

**III.P.5. This poster presentation has been modified by authors. It was scheduled as oral presentation V.O.13. on Sept. 4, 12.30 – 12.45**

### **III.P.6. Optoelectronic properties of gallium nitride thin membranes**

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We present the results of a systematic study of persistent photoconductivity (PPC) generated by UV-excitation in thin membranes based on crystalline GaN. The PPC was found to be optically quenched under extrinsic excitation (quanta energy lower than  $E_g$ ). Interesting optoelectronic phenomena have been evidenced in nanoporated GaN membranes. In particular, nanoporation-induced optical quenching of PPC was found to occur at temperatures  $T < 100$  K under intense intrinsic excitation. The obtained results are discussed taking into account strong surface localization of charge carriers in GaN thin membranes as well as UV-induced reactions occurring at surface states under intense intrinsic excitation.