

Electronic Supplementary Information (ESI) for:

Janus magnetoelastic membrane swimmers

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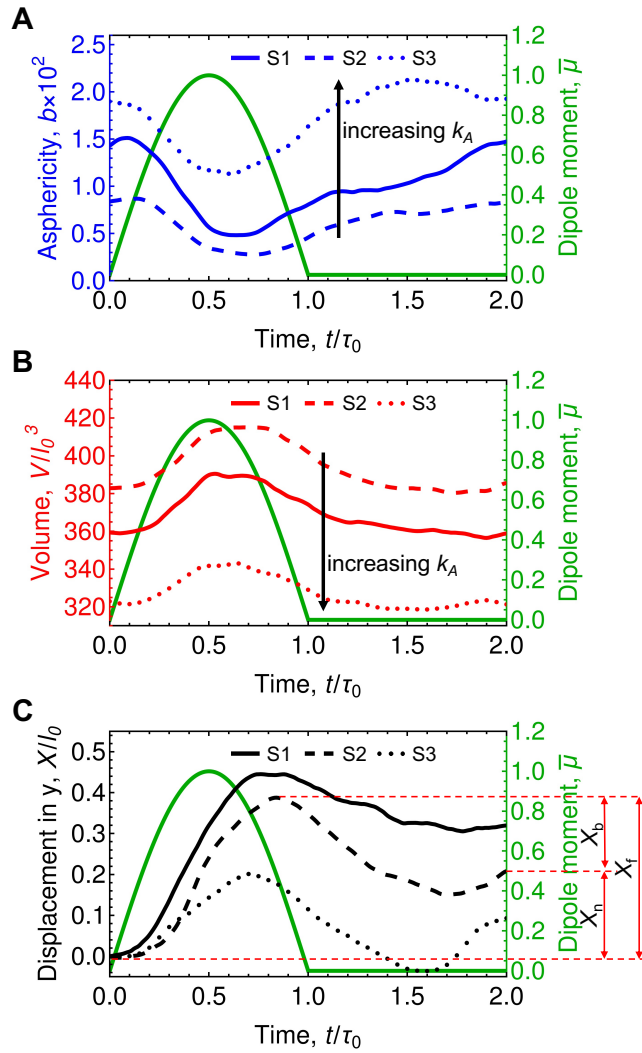


Fig. S1 Time evolutions of (A) the asphericity b , (B) the volume V , and (C) the displacement in y -direction. The sample S1~S3 are the same as marked in Fig. 4A.

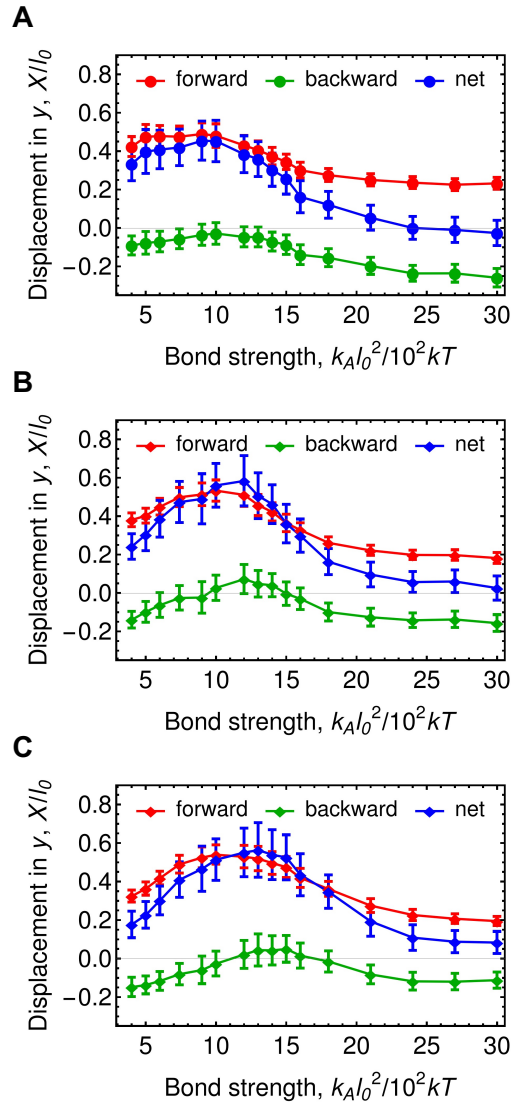


Fig. S2 The averaged forward, backward, and net displacements of one period for samples of microscopic bending rigidity (A) $\tilde{\kappa}_A = 10 \epsilon$, (B) $\tilde{\kappa}_A = 50 \epsilon$, and (C) $\tilde{\kappa}_A = 90 \epsilon$. The samples are the same as shown in Fig. 4A. As schemed in Fig. S1C, a forward displacement, X_f , is defined as the maximum displacement during the first half of the period, and a backward displacement, X_b , is computed as the difference of the net displacement X_n with X_f .

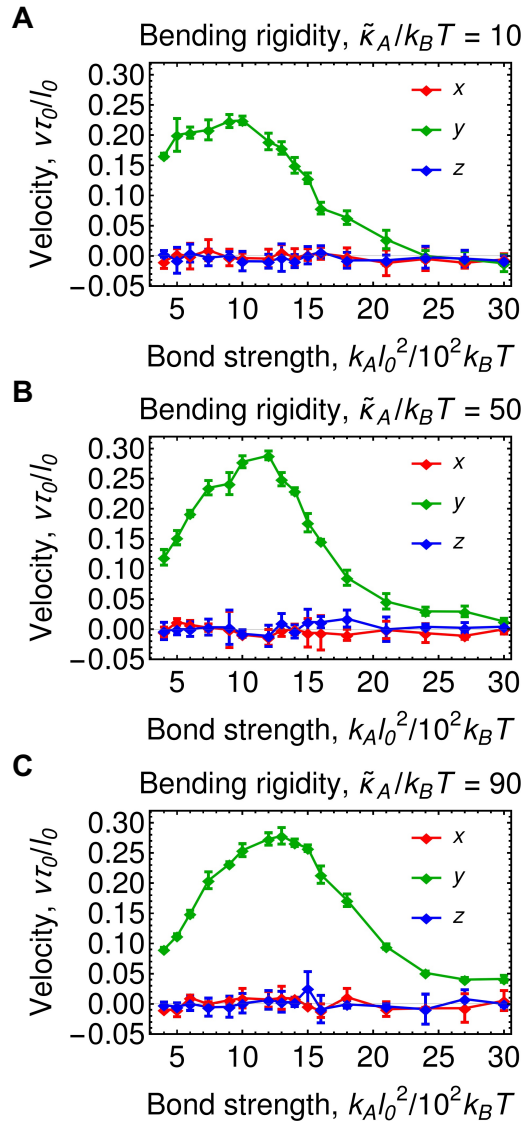


Fig. S3 Effects of bond strength k_A on the propelling velocity for samples of microscopic bending rigidity (A) $\tilde{\kappa}_A = 10 \epsilon$, (B) $\tilde{\kappa}_A = 50 \epsilon$, and (C) $\tilde{\kappa}_A = 90 \epsilon$. The samples are the same as shown in Fig. 4A.

