Electronic Supplementary Information (ESI)

A sorting strategy for *C. elegans* based on size-dependent motility and electrotaxis in a micro-structured channel

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Supplementary Movie S1:
The movie shows a moving worm in the micro-channel with micro-bump spacing *a* = 554 μm and the ratio of micro-bump diameter to spacing *d/a* = 0.8.

Supplementary Movie S2:
The movie shows a moving worm in the micro-channel with *a* = 554 μm and *d/a* = 0.6.

Supplementary Movie S3:
The movie shows a moving worm in the micro-channel with *a* = 554 μm and *d/a* = 0.3.

Supplementary Movie S4:
The movie shows a moving worm in the micro-channel with *a* = 346 μm and *d/a* = 0.6.

Supplementary Movie S5:
The movie shows a moving worm in the micro-channel with *a* = 485 μm and *d/a* = 0.6.

Supplementary Movie S6:
The movie shows a moving worm in the micro-channel with *a* = 624 μm and *d/a* = 0.6.

Supplementary Movie S7:
The movie shows an electrotactic movement (electrotaxis) of *C. elegans* in the micro-channel with *a* = 485 μm and *d/a* = 0.6.

Supplementary Movie S8:
The movie shows a self-sorting of adult worms in a mixture of different sized worms under the applied electric field of 2 V/cm, demonstrating the feasibility of separating worms using the proposed sorting strategy.