

trapping force F_t is calculated using the Stokes' law $F_t = 6\pi^2 D \alpha_4 \partial r$. Here the effective viscosity of the LC is approximated by the Leslie coefficient α_4 .⁹ We measure the velocity of the bead at the moment of escape from the trap and thus determine F_t . The Reynolds numbers were kept low enough ≤ 10

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μ

d

$$F_a = -\pi K \alpha \frac{D}{d}$$

$$\mu \left(\frac{\alpha}{D} \right)$$

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d