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title                = bilayer from 162 DPPC
define               =

; RUN CONTROL PARAMETERS
integrator           = md ; Leap-frog integrator

; start time and timestep in ps
tinit               = 0.0
dt                  = 0.002
nsteps              = 150000

; number of steps for center of mass motion removal
comm_mode           = Linear
nstcomm             = 1
comm_grps           = System

; OUTPUT CONTROL OPTIONS =
; Output frequency for coords (x), velocities (v) and forces (f)
nstxout             = 500
nstvout             = 1000
nstfout             = 0

; Output frequency for energies to log file and energy file
nstlog              = 500
nstenergy           = 500

; Output frequency and precision for xtc file
;nstxtcout          = 500
xtc_precision       = 50

; NEIGHBORSEARCHING PARAMETERS
nstlist             = 10

; ns algorithm (simple or grid)
ns_type             = grid

; Periodic boundary conditions: xyz or none
pbc                 = xyz
rlist               = 1.2

; Method for doing electrostatics
coulombtype         = PME
rcoulomb            = 1.2
rcoulomb_switch     = 1.0
fourierspacing      = 0.12
pme_order           = 4
optimize_fft        = yes

; Method for doing Van der Waals
vdwtype             = Switch
rvdw                = 1.2 ; cut-off lengths
rvdw_switch         = 1.0

; Apply long range dispersion corrections for Energy and Pressure

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DispCorr                = no

; Temperature coupling
tcoupl                  = V-rescale
tc_grps                  = SURF SOL Cal NA CL
tau_t                    = 0.1 0.1 0.1 0.1 0.1 ; Time constant (ps)
ref_t                    = 298 298 298 298 298 ; reference temperature
(K)

; GENERATE VELOCITIES FOR STARTUP RUN
gen_vel                  = yes
gen_temp                  = 2
gen_seed                  = 473529

; ANNEALING PROTOCOL
annealing                 = single single single single single
annealing_npoints         = 2 2 2 2 2
annealing_time            = 0 300 0 300 0 300 0 300 0 300
annealing_temp            = 2 298 2 298 2 298 2 298 2 298

; OPTIONS FOR BONDS
constraints               = hbonds

; Type of constraint algorithm
constraint_algorithm      = lincs

; Highest order in the expansion of the constraint coupling matrix
lincs_order                = 4
lincs_iter                 = 4

; Lincs will write a warning to the stderr if in one step a bond
; rotates over more degrees than
lincs_warnangle           = 30

cutoff-scheme             = verlet
```