Supplementary Material

Title：

Increased phenanthrene toxicity to *Eisenia fetida* upon co-exposure to o-xylene

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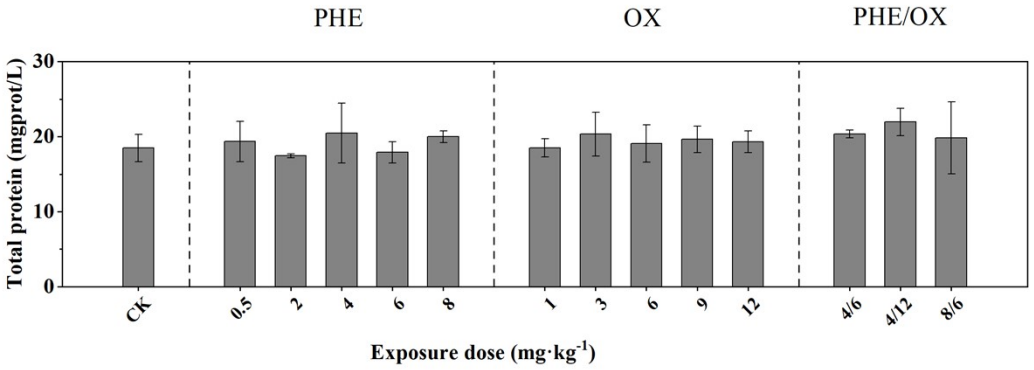

Figure.S1 Total protein contents in the *Eisenia fetida* exposed for 28 days to single and combined polluted soils. Values are the mean ± SD, n=3. * and ** indicate significant differences compared with the control at $P < 0.05$ and $P < 0.01$, respectively, by the *Student's* t-test.

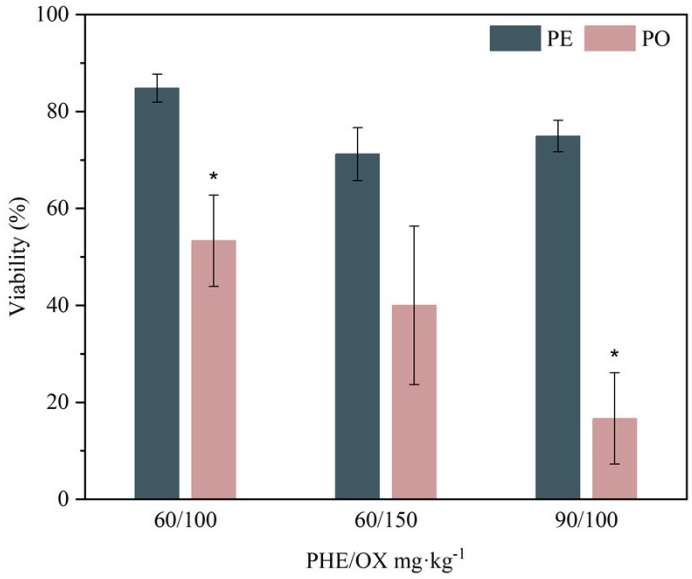

Figure.S2 Comparison between the predicted effects (PE) and the observed effects (PO) of the mixtures on the livability of earthworms after 48 h exposure (error bars = ±SE, n = 25 in PE and n = 5 in PO). * indicate significant differences between PE and PO at $P < 0.05$, by the *Student's* t-test.

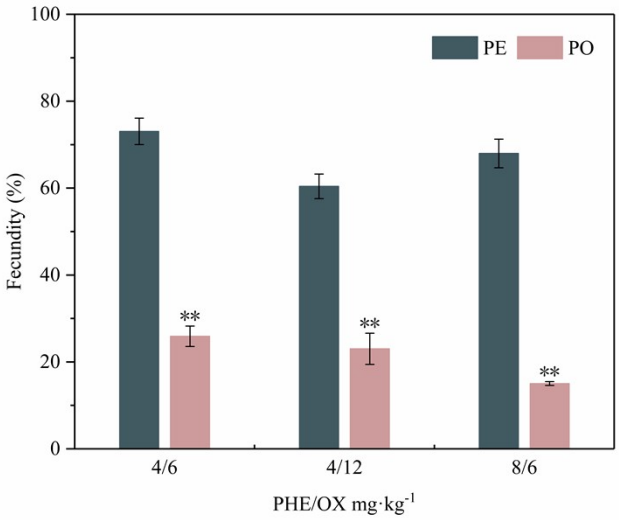

Figure.S3 Comparison between the predicted effects (PE) and the observed effects (PO) of the mixtures on the fecundity of earthworms (error bars = ±SE, n = 9 in PE and n = 3 in PO). ** indicate significant differences between PE and PO at $P < 0.01$, by the *Student's t*-test.

Table.S1 Summary of the calculated parameters for the acute toxicity of PHE and OX to earthworms (*Eisenia fetida*) in 24 h and 48 h exposure treatments.

Test substance	24 h		48 h	
	LC_{50} (95% CI) ($mg \cdot kg^{-1}$)	Fitting equation	LC_{50} (95% CI) ($mg \cdot kg^{-1}$)	Fitting equation
PHE	109 (76.1-141)	y=0.50x-4.86 R^2=0.97	71.6 (55.7-87.6)	y=0.70x+0.19 R^2=0.99
OX	174 (70.0-277)	y=0.37x-14.29 R^2=0.91	121 (53.6-188)	y=0.46x-5.43 R^2=0.96

r: the parameter was obtained from Pearson correlation analysis, performed using SPSS software ($^{*}p < 0.05$, $^{**}p < 0.01$)