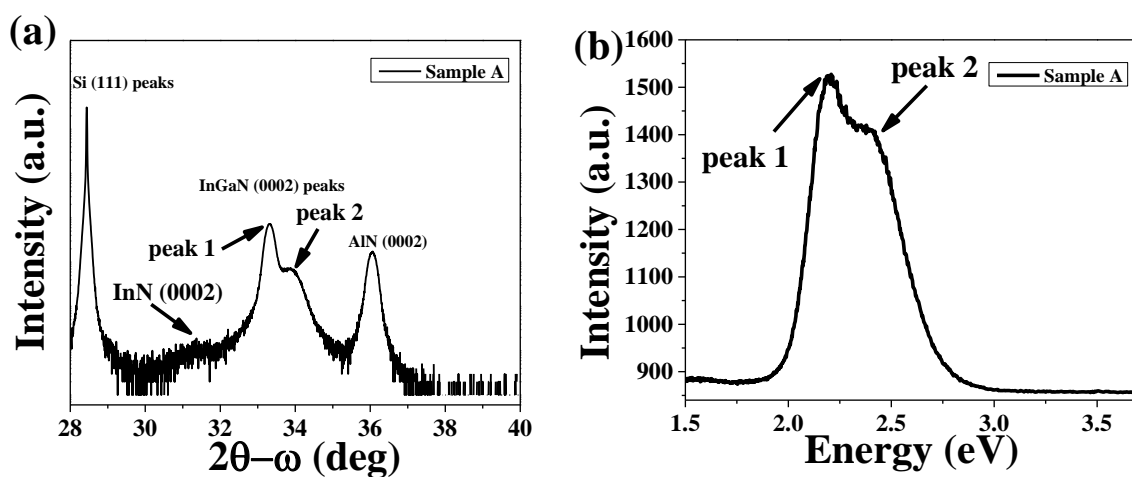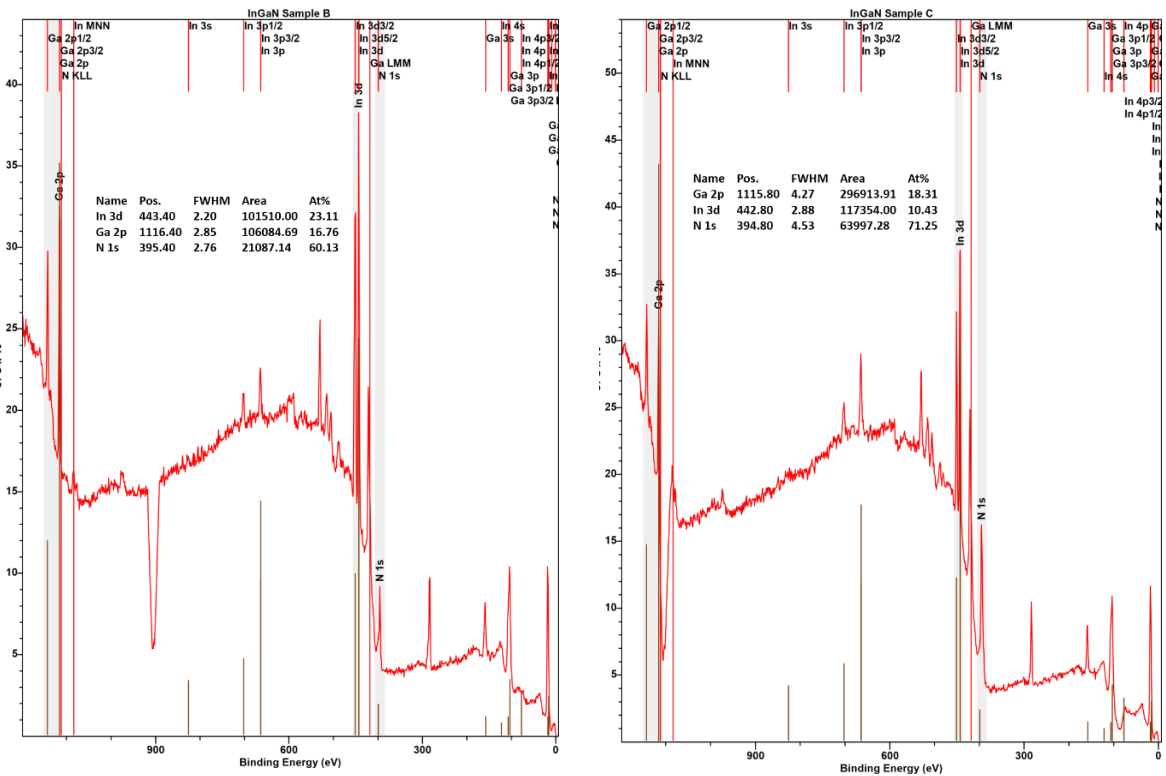

Figure S3. (a) HRXRD scan of Sample A along (0002) planes. (b) Photoluminescence spectra of Sample A.

(a)

(b)

Figure S4. The XPS survey spectrum of the as-grown InGaN layers acquired using a Kratos Axis Ultra DLD spectrometer with an incident monochromatic x-ray beam from an Al target for (a) sample B and (b) sample C.