

Supplemental Information

Title: Sublethal impacts of fragmented polyethylene nanoplastics on *Daphnia magna* following chronic exposure

Jinyoung Song^a, In Young Kim^b, Seonae Hwang^{b,c}, Tae Geol Lee^{b,d,*}, June-Woo Park^{a,d,*}

^a Center for Ecotoxicology and Environmental Future Research, Korea Institute of Toxicology (KIT), Jinju, 52834, Republic of Korea

^b Nanobio Measurement Group, Korea Research Institute of Standards and Science (KRISS), Daejeon, 34113, Republic of Korea

^c Focused Ultra-Sonic Tech. (FUST) lab, Daejeon, 34015, Republic of Korea

^d Advanced Bio-Convergence Program, Korea University of Science and Technology (UST), Daejeon, 34113, Republic of Korea

^e Human and Environmental Toxicology Program, Korea University of Science and Technology (UST), Daejeon, 34113, Republic of Korea

*Corresponding author: tglee@kriss.re.kr (T. G. Lee), jwpark@kitox.re.kr (J.-W. Park)

Figure S1. Image of floating PE NP fragments (100 $\mu\text{g}/\text{mL}$) on the surface of M4 medium.

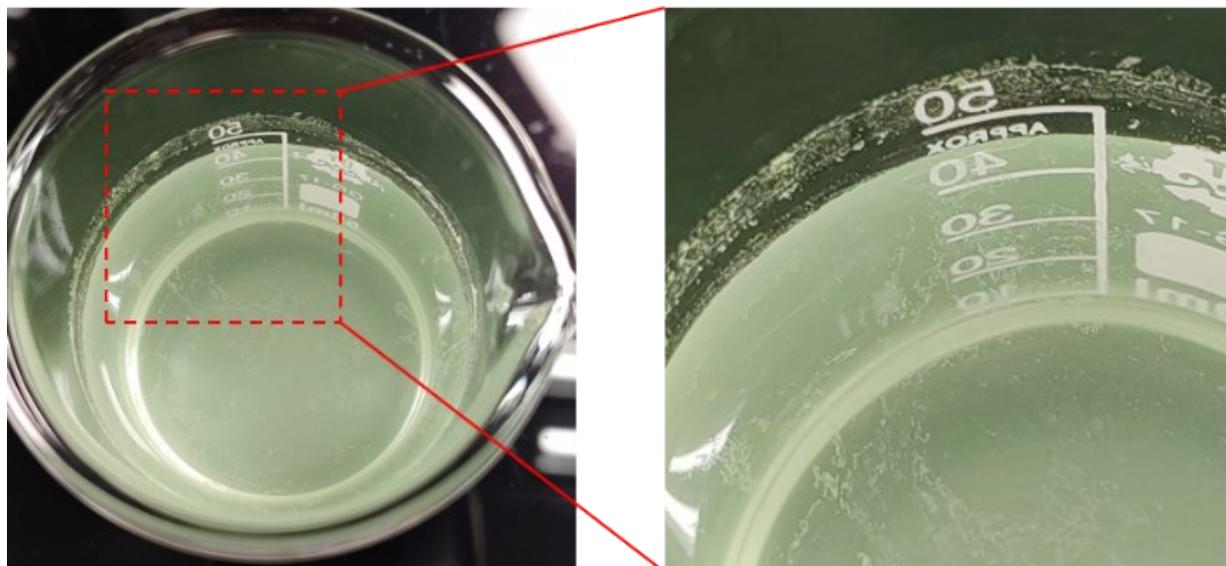
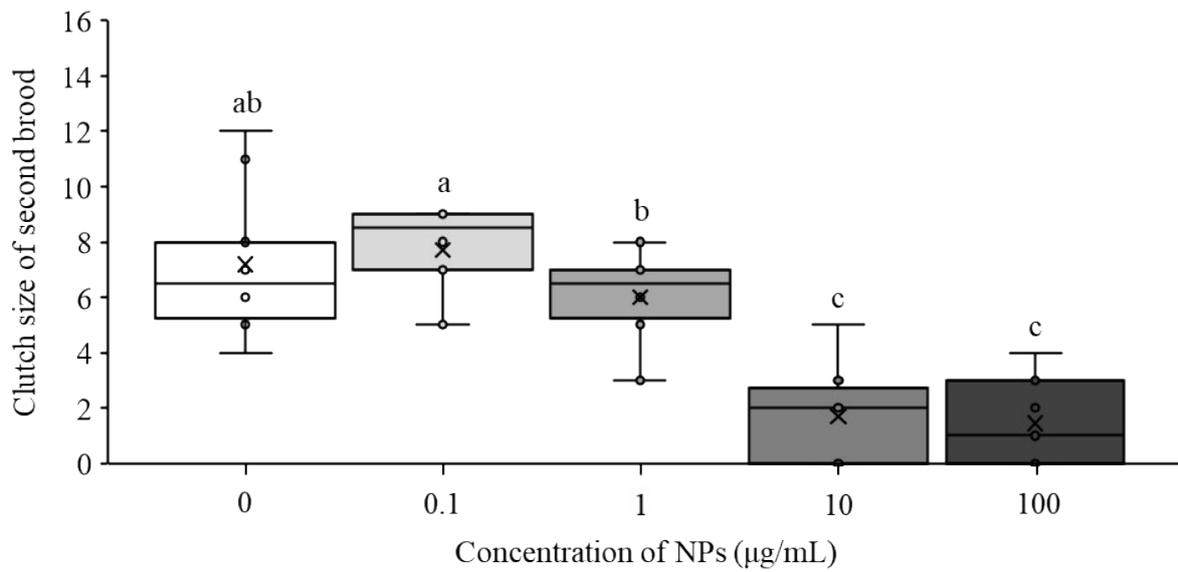


Figure S2. (A) Clutch size and (B) body size of second brood offspring from female *Daphnia magna* exposed to polyethylene (PE) nanoplastic (NP) fragments for 27 days. Data are presented as mean and interquartile range (n = 10). Different lowercase letters indicate significant differences ($p < 0.05$) between concentration of NPs.

(A)



(B)

