

Test Suite

Si

As_Si_100_8
As_100_8.in
As_15_8.in
B_Si_0
B_35_0.in
B_80_0.in
B_Si_100_7
B_15_7.in
B_80_7.in
B_280_7.in
B_700_7.in
B_2400_7.in
Damage_Si
B_15_0_8e15.in
B_80_0_8e15.in

SiC

Al_SiC
Al_30_16_30.in
Al_195_16_30.in
Al_SiC_40keV.in
Al_SiC_90keV.in
Al_SiC_500keV.in
Al_SiC_1MeV.in
As_SiC
As_40_16_30.in
As_100_16_30.in
As_SiC_100keV.in

GaAs

Se_GaAs
Se300_GaAs100.in
Se300_GaAsREO.in
Si_GaAs
Si150_GaAs100.in
Si150_GaAsREO.in

As_Si_100_8/As_100_8.in

```

RS0 2.0 2.0 0.0
Divergence 0.5
RareEvent 2
SD2 0.30

ShowHistOLD On
ShowDamage On
HSTFile[ As_100_8. ]

GPPlot[ t"Simulacion", "SIMS/as100_8_30.dat"t"SIMS" ]
GPInit[ set yrangle[1e15:] ]

ENERGY 100000 eV
NumberOfImplants 1000
Tha 8 degrees (tilt)
Phi 30 degrees

Temperature 300 kelvin

Atom As 33 75.000 600.0 // atom 1
Atom Si 14 28.086 600.0 // atom 2
Atom O 8 15.994 600.0 // atom 3
Projectiles 1 0

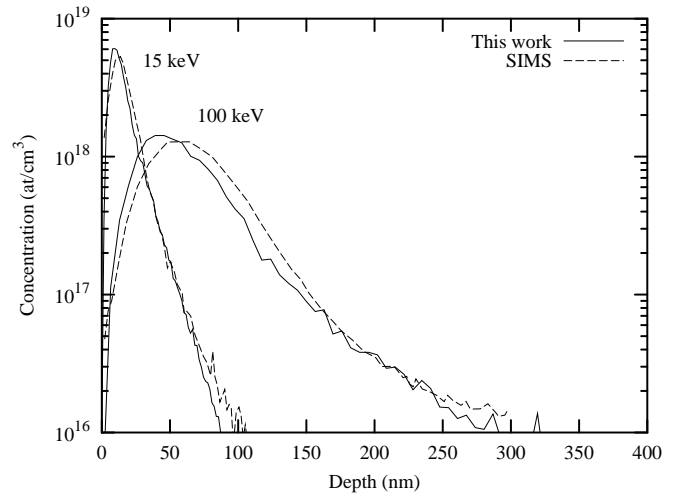
ABC 1 0 0

// SiO2 (amorfo)
LatticeParameter 4.91304 4.91304 5.40463
Angles 90.0 90.0 60.0
XTal 2 1 0.3333 -0.465 -0.465 15 // Si
XTal 2 1 0.0 0.0 0.465 15 // Si
XTal 2 1 0.6666 0.465 0.0 15 // Si
XTal 3 1 0.12 0.272 0.415 15 // O
XTal 3 1 0.4533 -0.415 -0.143 15 // O
XTal 3 1 0.7866 0.143 -0.272 15 // O
XTal 3 1 -0.12 -0.272 0.143 15 // O
XTal 3 1 0.5467 0.415 0.272 15 // O
XTal 3 1 0.2133 -0.143 -0.415 15 // O
Amorphous 2
XMin 0 A
XMax 5.0 A

NextLayer

// Si <100>
XTal 2 6 0.00 0.00 0.00 15 // Si
XTal 2 6 0.25 0.25 0.25 15 // Si
Amorphous 0
XMin 5.0 A
XMax 1e10 A

```



B_Si_0/B_35_0.in

```

RSO 1.85 1.85 0.0
Divergence 0.5
RareEvent 2

ShowHisto1D On
ShowDamage On

HSTFile[ B_35_0. ]
GPPlot[ t"Simulacion","SIMS/b35_0.dat"t"SIMS" ]
GPInit[ set yrange[1e15:2e18] ]

ENERGY 35000 eV
NumberOfImplants 1000
Tha 0 degrees (tilt)
Phi 0 degrees

Temperature 300 kelvin

Atom B 5 11.000 519.0 // atom 1
Atom Si 14 28.086 519.0 // atom 2
Atom O 8 15.994 519.0 // atom 3
Projectiles 1 0

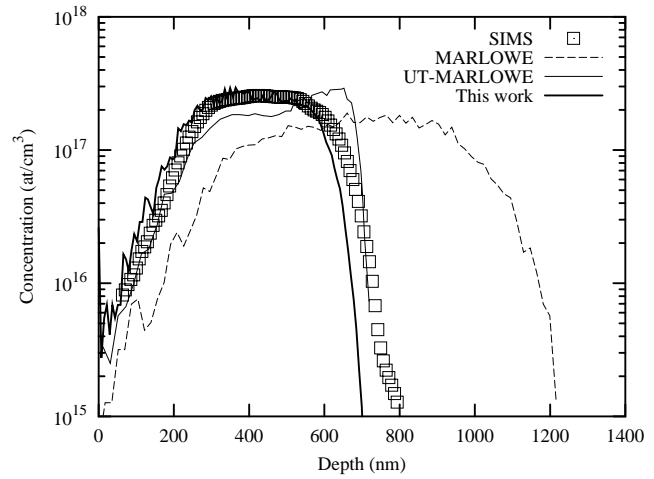
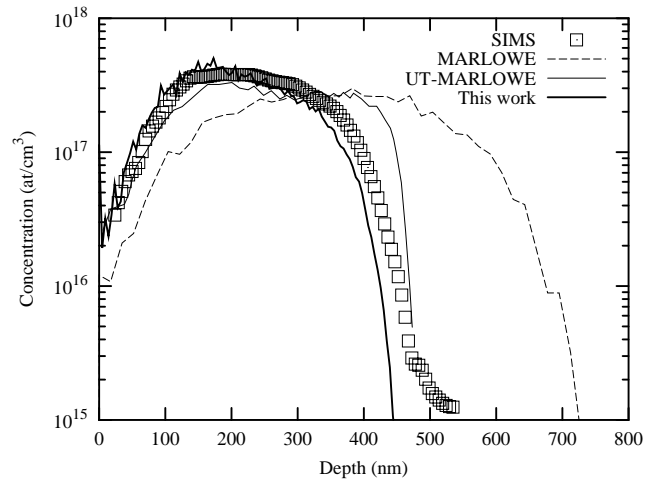
ABC 1 0 0

// SiO2 (amorfo)
LatticeParameter 4.91304 4.91304 5.40463
Angles 90.0 90.0 60.0
XTal 2 1 0.3333 -0.465 -0.465 15 // Si
XTal 2 1 0.0 0.0 0.465 15 // Si
XTal 2 1 0.6666 0.465 0.0 15 // Si
XTal 3 1 0.12 0.272 0.415 15 // O
XTal 3 1 0.4533 -0.415 -0.143 15 // O
XTal 3 1 0.7866 0.143 -0.272 15 // O
XTal 3 1 -0.12 -0.272 0.143 15 // O
XTal 3 1 0.5467 0.415 0.272 15 // O
XTal 3 1 0.2133 -0.143 -0.415 15 // O
Amorphous 2
XMin 0 A
XMax 15.0 A

NextLayer

// Si <100>
XTal 2 6 0.00 0.00 0.00 15 // Si
XTal 2 6 0.25 0.25 0.25 15 // Si
Amorphous 0
XMin 15.0 A
XMax 1e10 A

```



B_Si_100_0/B_15_7.in

```

RSO 1.85 1.85 0.0
Divergence 0.5
RareEvent 2

ShowHistOld On
ShowDamage On

HSTFile[ B_15_7. ]
GPPlot[ t"Simulacion","SIMS/bl5_7.dat"t"SIMS" ]
GPInit[ set yrange[1e15:2e18] ]

ENERGY 15000 eV
NumberOfImplants 1000
Tha 7 degrees (tilt)
Phi 30 degrees

Temperature 300 kelvin

Atom B 5 11.000 519.0 // atom 1
Atom Si 14 28.086 519.0 // atom 2
Atom O 8 15.994 519.0 // atom 3
Projectiles 1 0

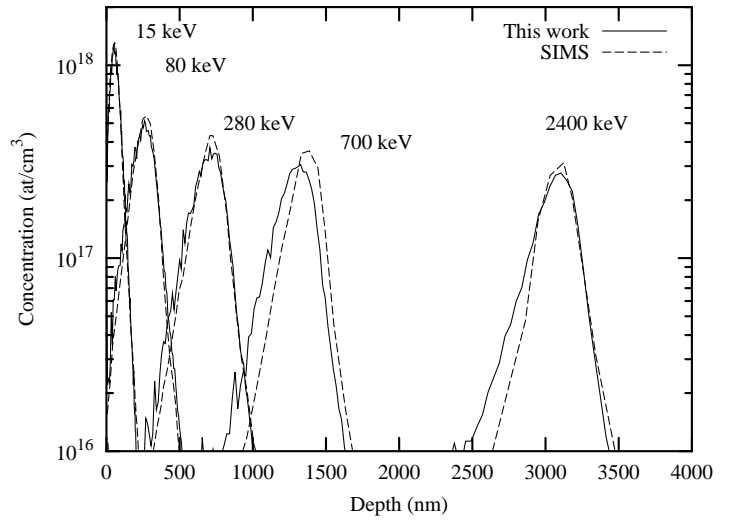
ABC 1 0 0

// SiO2 (amorfo)
LatticeParameter 4.91304 4.91304 5.40463
Angles 90.0 90.0 60.0
XTal 2 1 0.3333 -0.465 -0.465 15 // Si
XTal 2 1 0.0 0.0 0.465 15 // Si
XTal 2 1 0.6666 0.465 0.0 15 // Si
XTal 3 1 0.12 0.272 0.415 15 // O
XTal 3 1 0.4533 -0.415 -0.143 15 // O
XTal 3 1 0.7866 0.143 -0.272 15 // O
XTal 3 1 -0.12 -0.272 0.143 15 // O
XTal 3 1 0.5467 0.415 0.272 15 // O
XTal 3 1 0.2133 -0.143 -0.415 15 // O
Amorphous 2
XMin 0 A
XMax 15.0 A

NextLayer

// Si <100>
XTal 2 6 0.00 0.00 0.00 15 // Si
XTal 2 6 0.25 0.25 0.25 15 // Si
Amorphous 0
XMin 15.0 A
XMax 1e10 A

```



Damage_Si/B_15_0_8e15.in

```
Dose 8e15
FullDoseOutput Off

RS0 1.85 1.85 0.0
Divergence 0.5
RareEvent 2

ShowHisto1D On
ShowDamage On

HSTFile[ B_15_0_8e15. ]
GPPlot[ t"Simulacion", "SIMS/b15_0_8e15.dat"t"SIMS" ]

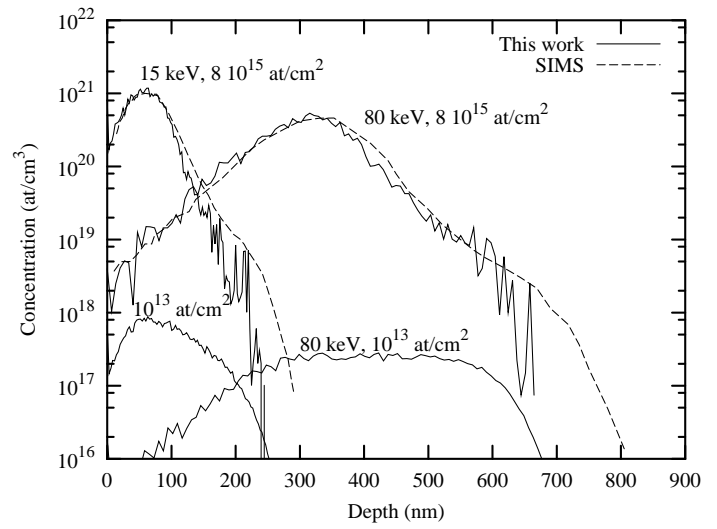
ENERGY 15000 eV
NumberOfImplants 1000
Tha 0 degrees (tilt)
Phi 0 degrees

Temperature 300 kelvin

Atom B 5 11.000 519.0 // atom 1
Atom Si 14 28.086 519.0 // atom 2
Projectiles 1 0

ABC 1 0 0

// Si <100>
XTal 2 6 0.00 0.00 0.00 15 // Si
XTal 2 6 0.25 0.25 0.25 15 // Si
Amorphous 0
XMin 0.0 A
XMax 1e10 A
```



Al_SiC/Al_30_16_30.in

```
RS0 1.70 0.00
Divergence 1.0
RareEvent 2
SD2 0.23

ShowHistold On
ShowDamage On

HSTFile[ Al_30_16_30. ]
GPPlot[ t"This work", "SIMS/Al_SiC_30.sims"t"SIMS" ]

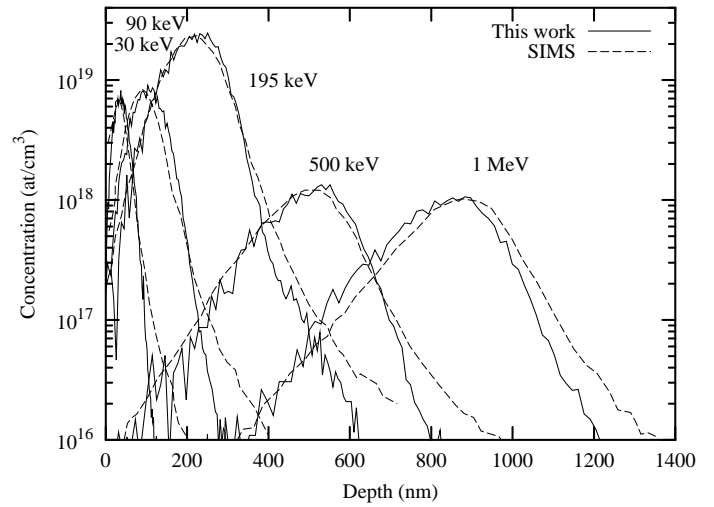
Dose 3.0e13
ENERGY 30000 eV
NumberOfImplants 1000
Tha 12.5 degrees (tilt)
Phi 30 degrees
Cut_Tilt 3.5 grados

ABC 0 0 1
FLAT 1 0 0

Temperature 300 kelvin

Atom Al 13 27.000 600.0 // atom 1
Atom Si 14 28.086 1185.0 // atom 2
Atom C 6 12.011 1185.0 // atom 3
Projectiles 1 0

LatticeParameter 3.073 3.073 15.08
Angles 90.0 90.0 120.0
XTal 3 1 0.000 0.000 0.000 15
XTal 3 1 0.000 0.000 0.500 15
XTal 3 1 0.333 0.666 0.166 15
XTal 3 1 0.666 0.333 0.666 15
XTal 3 1 0.333 0.666 0.833 15
XTal 3 1 0.666 0.333 1.333 15
XTal 2 1 0.000 0.000 0.125 15
XTal 2 1 0.000 0.000 0.625 15
XTal 2 1 0.333 0.666 0.291 15
XTal 2 1 0.666 0.333 0.791 15
XTal 2 1 0.333 0.666 0.958 15
XTal 2 1 0.666 0.333 1.458 15
Amorphous 0
XMin 0.0 A
XMax 1e10 A
```



As_SiC/As_SiC_100keV.in

```

RS0 1.75 0.00
Divergence 1.0
RareEvent 2
SD2 0.23

ShowHistOld On
ShowDamage On
HSTFile[ As_SiC_100keV. ]
GPPlot[ t"This work", "SIMS/As_SiC_100.sims"t"SIMS" ]

Dose 9.9e13
ENERGY 100000 eV
NumberOfImplants 1000
Tha 12.5 degrees (tilt)
Phi 30 degrees
Cut_Tilt 3.5 grados

ABC 0 0 1
FLAT 1 0 0

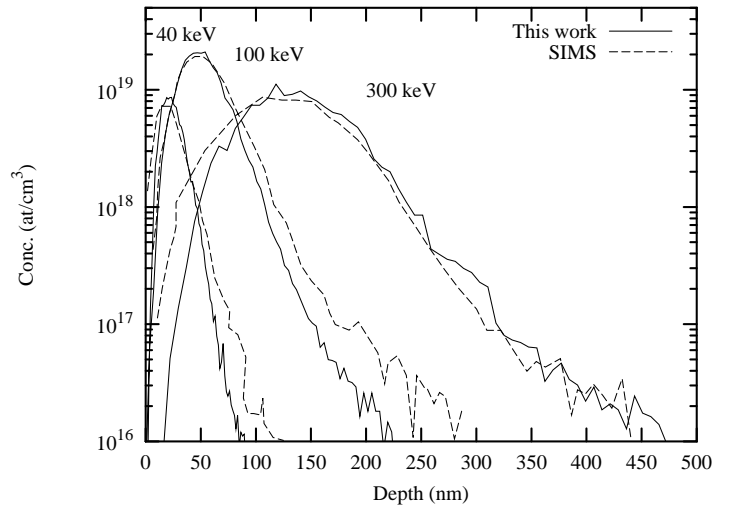
Temperature 300 kelvin

Atom As 33 75.000 600.0
Atom Si 14 28.086 1185.0
Atom C 6 12.011 1185.0
Projectiles 1 0

LatticeParameter 3.073 3.073 15.08
Angles 90.0 90.0 120.0
XTal 3 1 0.000 0.000 0.000 15
XTal 3 1 0.000 0.000 0.500 15
XTal 3 1 0.333 0.666 0.166 15
XTal 3 1 0.666 0.333 0.666 15
XTal 3 1 0.333 0.666 0.833 15
XTal 3 1 0.666 0.333 1.333 15
XTal 2 1 0.000 0.000 0.125 15
XTal 2 1 0.000 0.000 0.625 15
XTal 2 1 0.333 0.666 0.291 15
XTal 2 1 0.666 0.333 0.791 15
XTal 2 1 0.333 0.666 0.958 15
XTal 2 1 0.666 0.333 1.458 15

Amorphous 0
XMin 0.0 A
XMax 1e10 A

```



Se_GaAs/Se300_GaAs100.in

```
RS0 1.70 1.70 0.0
Divergence 1.0
RareEvent 2
SD2 0.23

AmorphizationDensity 6e20
RecombinationFactor 0.09

ShowHistolD On
ShowDamage On
HSTFile[ Se300_GaAs100. ]
GPPlot[
simulador", "SIMS/Se300_GaAs100.dat"t"SIMS" ] t"Nuestro

Dose 3.0e13
ENERGY 300000 eV
NumberOfImplants 1000
Tha 0 degrees (tilt)
Phi 0 degrees
ABC 1 0 0

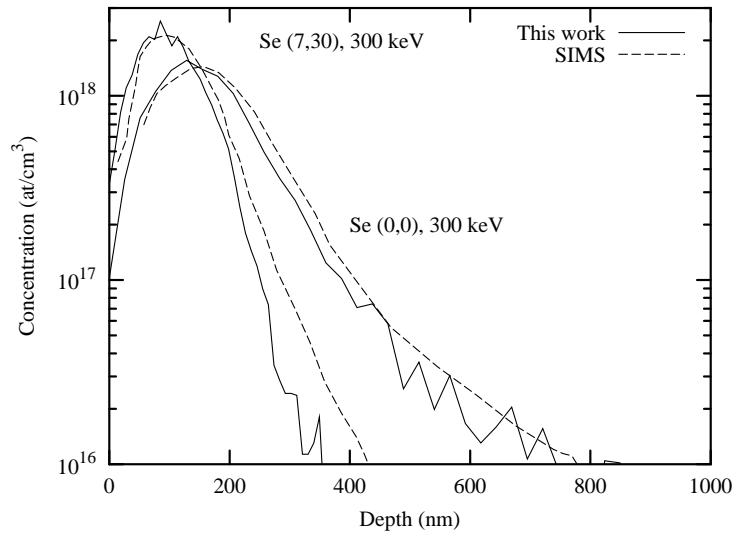
Temperature 300 kelvin

Atom Se 34 80.000 600.0 // atom 1
Atom As 33 74.921 360.0 // atom 2
Atom Ga 31 69.723 360.0 // atom 3
Projectiles 1 0

// GaAs
LatticeParameter 5.6537 5.6537 5.6537
Angles 90.0 90.0 90.0
XTal 3 6 0.000 0.000 0.000 15 // Ga
XTal 2 6 0.250 0.250 0.250 15 // As
Amorphous 2
XMin 0.0 A
XMax 15 A

NextLayer

// GaAs
LatticeParameter 5.6537 5.6537 5.6537
Angles 90.0 90.0 90.0
XTal 3 6 0.000 0.000 0.000 15 // Ga
XTal 2 6 0.250 0.250 0.250 15 // As
Amorphous 0
XMin 15.0 A
XMax 1e10 A
```



Si_GaAs/Si150_GaAsREO.in

```
RSO 2.0 0.0
Divergence 1.0
RareEvent 2
SD2 0.23

AmorphizationDensity 6e20
RecombinationFactor 0.09

ShowHisto1D On
ShowDamage On
HSTFile[ Si150_GaAsREO. ]
GPPlot[ t"Nuestro
simulador", "SIMS/Si150_GaAsREO.dat"t"SIMS" ]

Dose 3.0e13
ENERGY 150000 eV
NumberOfImplants 1000
Tha 7 degrees (tilt)
Phi 30 degrees

ABC 1 0 0
FLAT 0 1 1

Temperature 300 kelvin

Atom Si 14 29.000 519.0
Atom As 33 74.921 360.0
Atom Ga 31 69.723 360.0

Projectiles 1 0

LatticeParameter 5.6537 5.6537 5.6537
Angles 90.0 90.0 90.0
XTal 3 6 0.000 0.000 0.000 15
XTal 2 6 0.250 0.250 0.250 15
Amorphous 2
XMin 0.0 A
XMax 15.0 A

NextLayer

LatticeParameter 5.6537 5.6537 5.6537
Angles 90.0 90.0 90.0
XTal 3 6 0.000 0.000 0.000 15
XTal 2 6 0.250 0.250 0.250 15
Amorphous 0
XMin 15.0 A
XMax 1e10 A
```

