

Supporting Information:

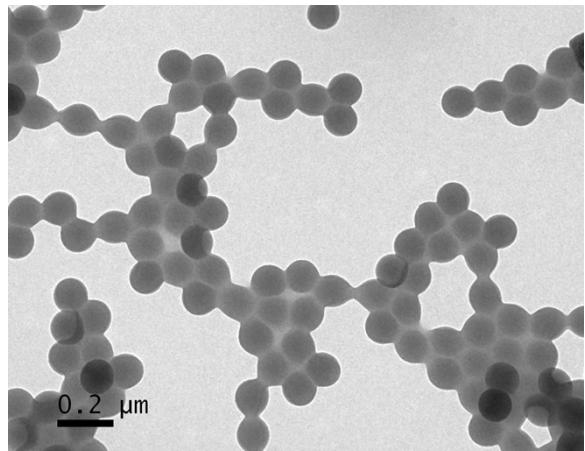


Fig. S1 TEM image of nanopolystyrene particles (100 nm) in K medium.

UNC-47::GFP

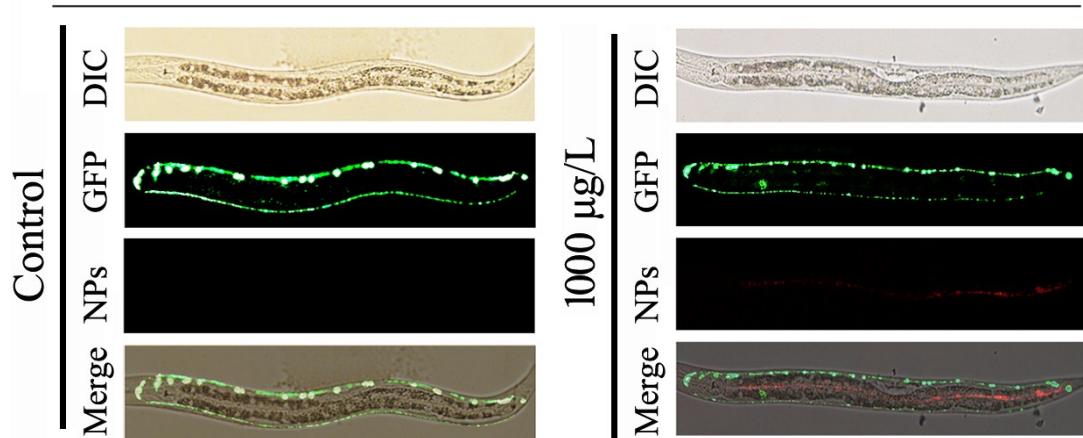


Fig. S2 Nanopolystyrene particles (red signals) were not accumulated in the D-type GABAergic motor neurons (green signals) in nematodes. Prolonged exposure was from L1-larvae to adult day-1.

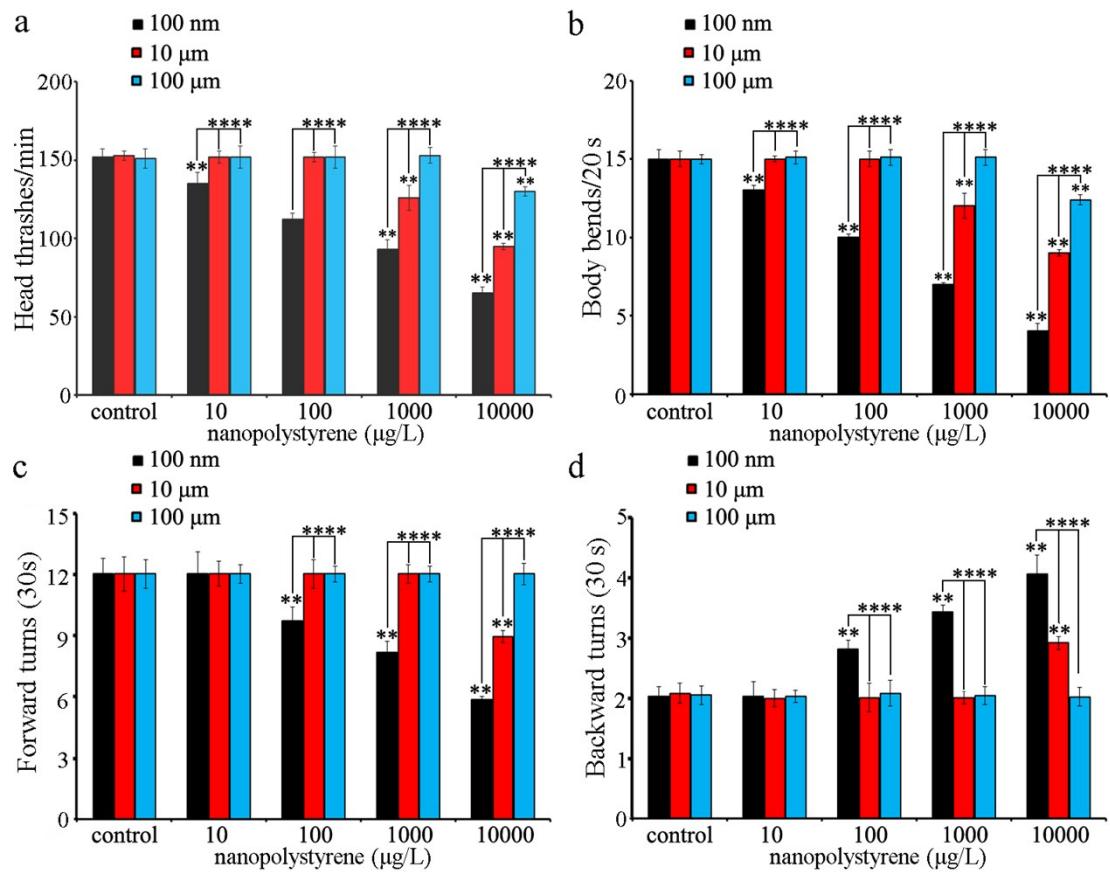


Fig. S3. Comparison of neurotoxicity of different sizes of polystyrene on head thrash (a), body bend (b), forward movement frequency (c), and backward movement frequency (d). Prolonged exposure was from L1-larvae to adult day-1. Bars represent means \pm SD. ** $P < 0.01$ vs control (if not specially indicated).

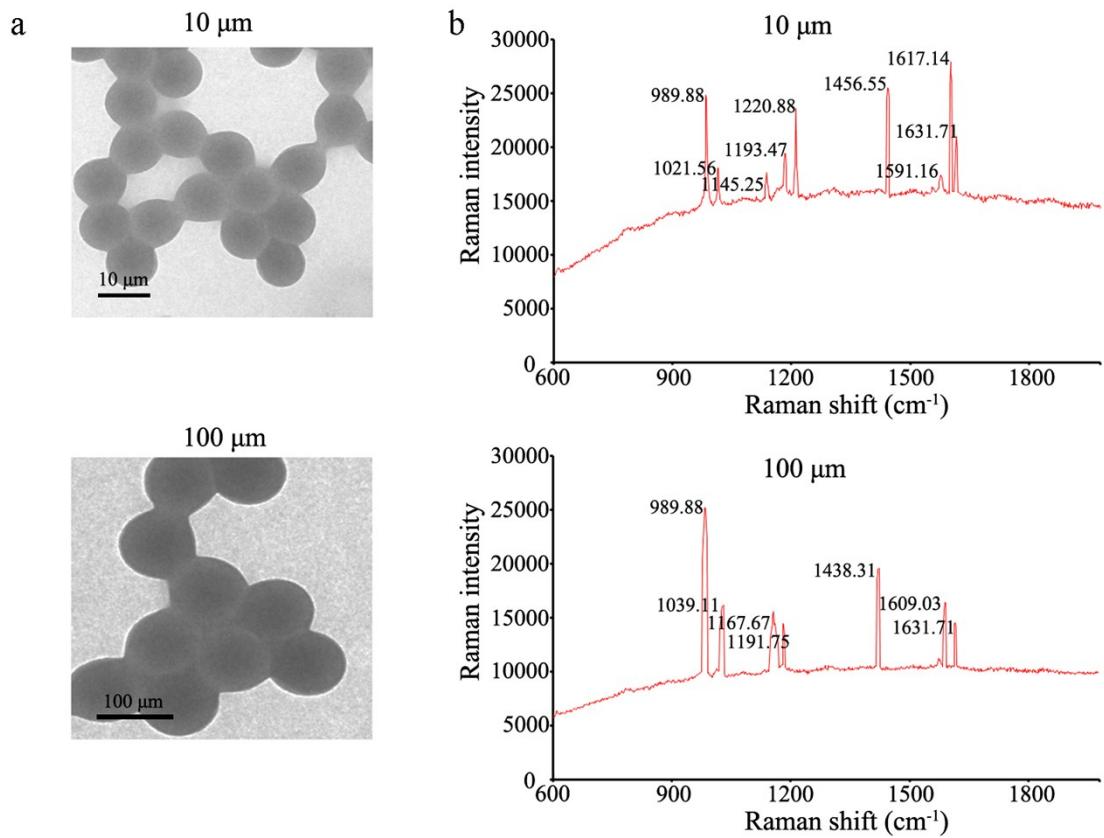


Fig. S4 Properties of polystyrene particles (10 and 100 μm). (a) TEM image of polystyrene particles (10 and 100 μm) in K medium. (b) Raman spectrum of polystyrene particles (10 and 100 μm).

Table S1 Primer information for qRT-PCR

| Gene | Forward primer (5'-3') | Reverse primer (5'-3') |
|---------------|------------------------|------------------------|
| <i>lgg-1</i> | CCGCAGAAAGTACCCAGACC | CTGGACGAAGTTGGATGCGT |
| <i>lgg-2</i> | GGAAGAAATCCGCAGCCAAC | GCCATCTGGATCACGCTCTT |
| <i>bec-1</i> | GACGACCCAACGAAGCCATA | ATCGACGTTGTCGGATGGTT |
| <i>atg-18</i> | ATGGCTGCTACATCAGACGG | TGGCTCATTGGTGGGAAGTC |
| <i>tba-1</i> | TCAACACTGCCATCGCCGCC | TCCAAGCGAGACCAGGCTTCAG |

Table S2 Primer information for DNA constructions

| Gene | Forward primer (5'-3') | Reverse primer (5'-3') |
|----------------|--------------------------------|---------------------------------|
| <i>Phlh-30</i> | ATACTGCAGATGAATGCTCTTATT CG | CGCTCTAGAGTGTCTAAACTTCTG ATC |
| <i>hh-30</i> | ATAGGTACCATGGCCGATGACGAC | ATACCATGGCGAAAAGTCCATGTG |