

Characterization and modeling of GaN-devices within GaN4AP project

Alessandro CHINI - University of Modena and Reggio Emilia

This talk will present results achieved within the framework of GaN4AP device characterization and TCAD modeling activities carried out during the first two years of project activities. On-resistance and as well as threshold voltage instabilities have been deeply investigated by means also of dedicated custom measurement setups both on the more mature pGaN-HEMT technology and also in the vertical GaN devices which are of great interest for high voltage applications. Characterization results, details on the measurement techniques adopted as well as TCAD simulations aimed at investigating the limiting physical mechanisms involved in the observed parameter drifts will be presented and discussed.