OXFORD INSTRUMENTS

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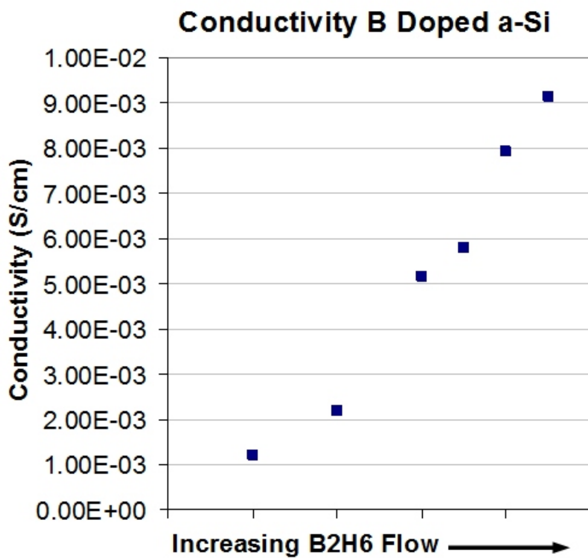
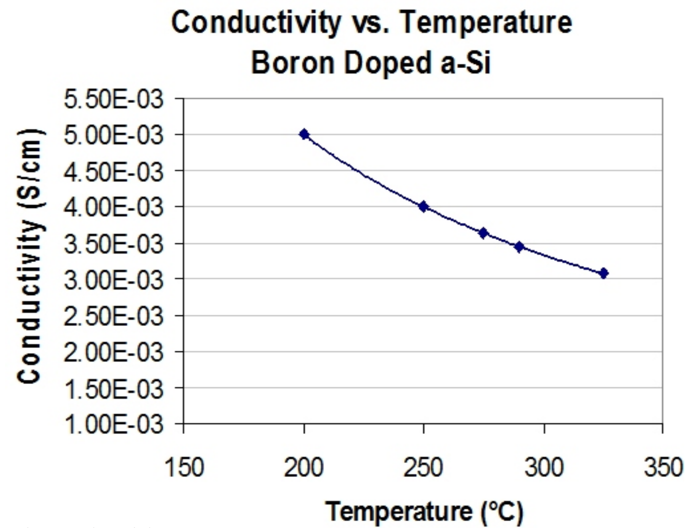
email: plasma@oxford.de

Plasmalab Data

Amorphous Si Deposition (PECVD)



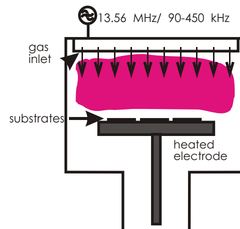


Equipment:
Plasmalab System 100/133
Plasmalab 80/800 Plus

Results:
Rate : 5 - 25 nm/min
Uniformity: +/- 3% - 4%
Reproducibility: +/- 2.5%

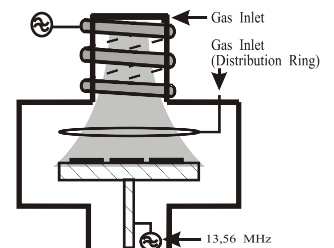
good Si carrier lifetime data of
~ 2ms - 2.5ms down to 12nm film thickness
i - a Si:H dark conductivity <10^{-9} S/cm

a Si can be deposited by:
parallel plate PECVD
(13MHz/81Mhz)



Technology:
Parallel Plate Reactor
Shower Head Gas inlet
SiH_4 based process
(PH_3 , B_2H_6 for doping)

a Si can also be deposited by
"remote plasma" PECVD.



The "remote" plasma only cracks
the molecules in a region "remote"
from the substrate.