GN-04
www.oxfordplasma.de/process/gan_ecr.htm

OXFORD INSTRUMENTS

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June 2003
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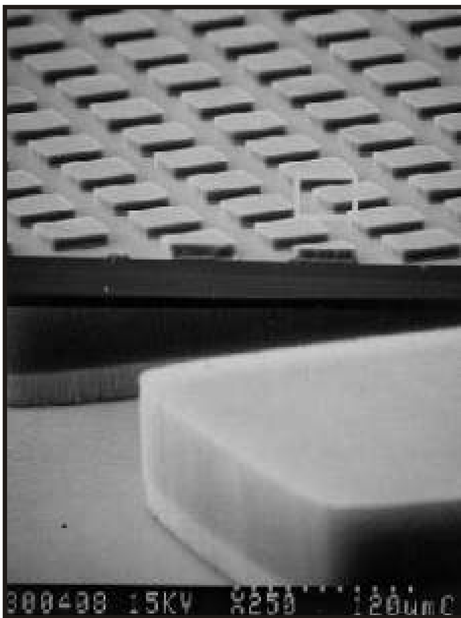
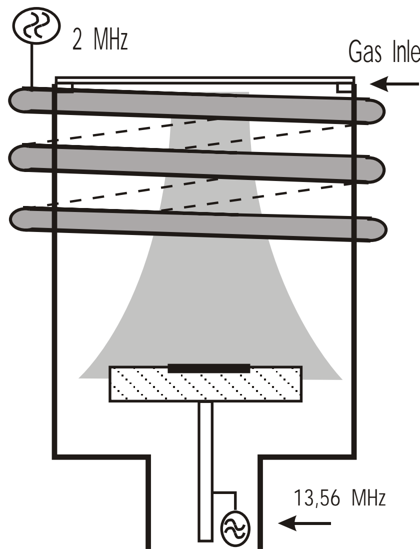
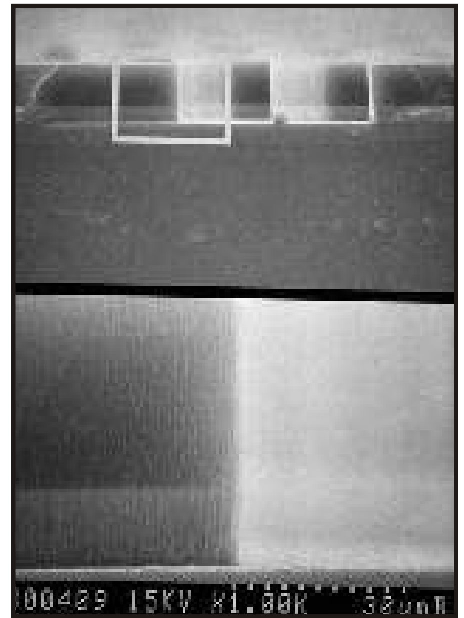
Plasmalab Data

90° Walls etched in GaN (ICP)

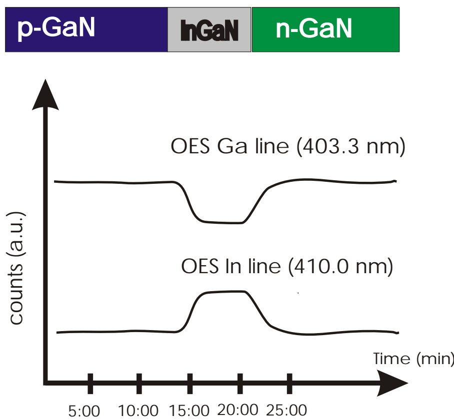




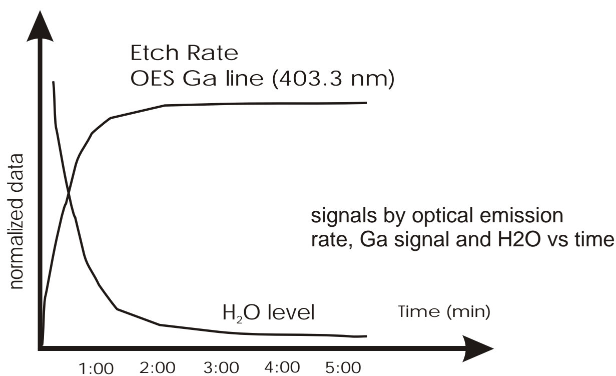


2 µm deep etch (resist mask intact)
GaN on sapphire substrate

Courtesy of Infineon Munich
Z T KM 4 (Dr. G. Franz)



signals by mass spectrometry
(differentially pumped)



Plasmalab System 100

Plasmalab System 133

Plasmalab 80 Plus

Technology:

Inductive Coupled Plasma ICP - RIE*
13.56 MHz driven electrode
Cl based process

*original work by ECR, see:
http://www.oxfordplasma.de/technols/rie_ecr.htm

Results:

anisotropic etch with 90° walls
rate: 110 nm/ min (2“ wafer)
mask: photoresist
selectivity for smooth 90° walls 2 : 1
uniformity over 2" dia. area: < $\pm$ 3 %
very smooth walls