

# 1 CONTROL

DLPOLY: LiNbO3

```
temperature 200.000000
pressure 0.000000
steps 200000
equilibration 40000
print every 1000
stats every 1000
timestep 0.0002000000 ps
ensemble nvt ber 0.600000 0.500000 (ps)
traj 1 1000 0
rdf 1000
multiple step 1
cap 1000
scale 307
primary cutoff 10.000
cutoff 10.000
delr width 1.000
rvdw cutoff 10.000
ewald precision 1.0E-6
shake tolerance 1.0E-6
quaternion tolerance 1.0E-5
job time 1520000
close time 200
finish
```

# 2 result

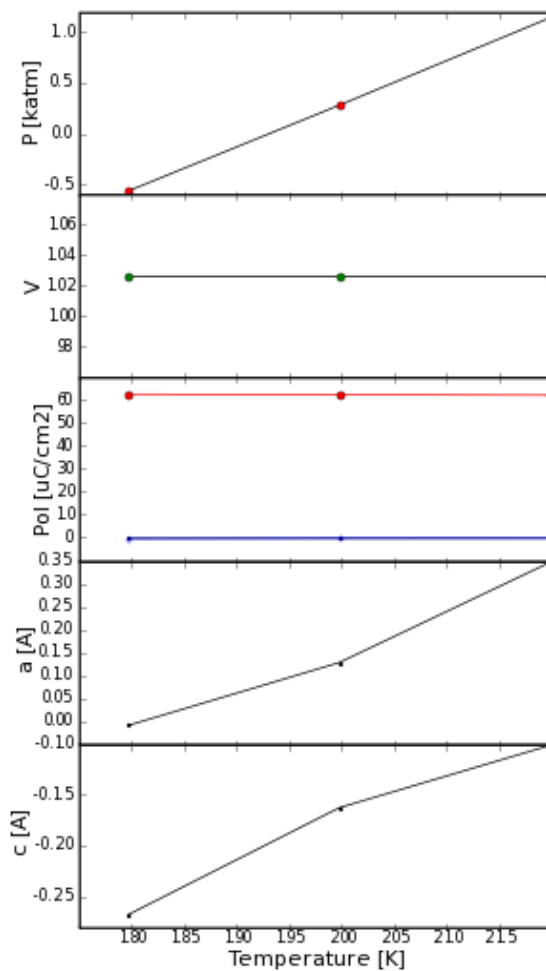


Figure 1: Pressure, Volume, Polarization verse temperature for MD simulation of LiNbO3 (T200 -c ).

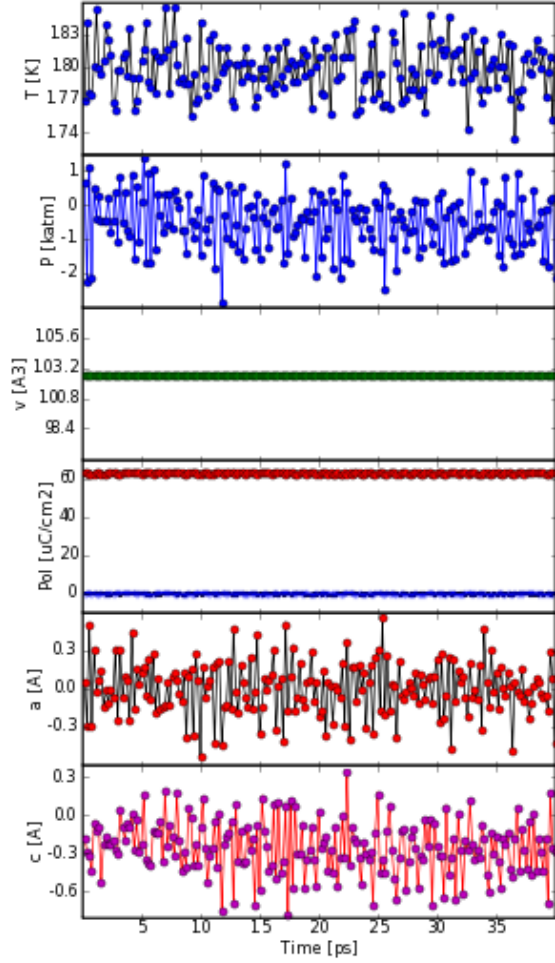


Figure 2: Temperature, Pressure, Volume, Polarization verse time for MD simulation of LiNbO3 at target temperature  $T=180$  K (T200).

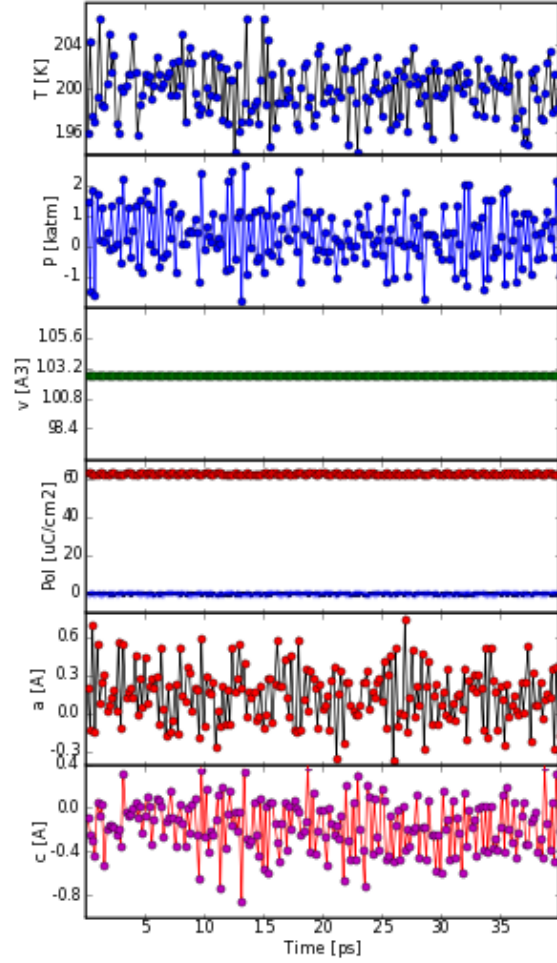


Figure 3: Temperature, Pressure, Volume, Polarization verse time for MD simulation of LiNbO3 at target temperature  $T=200$  K (T200).

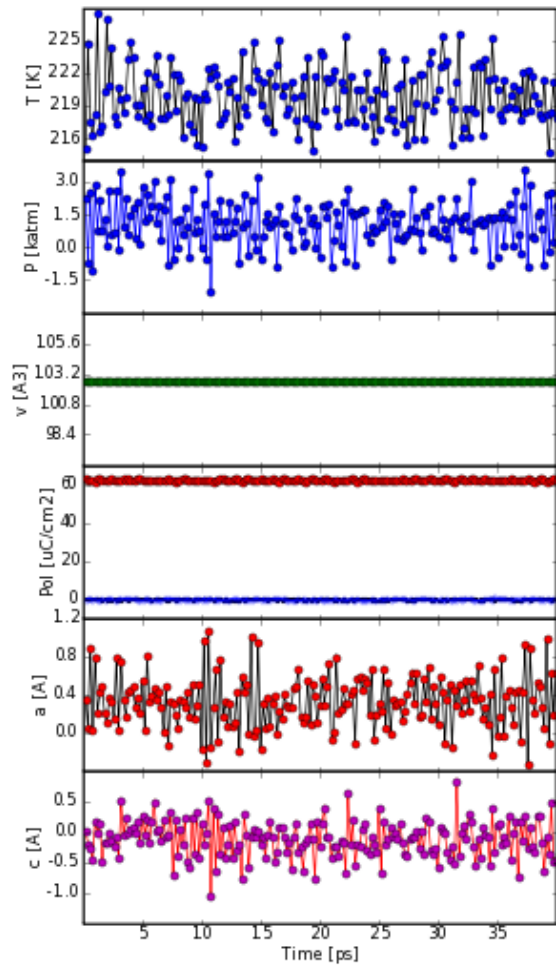


Figure 4: Temperature, Pressure, Volume, Polarization verse time for MD simulation of LiNbO3 at target temperature  $T=220$  K (T200).