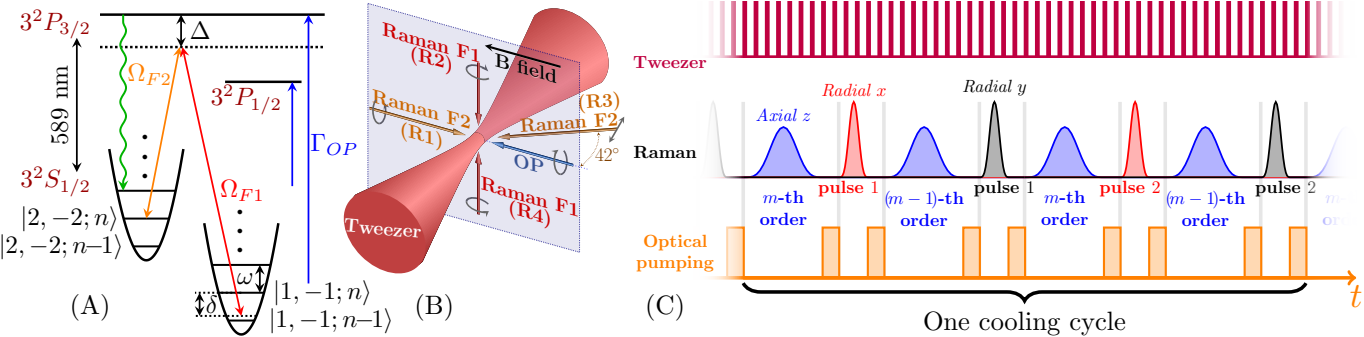
$3^2P_{3/2}$
Δ
589 nm
Ω_{F2}
$3^2P_{1/2}$
Γ_{OP}
$3^2S_{1/2}$
Ω_{F1}
$|2,-2;n\rangle$
$|2,-2;n-1\rangle$
ω
δ
$|1,-1;n\rangle$
$|1,-1;n-1\rangle$
(A)
Raman F1 (R2)
B field
Raman F2 (R1)
(R3) Raman F2
OP
42°
Raman F1 (R4)
Tweezer
(B)
Tweezer
Raman
Optical pumping
Axial z
Radial x
Radial y
m-th order
pulse 1
(m − 1)-th order
pulse 1
m-th order
pulse 2
(m − 1)-th order
pulse 2
t
(C)
One cooling cycle