| 1_SiN_dep | | | | | | |
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| **SUBROUTINE** | **STEPS** | | | | | |
| **N2_ Gas_Prep** | **N2_Gas_ Prep** | | | | | |
| | | **Depo Beam Parameters** | **Assist Beam Parameters** | **Target** | **Process** | **Fixture** |
| | | Beam voltage=0 | Beam voltage=0 | | | Fixture Tilt Angle=40 |
| | | Beam curent=0 | Beam curent=0 | | | Fixture Rotation Speed=20rpm |
| | | Ignition RF Power=0 | Ignition RF Power=0 | | | |
| | | Suppressor Voltage=0 | Suppressor Voltage=0 | PM1 | Process time | |
| | | PBN Flowrate=5 | PBN Flowrate=5 | **Si** | **10sec** | **Shutter "at beam"** |
| | | K Factor=0 | K Factor=0 | | | substrate=close |
| | | **Gas Values** | **Gas Values** | | | target=close |
| | | PM1 | PM1 | | | |
| | | Ar=0 | Ar=0 | | | |
| | | Xe=0 | O2=0 | Target angle=55 | | |
| | | N2=0 | N2=5 | | | |
| | **N2_Gas_Shutoff** | | | | | |
| | | **Depo Beam Parameters** | **Assist Beam Parameters** | **Target** | **Process** | **Fixture** |
| | | Beam voltage=0 | Beam voltage=0 | | | Fixture Tilt Angle=40 |
| | | Beam curent=0 | Beam curent=0 | | | Fixture Rotation Speed=20rpm |
| | | Ignition RF Power=0 | Ignition RF Power=0 | | | |
| | | Suppressor Voltage=0 | Suppressor Voltage=0 | PM1 | Process time | |
| | | PBN Flowrate=5 | PBN Flowrate=5 | **Si** | **10sec** | **Shutter "at beam"** |
| | | K Factor=0 | K Factor=0 | | | substrate=close |
| | | **Gas Values** | **Gas Values** | | | target=close |
| | | PM1 | PM1 | | | |
| | | Ar=0 | Ar=0 | | | |
| | | Xe=0 | O2=0 | Target angle=55 | | |
| | | N2=0 | N2=0 | | | |
| **Ignite** | **Ignite_HiV_00_Asst** | | | | | |
| | | **Depo Beam Parameters** | **Assist Beam Parameters** | **Target** | **Process** | **Fixture** |
| | | Beam at step=shutoff | Beam at step=ExtractBeam | | | |
| | | Beam at end=shutoff | Beam at end=PlasmaOnly | | | |
| | | PBN=off | PBN=on | | | |
| | | Beam voltage=0 | Beam voltage=900 | PM1 | Process time | Fixture Tilt Angle=40 |
| | | Beam curent=0 | Beam curent=160 | **Si** | **20sec** | Fixture Rotation Speed=20rpm |
| | | Ignition RF Power=0 | Ignition RF Power=150 | | | |
| | | Suppressor Voltage=0 | Suppressor Voltage=180 | | | **Shutter "at beam"** |
| | | PBN Flowrate=5 | PBN Flowrate=5 | | | substrate=close |
| | | K Factor=0 | K Factor=3.1 | | | target=close |
| | | **Gas Values** | **Gas Values** | Target angle=55 | | |
| | | PM1 | PM1 | | | |
| | | Ar=10 | Ar=10 | | | |
| | | Xe=0 | O2=0 | | | |
| | | N2=0 | N2=0 | | | |
| | **Ignite_HiV_01_DepoAsst** | | | | | |
| | | **Depo Beam Parameters** | **Assist Beam Parameters** | **Target** | **Process** | **Fixture** |
| | | Beam at step=shutoff | Beam at step=ExtractBeam | | | |
| | | Beam at end=shutoff | Beam at end=ExtractBeam | | | |
| | | PBN=on | PBN=on | | | |
| | | Beam voltage=1120 | Beam voltage=900 | PM1 | Process time | Fixture Tilt Angle=40 |
| | | Beam curent=200 | Beam curent=200 | **Si** | **20sec** | Fixture Rotation Speed=20rpm |
| | | Ignition RF Power=150 | Ignition RF Power=150 | | | |
| | | Suppressor Voltage=150 | Suppressor Voltage=180 | | | **Shutter "at beam"** |
| | | PBN Flowrate=5 | PBN Flowrate=5 | | | substrate=close |
| | | K Factor=3.1 | K Factor=3.1 | | | target=close |
| | | **Gas Values** | **Gas Values** | Target angle=55 | | |
| | | PM1 | PM1 | | | |
| | | Ar=10 | Ar=10 | | | |
| | | Xe=0 | O2=0 | | | |
| | | N2=0 | N2=0 | | | |

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| | **Ignite_GridClean** | | | | | |
| | | **Depo Beam Parameters** | **Assist Beam Parameters** | **Target** | **Process** | **Fixture** |
| | | Beam at step=ExtractBeam | Beam at step=ExtractBeam | | | |
| | | Beam at end=PlasmaOnly | Beam at end=PlasmaOnly | | | |
| | | PBN=on | PBN=on | | | |
| | | Beam voltage=50 | Beam voltage=50 | PM1 | Process time | Fixture Tilt Angle=40 |
| | | Beam curent=310 | Beam curent=310 | **Si** | **300sec** | Fixture Rotation Speed=20rpm |
| | | Ignition RF Power=250 | Ignition RF Power=250 | | | |
| | | Suppressor Voltage=800 | Suppressor Voltage=800 | | | **Shutter "at beam"** |
| | | PBN Flowrate=5 | PBN Flowrate=5 | | | substrate=close |
| | | K Factor=2 | K Factor=2 | | | target=close |
| | | **Gas Values** | **Gas Values** | Target angle=55 | | |
| | | PM1 | PM1 | | | |
| | | Ar=10 | Ar=10 | | | |
| | | Xe=0 | O2=0 | | | |
| | | N2=0 | N2=0 | | | |
| **Warmup** | **Warm up** | | | | | |
| | | **Depo Beam Parameters** | **Assist Beam Parameters** | **Target** | **Process** | **Fixture** |
| | | Beam at step=PlasmaOnly | Beam at step=PlasmaOnly | | | |
| | | Beam at end=PlasmaOnly | Beam at end=PlasmaOnly | | | |
| | | PBN=on | PBN=on | | | |
| | | Do not change RF | Do not change RF | | | |
| | | Beam voltage=50 | Beam voltage=55 | PM1 | Process time | Fixture Tilt Angle=40 |
| | | Beam curent=380 | Beam curent=400 | **Si** | **10sec** | Fixture Rotation Speed=10rpm |
| | | Ignition RF Power=300 | Ignition RF Power=300 | | | |
| | | Suppressor Voltage=800 | Suppressor Voltage=795 | | | **Shutter "at beam"** |
| | | PBN Flowrate=5 | PBN Flowrate=5 | | | substrate=close |
| | | K Factor=2 | K Factor=2 | | | target=close |
| | | **Gas Values** | **Gas Values** | Target angle=55 | | |
| | | PM1 | PM1 | | | |
| | | Ar=10 | Ar=10 | | | |
| | | Xe=0 | O2=0 | | | |
| | | N2=0 | N2=0 | | | |
| **SiN_GasRamp** | **SiN_GasRamp** | | | | | |
| | | **Depo Beam Parameters** | **Assist Beam Parameters** | **Target** | **Process** | **Fixture** |
| | | Beam at step=PlasmaOnly | Beam at step=PlasmaOnly | | | |
| | | Beam at end=PlasmaOnly | Beam at end=PlasmaOnly | | | |
| | | PBN=on | PBN=on | | | |
| | | Do not change RF | Do not change RF | | | |
| | | Beam voltage=950 | Beam voltage=60 | PM1 | Process time | Fixture Tilt Angle=40 |
| | | Beam curent=380 | Beam curent=310 | **Si** | **15sec** | Fixture Rotation Speed=20rpm |
| | | Ignition RF Power=300 | Ignition RF Power=300 | | | |
| | | Suppressor Voltage=153 | Suppressor Voltage=960 | | | **Shutter "at beam"** |
| | | PBN Flowrate=5 | PBN Flowrate=5 | | | substrate=close |
| | | K Factor=2 | K Factor=2 | | | target=close |
| | | **Gas Values** | **Gas Values** | Target angle=55 | | |
| | | PM1 | PM1 | | | |
| | | Ar=10 | Ar=5 | | | |
| | | Xe=5 | O2=0 | | | |
| | | N2=0 | N2=10 | | | |
| **SiN_PreSputter** | **SiN_PreDep1_Gas Stab.** | | | | | |

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| | | **Depo Beam Parameters** | **Assist Beam Parameters** | **Target** | **Process** | **Fixture** |
| | | Beam at step=PlasmaOnly | Beam at step=PlasmaOnly | | | |
| | | Beam at end=PlasmaOnly | Beam at end=PlasmaOnly | | | |
| | | PBN=on | PBN=on | | | |
| | | Do not change RF | Do not change RF | | | |
| | | Beam voltage=950 | Beam voltage=60 | PM1 | Process time | Fixture Tilt Angle=40 |
| | | Beam curent=380 | Beam curent=310 | **Si** | **60sec** | Fixture Rotation Speed=20rpm |
| | | Ignition RF Power=300 | Ignition RF Power=300 | | | |
| | | Suppressor Voltage=153 | Suppressor Voltage=960 | | | **Shutter "at beam"** |
| | | PBN Flowrate=5 | PBN Flowrate=5 | | | substrate=close |
| | | K Factor=2 | K Factor=2 | | | target=close |
| | | **Gas Values** | **Gas Values** | Target angle=55 | | |
| | | PM1 | PM1 | | | |
| | | Ar=0 | Ar=0 | | | |
| | | Xe=5 | O2=0 | | | |
| | | N2=0 | N2=30 | | | |
| | **SiN_PreDep2_Sputter** | | | | | |
| | | **Depo Beam Parameters** | **Assist Beam Parameters** | **Target** | **Process** | **Fixture** |
| | | Beam at step=PlasmaOnly | Beam at step=PlasmaOnly | | | |
| | | Beam at end=PlasmaOnly | Beam at end=PlasmaOnly | | | |
| | | PBN=on | PBN=on | | | |
| | | Do not change RF | Do not change RF | | | |
| | | Beam voltage=950 | Beam voltage=60 | PM1 | Process time | Fixture Tilt Angle=40 |
| | | Beam curent=380 | Beam curent=310 | **Si** | **300sec** | Fixture Rotation Speed=20rpm |
| | | Ignition RF Power=300 | Ignition RF Power=300 | | | |
| | | Suppressor Voltage=153 | Suppressor Voltage=960 | | | **Shutter "at beam"** |
| | | PBN Flowrate=5 | PBN Flowrate=5 | | | substrate=close |
| | | K Factor=2 | K Factor=2 | | | target=close |
| | | **Gas Values** | **Gas Values** | Target angle=55 | | |
| | | PM1 | PM1 | | | |
| | | Ar=0 | Ar=0 | | | |
| | | Xe=5 | O2=0 | | | |
| | | N2=0 | N2=30 | | | |
| | | | | | | |
| **SiN_Dep** | **SiN_Dep** | | | | | |
| | | **Depo Beam Parameters** | **Assist Beam Parameters** | **Target** | **Process** | **Fixture** |
| | | Beam at step=ExtractOnly | Beam at step=ExtractOnly | | | |
| | | Beam at end=PlasmaOnly | Beam at end=PlasmaOnly | | | |
| | | PBN=on | PBN=on | | | |
| | | Beam voltage=950 | Beam voltage=60 | PM1 | Process time | Fixture Tilt Angle=40 |
| | | Beam curent=380 | Beam curent=310 | **Si** | **1800sec** | Fixture Rotation Speed=20rpm |
| | | Ignition RF Power=300 | Ignition RF Power=300 | | | |
| | | Suppressor Voltage=153 | Suppressor Voltage=960 | | | **Shutter "at beam"** |
| | | PBN Flowrate=5 | PBN Flowrate=5 | | | substrate=open |
| | | K Factor=2 | K Factor=2 | | | target=open |
| | | **Gas Values** | **Gas Values** | Target angle=55 | | |
| | | PM1 | PM1 | | | |
| | | Ar=0 | Ar=0 | | | |
| | | Xe=5 | O2=0 | | | |
| | | N2=0 | N2=30 | | | |

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| **SiN_GasRamp** | **SiN_GasRamp** | | | | | |
| | | **Depo Beam Parameters** | **Assist Beam Parameters** | **Target** | **Process** | **Fixture** |
| | | Beam at step=PlasmaOnly | Beam at step=PlasmaOnly | | | |
| | | Beam at end=PlasmaOnly | Beam at end=PlasmaOnly | | | |
| | | PBN=on | PBN=on | | | |
| | | Do not change RF | Do not change RF | | | |
| | | Beam voltage=950 | Beam voltage=60 | PM1 | Process time | Fixture Tilt Angle=40 |
| | | Beam curent=380 | Beam curent=310 | **Si** | **15sec** | Fixture Rotation Speed=20rpm |
| | | Ignition RF Power=300 | Ignition RF Power=300 | | | |
| | | Suppressor Voltage=153 | Suppressor Voltage=960 | | | **Shutter "at beam"** |
| | | PBN Flowrate=5 | PBN Flowrate=5 | | | substrate=close |
| | | K Factor=2 | K Factor=2 | | | target=close |
| | | **Gas Values** | **Gas Values** | Target angle=55 | | |
| | | PM1 | PM1 | | | |
| | | Ar=10 | Ar=5 | | | |
| | | Xe=5 | O2=0 | | | |
| | | N2=0 | N2=10 | | | |
| **SiN_GridClean** | **SiN_GridClean** | | | | | |
| | | **Depo Beam Parameters** | **Assist Beam Parameters** | **Target** | **Process** | **Fixture** |
| | | Beam at step=ExtractOnly | Beam at step=ExtractOnly | | | |
| | | Beam at end=PlasmaOnly | Beam at end=PlasmaOnly | | | |
| | | PBN=on | PBN=on | | | |
| | | Beam voltage=50 | Beam voltage=50 | PM1 | Process time | Fixture Tilt Angle=40 |
| | | Beam curent=310 | Beam curent=310 | **Si** | **300sec** | Fixture Rotation Speed=20rpm |
| | | Ignition RF Power=375 | Ignition RF Power=375 | | | |
| | | Suppressor Voltage=800 | Suppressor Voltage=800 | | | **Shutter "at beam"** |
| | | PBN Flowrate=5 | PBN Flowrate=5 | | | substrate=close |
| | | K Factor=2 | K Factor=2 | | | target=close |
| | | **Gas Values** | **Gas Values** | Target angle=55 | | |
| | | PM1 | PM1 | | | |
| | | Ar=10 | Ar=10 | | | |
| | | Xe=0 | Xe=0 | | | |
| | | N2=0 | N2=0 | | | |
| **Shut_n_pmp_dv** | **Shut_n_pmp_dwn** | | | | | |
| | | **Depo Beam Parameters** | **Assist Beam Parameters** | **Target** | **Process** | **Fixture** |
| | | Beam at step=shutoff | Beam at step=shutoff | | | |
| | | Beam at end=shutoff | Beam at end=shutoff | | | |
| | | PBN=off | PBN=off | | | |
| | | Beam voltage=0 | Beam voltage=0 | PM1 | Process time | Fixture Tilt Angle=40 |
| | | Beam curent=0 | Beam curent=0 | **Si** | **30sec** | Fixture Rotation Speed=10rpm |
| | | Ignition RF Power=0 | Ignition RF Power=0 | | | |
| | | Suppressor Voltage=0 | Suppressor Voltage=0 | | | **Shutter "at beam"** |
| | | PBN Flowrate=0 | PBN Flowrate=0 | | | substrate=close |
| | | K Factor=0 | K Factor=0 | | | target=close |
| | | **Gas Values** | **Gas Values** | Target angle=55 | | |
| | | PM1 | PM1 | | | |
| | | Ar=0 | Ar=0 | | | |
| | | Xe=0 | Xe=0 | | | |
| | | N2=0 | N2=0 | | | |
| | **Shut_dwn_open_cryo** | | | | | |
| | | **Depo Beam Parameters** | **Assist Beam Parameters** | **Target** | **Process** | **Fixture** |
| | | Beam at step=shutoff | Beam at step=shutoff | | | |
| | | Beam at end=shutoff | Beam at end=shutoff | | | |
| | | PBN=off | PBN=off | | | |
| | | Beam voltage=0 | Beam voltage=0 | PM1 | Process time | Fixture Tilt Angle=90 |
| | | Beam curent=0 | Beam curent=0 | **Si** | **10sec** | Fixture Rotation Speed=10rpm |
| | | Ignition RF Power=0 | Ignition RF Power=0 | | | |
| | | Suppressor Voltage=0 | Suppressor Voltage=0 | | | **Shutter "at beam"** |
| | | PBN Flowrate=0 | PBN Flowrate=0 | | | substrate=close |
| | | K Factor=0 | K Factor=0 | | | target=close |
| | | **Gas Values** | **Gas Values** | Target angle=55 | | |
| | | PM1 | PM1 | | | |
| | | Ar=0 | Ar=0 | | | |
| | | Xe=0 | Xe=0 | | | |
| | | N2=0 | N2=0 | | | |