

## Interface study of graphene on AlGaIn/GaN heterostructures using Raman Spectroscopy

Srujana Dusari, Nitin Goyal, Martin Debiasio, Andreas Kenda

Carinthian Tech Research AG, Europastrasse 4/1, 9524 Villach, Austria  
Srujana.Dusari@ctr.at

Graphene has attracted much attention due to its unique physical properties, such as high carrier mobility and high saturation velocity, which make it promising candidate for high speed devices and circuits [1]. On the other hand, GaN has been widely studied for high voltage and high power switching applications, due to its high temperature operation and high efficiency. Interfacing AlGaIn and GaN causes polarization due to lattice mismatch and forms two-dimensional electron gas [2]. AlGaIn/GaN is an attractive structure for the design of sensor components that can operate in harsh environments. It has been shown that by integrating unique characteristics of these two materials could lead to interesting results like Ohmic contact formation between metal and semiconductor [3], heat spreaders for GaN transistors [4], transparent conducting layers for GaN LEDs and ultraviolet and visible photo-detectors [5]. Here, we investigate the interface properties of graphene on AlGaIn/GaN heterostructures using Raman spectroscopy.

### References

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