

Plasma Immersion Ion Implantation

IMPULSE series

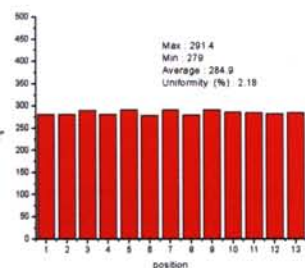


Applications

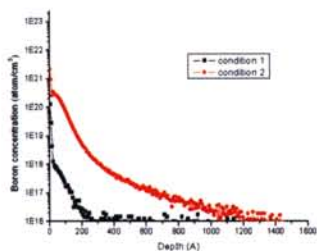
- Ultra-Shallow Junction Doping for sub-100 nm CMOS
- Conformal doping of non-planar CMOS and other electronic devices
- Poly-Si Gate & Trench Sidewall Doping
- Gate Dielectric Modification
- Layer transfer technology for "SOI", "Si-on Anything" and other electron materials (SiC, GaAs, InP, GaN, etc)
- SOI by SPIMOX (Separation by Plasma Ion Immersion Implantation of Oxygen)

Specifications

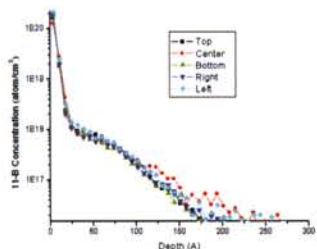
- Dopant : N-type (P, As) , P-type (B)
- Dose : $5 \times 10^{10} \sim 2 \times 10^{16} \text{ cm}^{-2}$
- Energy range : 50eV \sim 10keV
- Throughput : 60 wafer/hour
- Dose control : 4 Faraday cups
- Base pressure : $< 7 \times 10^{-17} \text{ Torr}$
- Automated Loadlock
- Safety interlock & Gas detection
- Easy and user-friendly control system & software



Boron SIMS profiles



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Hightech Solution Corporation

ULTECH Co.,Ltd.

E vaporator

- Organic materials coating (OLED)
- Optical coating of rotational symmetry mirrors such as polygon mirrors
- Conventional materials coating
- Spintronix research (UHV & ultra low temperature system)



P lasma Immersion Ion Implanter (PIII)

- Ultra-shallow junction doping for sub-100nm CMOS
- Conformal doping of non-planar CMOS and other electronic devices
- Poly-silicon gate & trench sidewall doping
- Active matrix doping (LCD,PDP,AMOLED)



V ertical or horizontal type Furnace/LPCVD

- Low stress / Stoichiometric silicon nitride LPCVD
- Poly / Doped poly silicon LPCVD
- Silicon oxide LPCVD
- Wet / Dry oxidation
- Annealing
- LTO



S putter

- Magnetic thin films layer coating
- Opto-electronic films coating
- Industrial machinery & tools hard coating
- Conventional materials coating



D ry etcher (ICP,RIE)

- Nano etching
- Compound etching
- Polymer etching
- Bulk silicon deep etching



Major Product

R TP

- Thin Gate Oxidation(Low Pressure) (Nano device)
- Rapid Annealing(Atmospheric or Low Pressure)



S pray & Spin coater

- Uniform coating of topography such as V-grooves and trenches
- Photo resist coating
- Spin-On-Glass
- Organic materials



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