

§-I. RELATED VIDEOS

1. Related to Figure 2

- Movie 1 : Symmetric channel: An experimental trace (blue) of a $4\mu\text{l}$ 1-pentanol drop in the symmetric channel.
- Movie 2 : Asymmetric channel: An experimental trace (blue) of a $4\mu\text{l}$ 1-pentanol drop in the asymmetric channel.

2. Combined fast-forwarded experimental trials: (Movies have been fast-forwarded ($\approx 5x$ to $15x$).

- Movie 3 : 10 Experimental trials of a $4\mu\text{l}$ drop in the symmetric environment (channel) with the counter. The drop chooses the left arm with 60 % probability.
- Movie 4 : 10 Experimental trials of a $4\mu\text{l}$ drop in the asymmetric environment (channel) with the counter. The drop chooses the wider arm with 80 % probability.

3. Related to Figure 3

- Movie 5 : An experimental trace (blue) of a $4\mu\text{l}$ 1-pentanol drop in the chemically asymmetric environment (channel) where the confined drop is in the left arm.

- Movie 6 : An experimental trace (blue) of a $4\mu\text{l}$ 1-pentanol drop in the chemically asymmetric environment (channel) where the confined drop is in the source arm.
- Movie 7 : An experimental trace (blue) of a $4\mu\text{l}$ 1-pentanol drop in the chemically asymmetric environment (channel) where the confined drop is in the right arm.

4. Combined fast-forwarded simulations.

- Movie 8 : Simulated 100 trajectories for a symmetric channel, in which 49 times the drop chose the left path and the rest 51 times the right one.
- Movie 9(a) : Simulated 50 trajectories for an asymmetric channel where the left arm is the narrower arm.
- Movie 9(b) : Simulated 50 trajectories for an asymmetric channel where the right arm is the narrower arm.
- Movie 10 : Simulated 50 runs for a free drop in a chemically asymmetric environment where the confined extra drop is in the left arm.
- Movie 11 : Simulated 50 runs for a free drop in a chemically asymmetric environment where the confined extra drop is in the source arm.
- Movie 12 : Simulated 50 runs for a free drop in a chemically asymmetric environment where the confined extra drop is in the right arm.