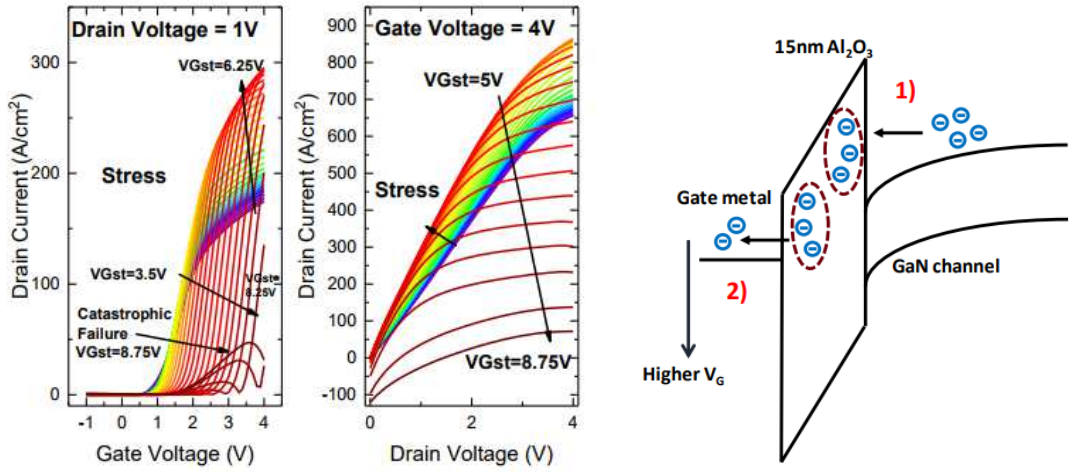
4B.1 Degradation of Vertical GaN FETs Under Gate and Drain Stress by M. Ruzzarin, M. Meneghini, C. De Santi, M. Sun, T. Palacios, G. Meneghesso, and E. Zanoni, University of Padova, and MIT

GaN-on-GaN vertical devices have a great potential, for application in the power conversion field. So far, no extensive reliability data has been presented on these devices. This paper reports the first experimental analysis of the degradation of GaN-based VFETs submitted to gate- and drain step-stress. The results allow to identify the main failure mechanisms under gate and drain-step stress.



Impact of step-stress on the transfer and output characteristics of vertical GaN MOSFETs, and related (Schematic) model