	Lectures	Exercises/Home work problems	
Ordinary differential equations	Linear dynamics	E1	
	Non-linear dynamics	E2	
	Molecular dynamics		H1a/H1b
Stochastic methods	Monte Carlo integration	E3	
	Metropolis algorithm		H2a/H2b
	Brownian dynamics	E4	
Partial differential equations	Quantum structure	E5	H3a
	Quantum dynamics		H3b

Central-field unscreened (Z =2)

Central-field screened (Z =27/16)

⋯⋯⋯ Hartree method

ρ (r)

r (a_0)

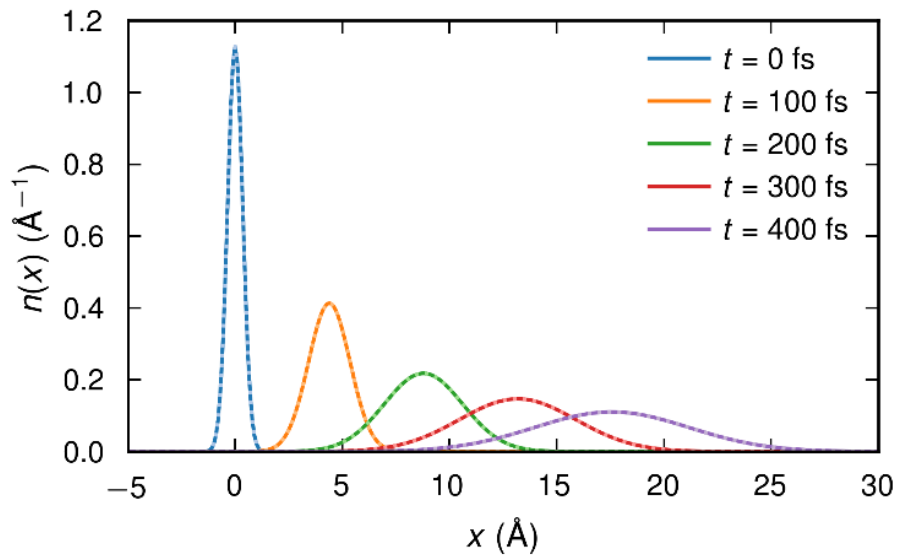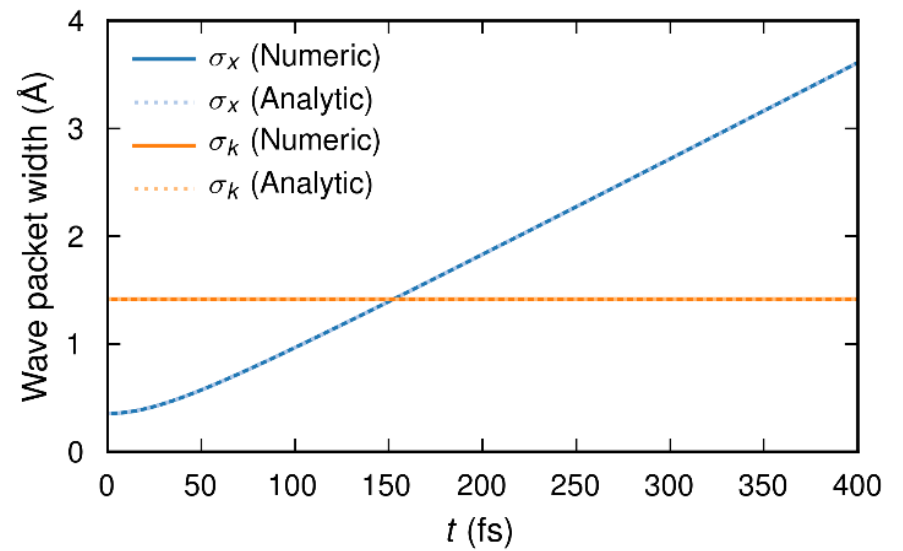# Gaussian wave-packet

Density for the position
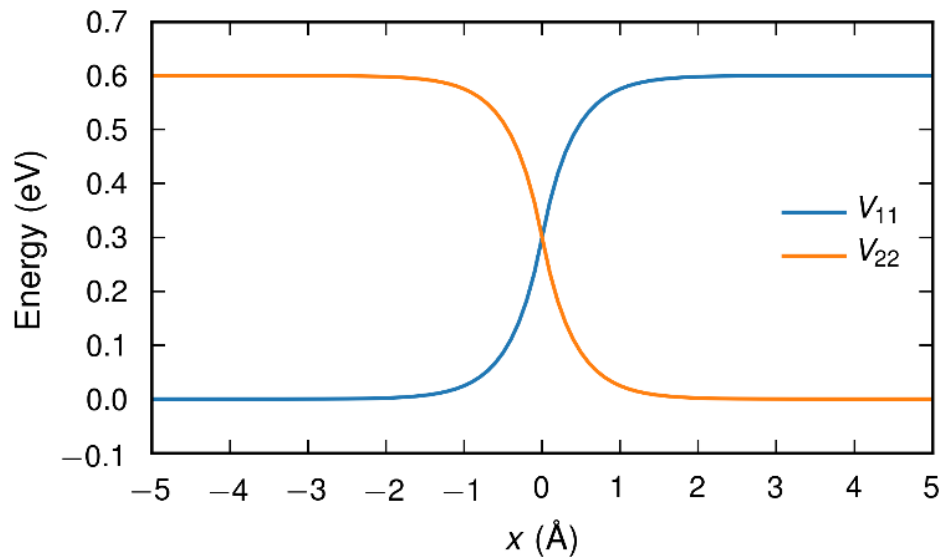
Density for the momentum
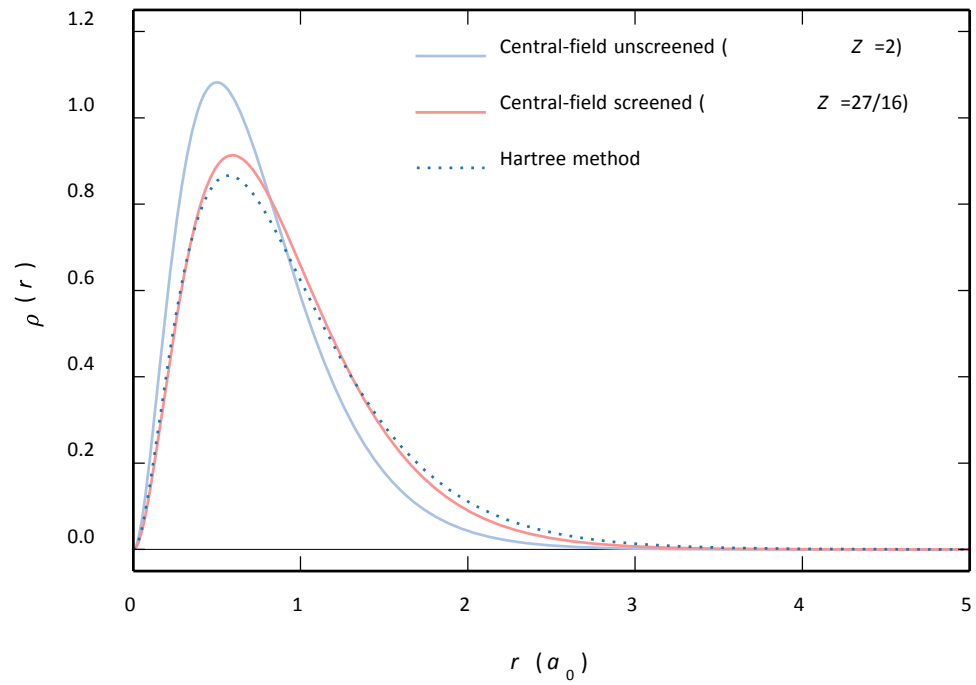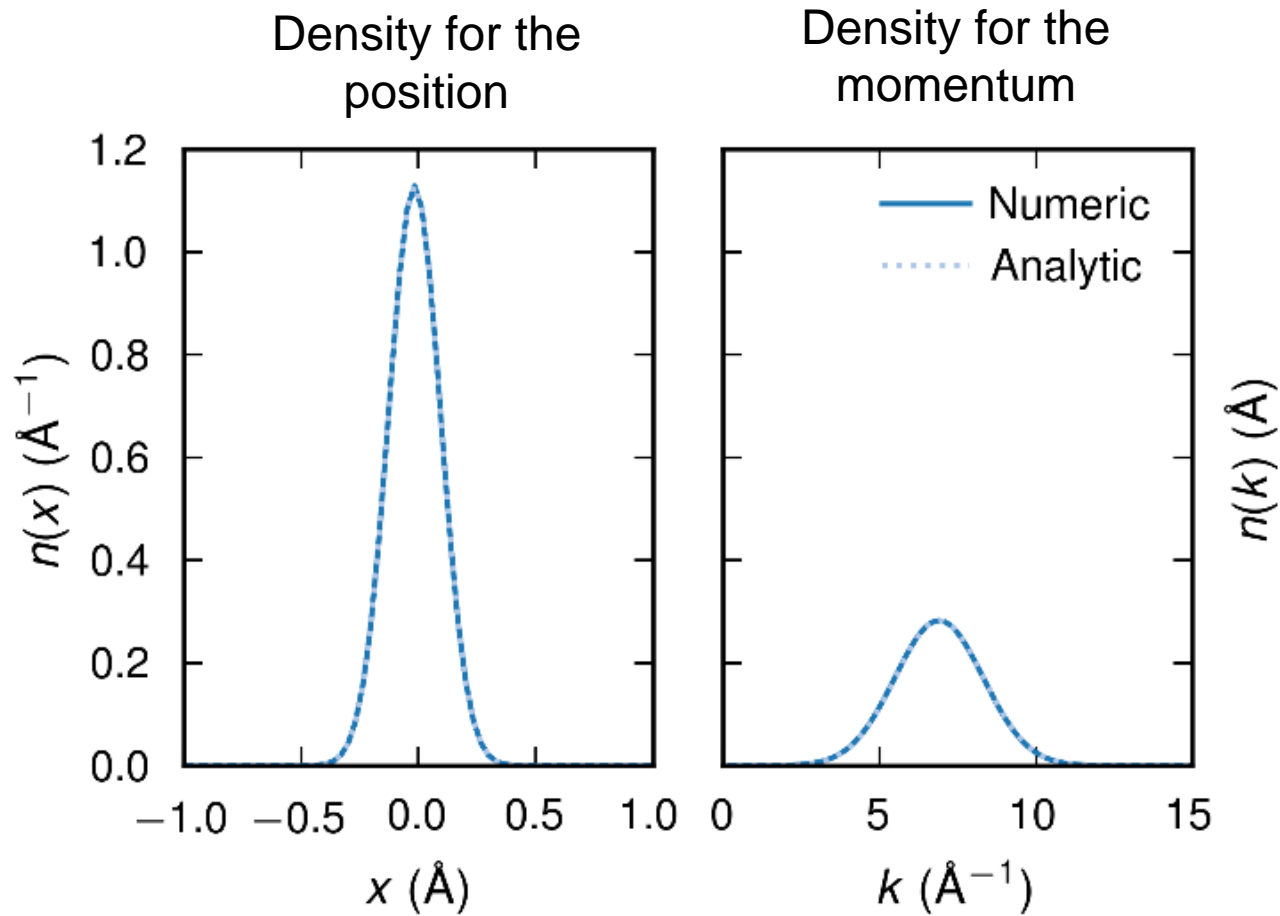
Time-evolution of the wavepacket

Time-evolution of the widths

Diabatic potential energy surfaces

Adiabatic potential energy surfaces