

QUICK-SHEET for molsim

Action	Specifier	Input values	Output values
load	xyz	File name (string)	
	top	File name (string)	
save		1 Types (string) 2 File name (string)	
set	timestep	Time step (scalar – default 0.005)	
	temperature	Temperature (scalar – default 1.0)	
	cutoff	Max. cutoff (scalar – default 2.5)	
	omp	No. threads (int scalar – default 1)	
	exclusion	‘bonded’ or ‘molecule’ (string – default ‘all’)	
	temperaturerelax	Temp. relaxation time (scalar – default 0.01)	
	compressionfactor	Compression factor (scalar – default 0.99995)	
	types	Particle types (string)	
	skin	Buffer-skin for neighbourlist (scalar – default 0.25)	
	charges	Atom charges (vector)	
get	numbpart		Scalar
	box		Vector
	energies		Vector (E_{kin} , E_{pot})
	velocities		Matrix
	positions		Matrix
	forces		Matrix
	types		String
	molpositions		Matrix
	pressure		Scalar
calcforce	lj	1 Types (string) 2 Cutoff (scalar) 3 σ (scalar) 4 ϵ (scalar)	
	bond	1 Bond type (int scalar) 2 Bond length (scalar)	

		3 Spring constant(scalar)
	angle	1 Angle type (int scalar) 2 Eq. angle (scalar) 3 Spring constant (scalar)
	torsion	1 Torsion type (int scalar) 2 Potential parameters (vector)
	coulomb	Cutoff (scalar)
	lattice	1 Particle type (string) 2 Spring constant (scalar)
	dpd	1 Types (string) 2 Cutoff (scalar) 3 Repulsion parameter (scalar) 4 σ (scalar)

integrate	leapfrog	
	dpd	λ (scalar)

thermostate	relax	1 Particle type (string) 2 Temperature (scalar) 3 Thermostat relax time (scalar)
	nosehoover	1 Particle type (string) 2 Temperature (scalar) 3 Thermostat mass (scalar)

sample	vacf/mcvacf	1 Length vector (int scalar) 2 Time span (scalar)
	sacf/msacf	1 Length vector (int scalar) 2 Time span (scalar)
	hydrocorrelations/ mhydrocorrelations	1 Length vector (int scalar) 2 Time span (scalar) 3 No. wavevectors (int scalar)
	profiles	1 Particle type (string) 2 Length vector (int scalar) 3 Sample freq. (int scalar)
	msd	1 Length vector (int scalar) 2 Time span (scalar) 3 No. wavevectors (int scalar) 4 Particle type (string)
	do	
task	lj	1 Types (string) 2 Cutoff (scalar) 3 σ (scalar) 4 ϵ (scalar) 5 Block no.
	bond	1 Bond type (int scalar)

		2 Bond length (scalar) 3 Spring constant(scalar) 4 Block no.
	angle	1 Angle type (int scalar) 2 Eq. angle (scalar) 3 Spring constant (scalar) 4 Block no.
	torsion	1 Torsion type (int scalar) 2 Potential parameters (vector) 3 Block no.
	coulomb	1 Cutoff (scalar) 2 Block no.
	do	1 Total no. blocks

compress	Target density
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add	force	1 Forces (vector) 2 Direction (int scalar)
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clear
