

Dopant ALD Cycle(s)

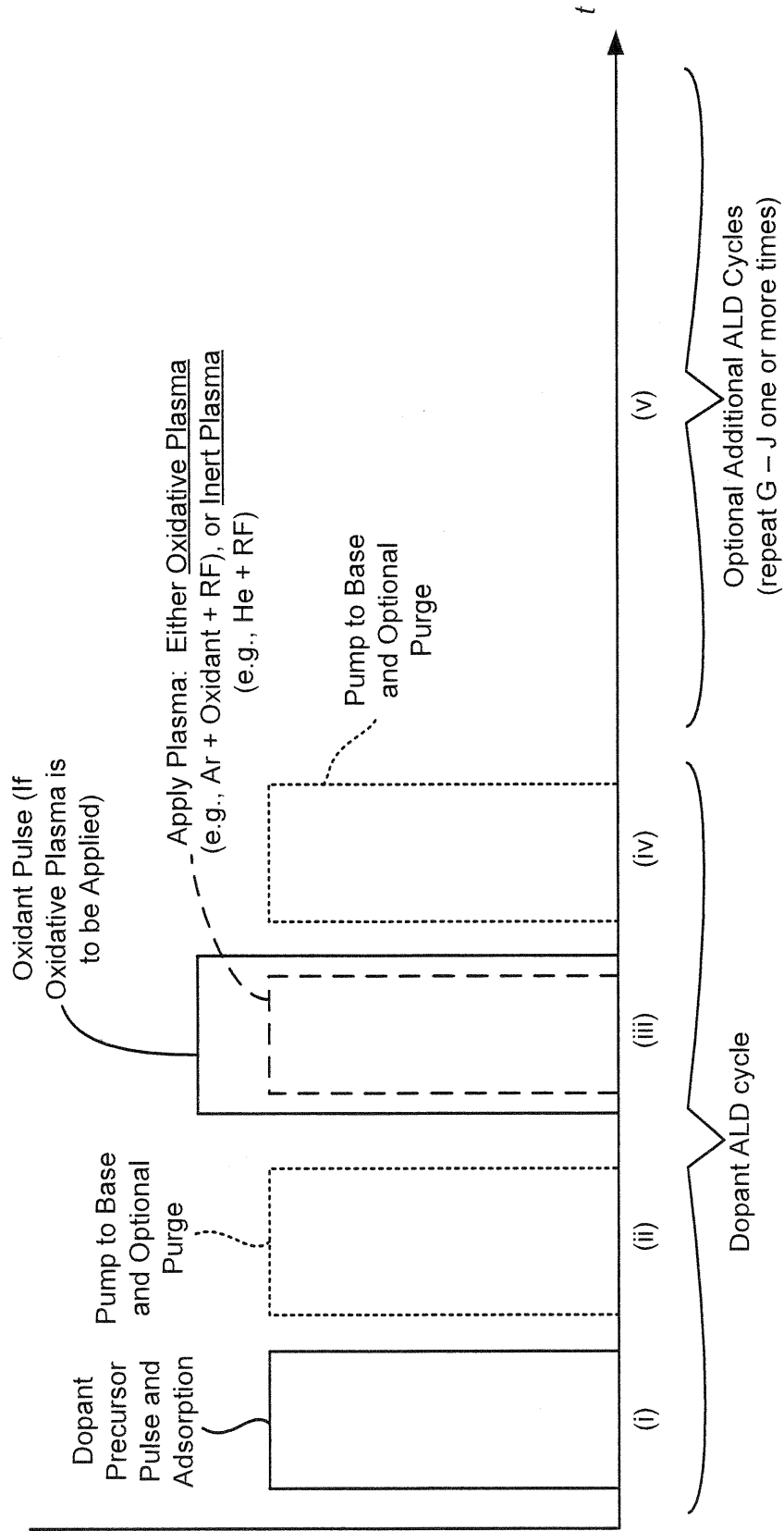
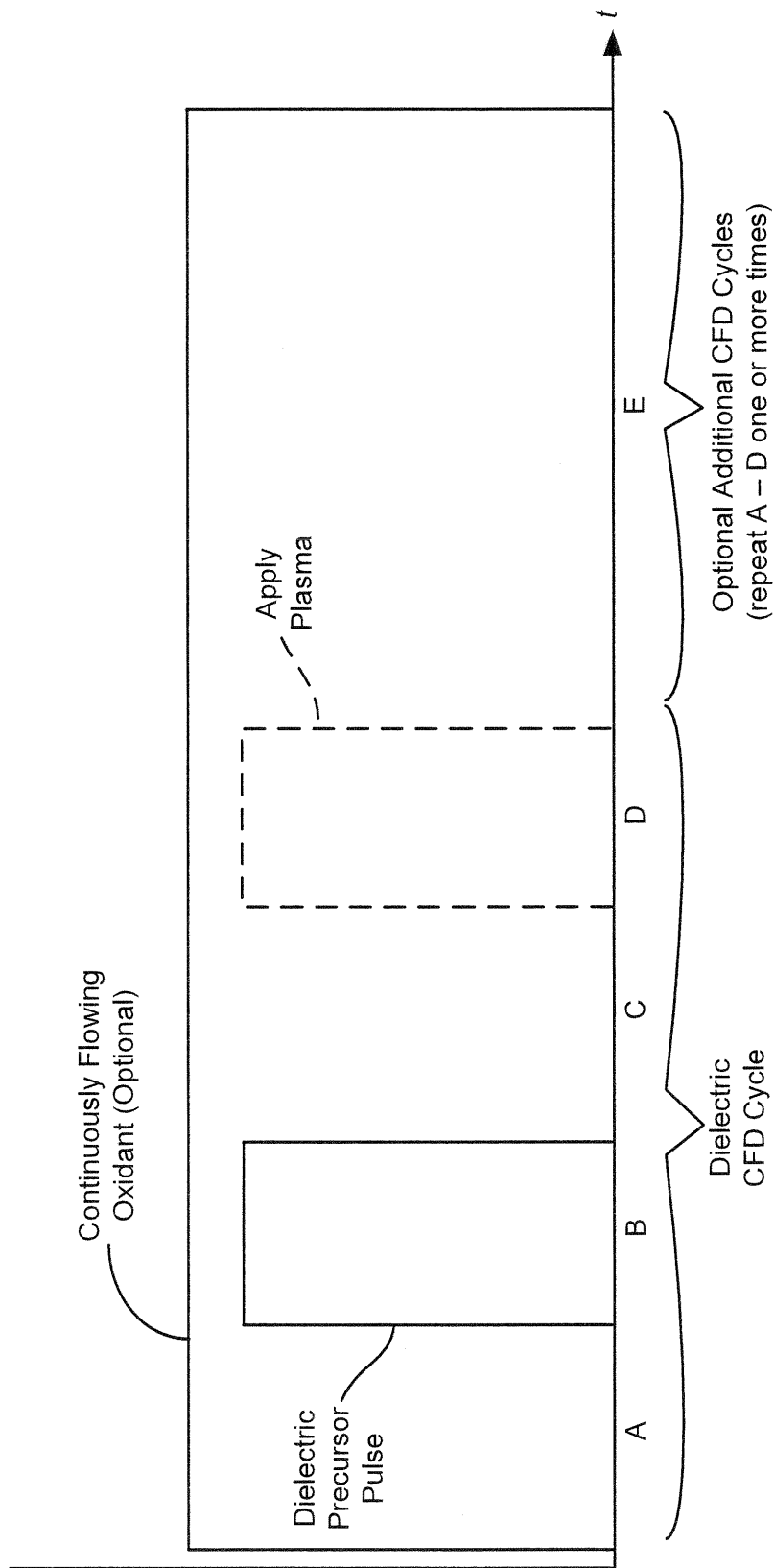
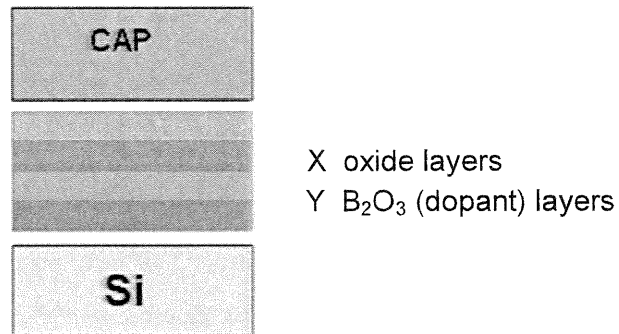
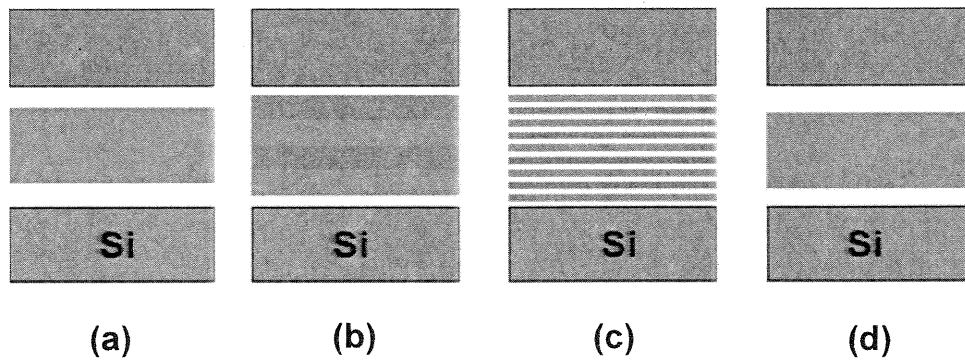
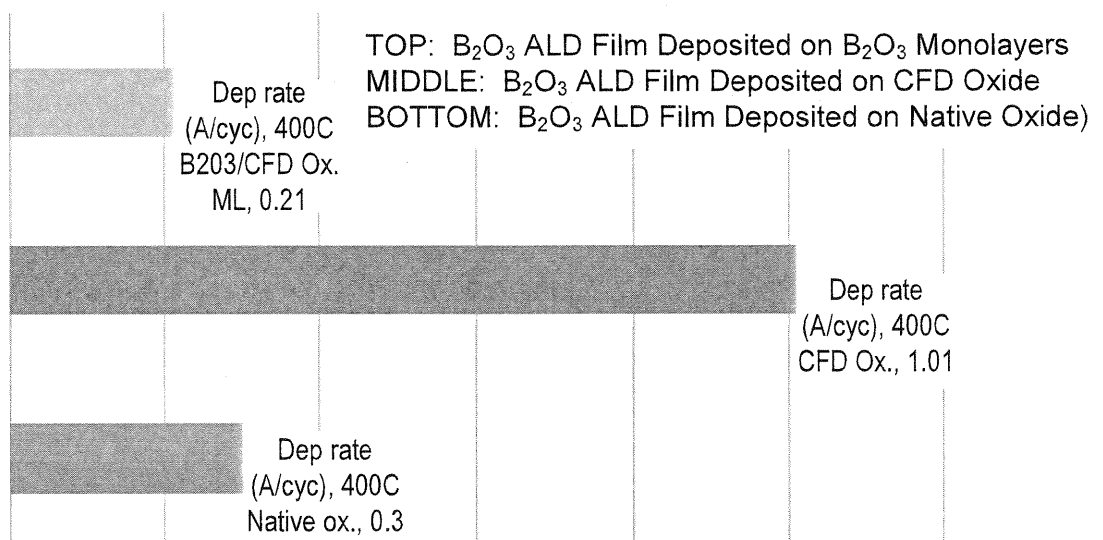


FIG. 1

Dielectric CFD Cycle(s)

**FIG. 2**

**FIG. 3****FIG. 4****FIG. 5**

Sample Method for Depositing a Conformal Film Stack and Doping a Semiconductor Substrate

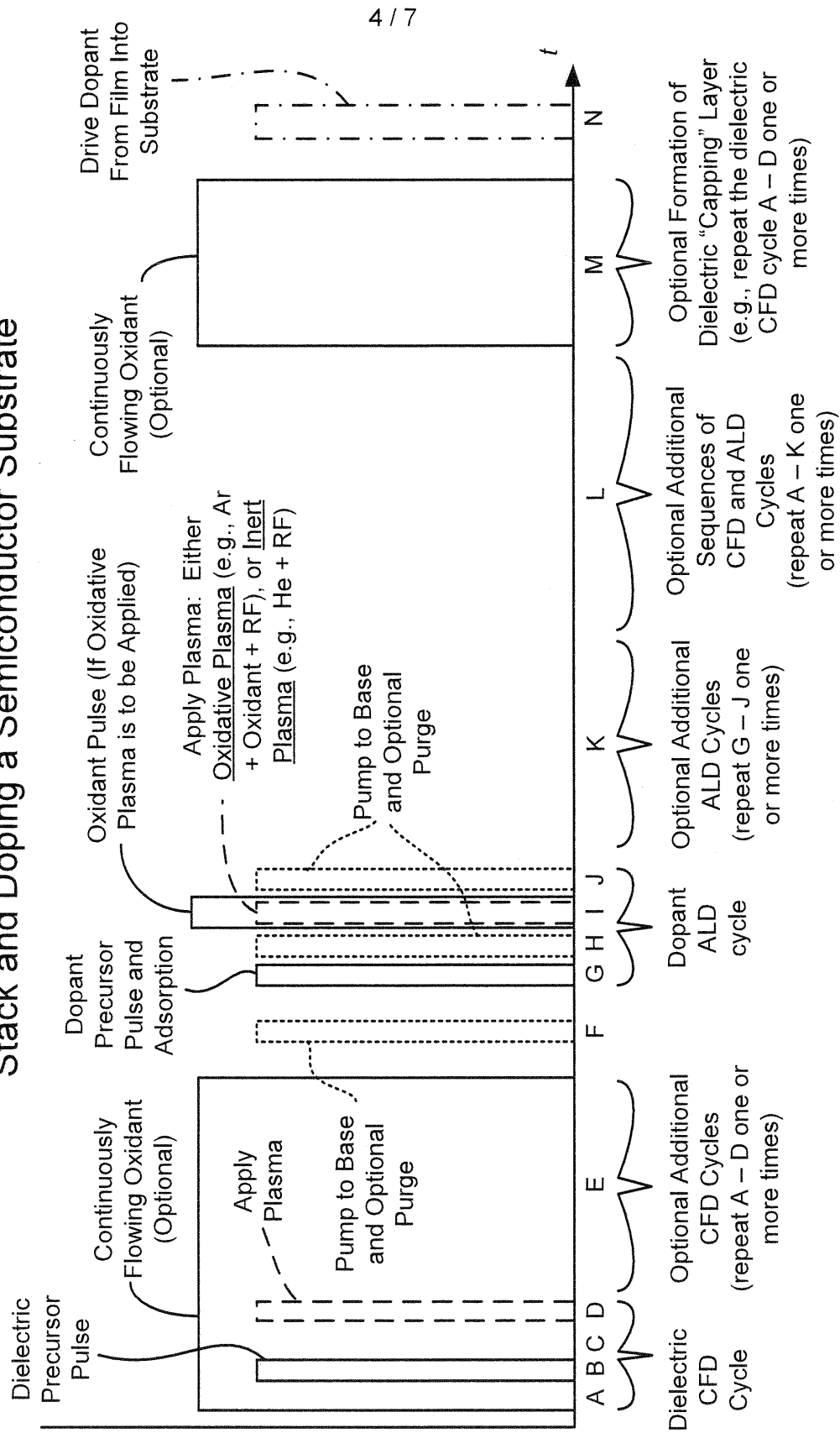
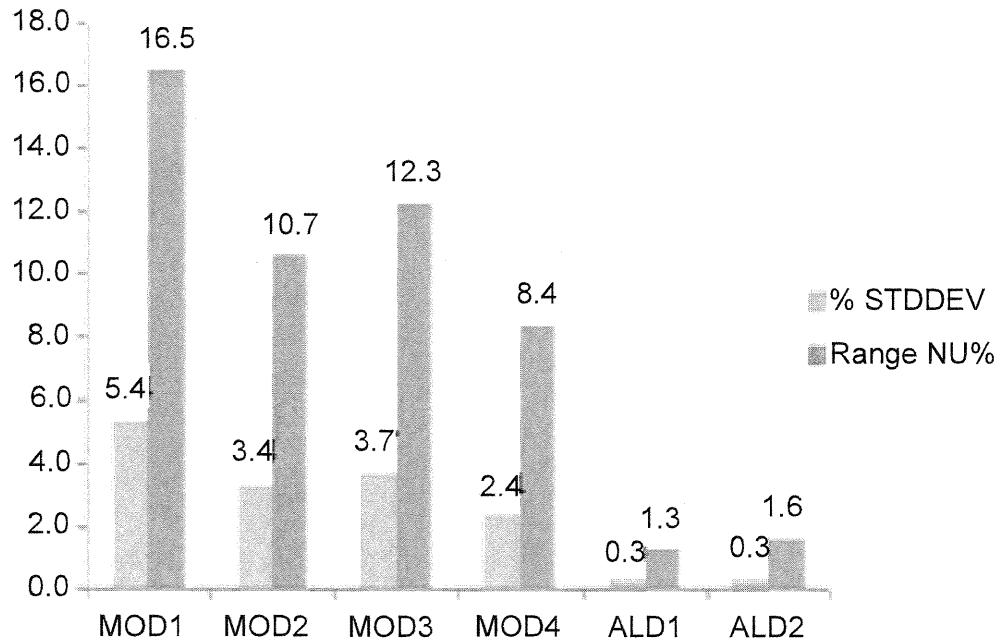
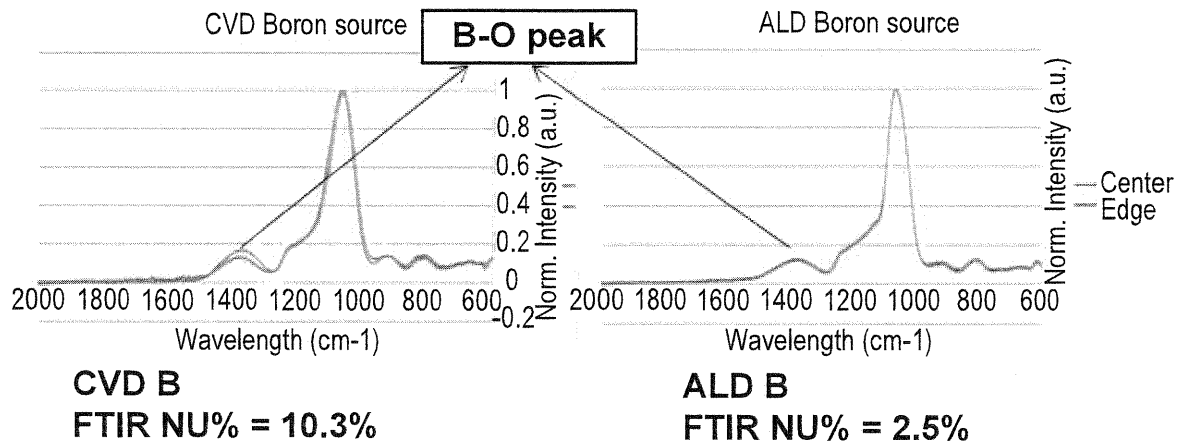


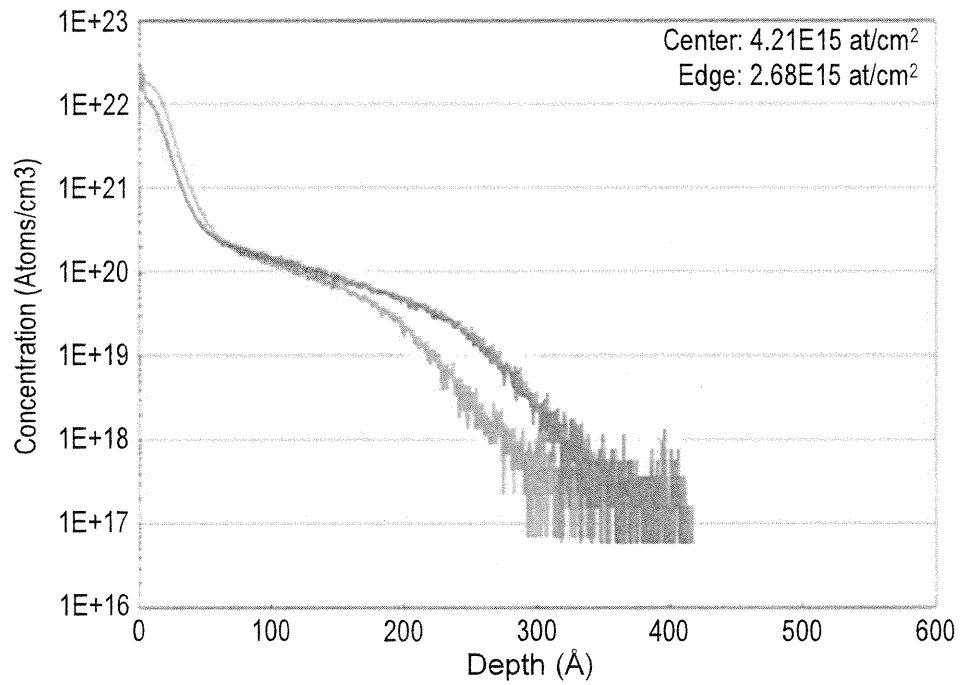
FIG. 6

**FIG. 7**

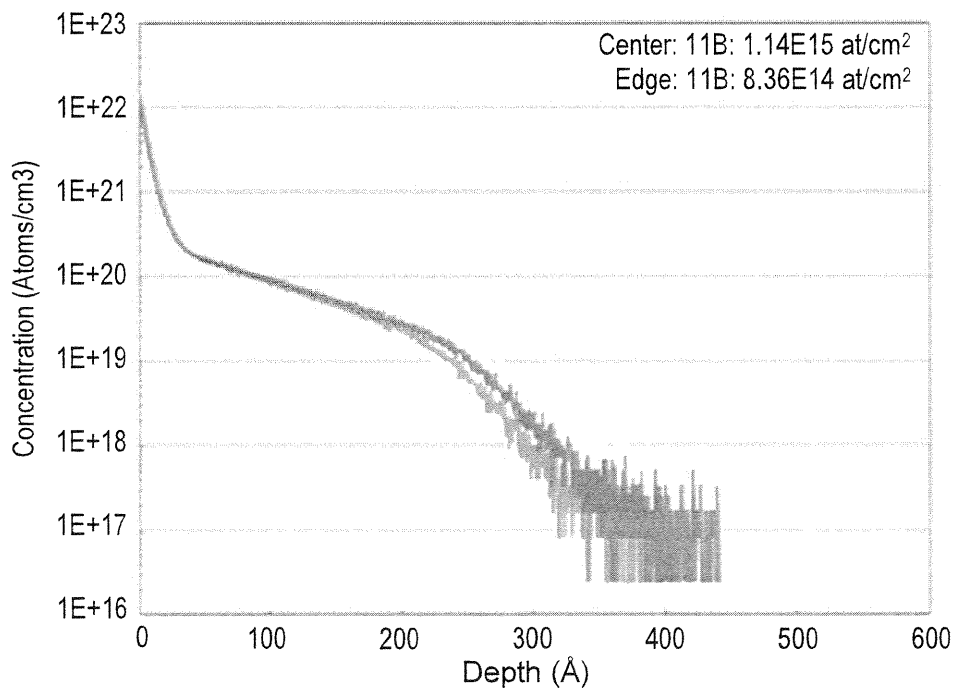
Improved as-deposited
FTIR uniformity using
ALD Boron source

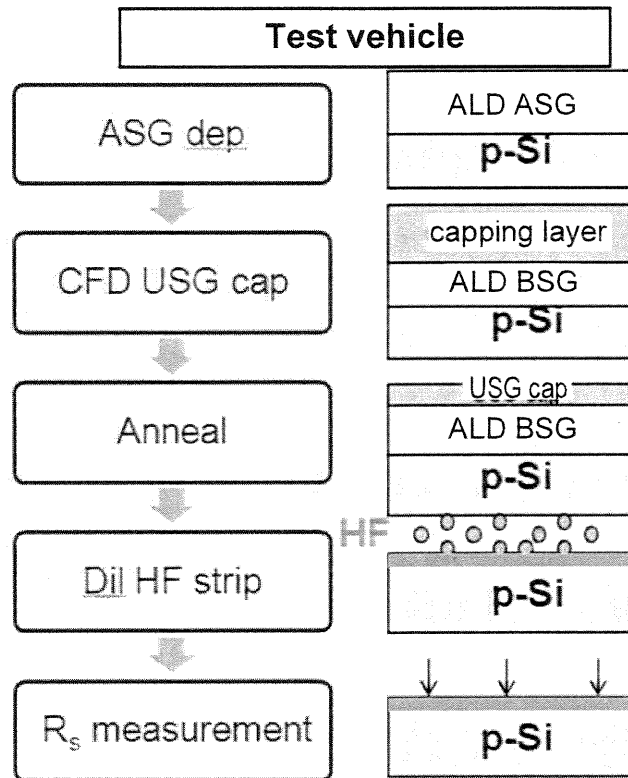
FIG. 8

ALD p3 (previous best NU process): Rs NU 13.2%

**FIG. 9**

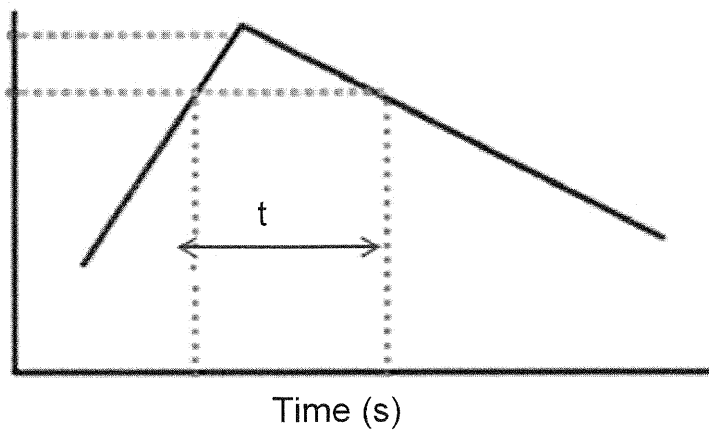
ALD STK Rev3 (new process): Rs NU – 5.4%

**FIG. 10**

**FIG. 11(a)**

Temperature (C)

Target T

**FIG. 11(b)**