

# technical bulletin

## SAFC Hitech TEGa—Low Silicon & Oxygen

An AlGaAs DH structure on a GaAs:Si (100) -10° <111>A off-axis substrate was grown at the University of Texas at Austin. The SIMS data below illustrates the low silicon and oxygen levels in the active layer as the gallium concentration increased from 0.5 (cladding) to 0.8 (active).

GaAs Cap Layer (50 nm)

Al<sub>0.5</sub>Ga<sub>0.5</sub>As upper cladding (100nm)

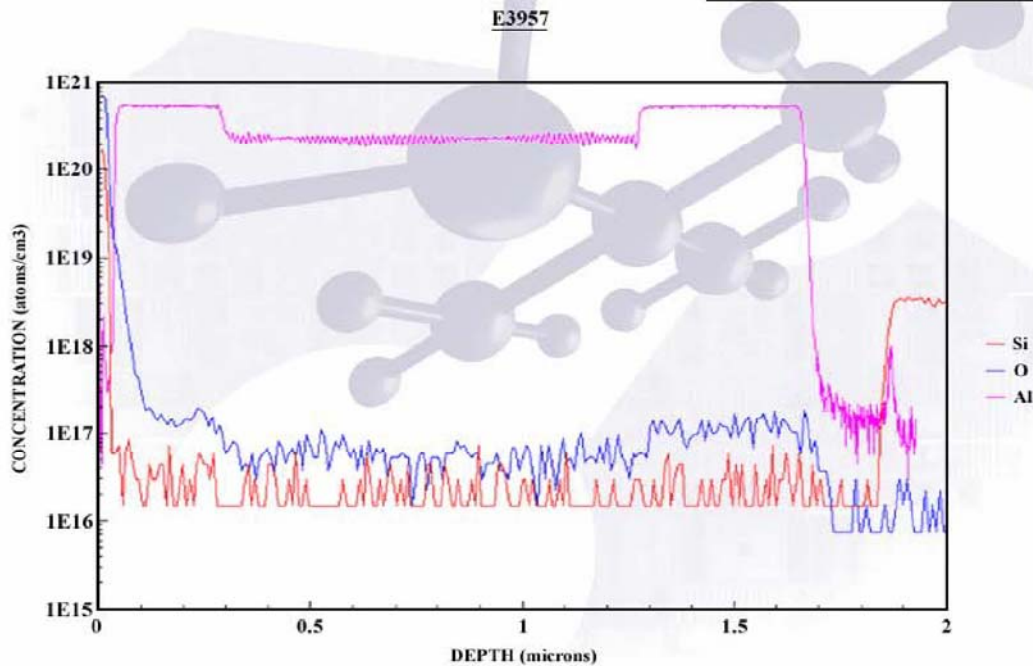
TEGa, [O] = 2E16 -1E17, [Si] = 1E16-8E16

Al<sub>0.2</sub>Ga<sub>0.8</sub>As active (600nm)

TEGa, [O] = 2E16 -1E17, [Si] = 1E16-8E16

Al<sub>0.5</sub>Ga<sub>0.5</sub>As lower cladding (150nm)

TEGa, [O] = 8E16 -2E17, [Si] = 1E16-8E16



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