Supporting Information

Silica Nanoparticles Alleviate Mercury Toxicity via Immobilization and Inactivation of Hg(II) in Soybean (*Glycine max*)

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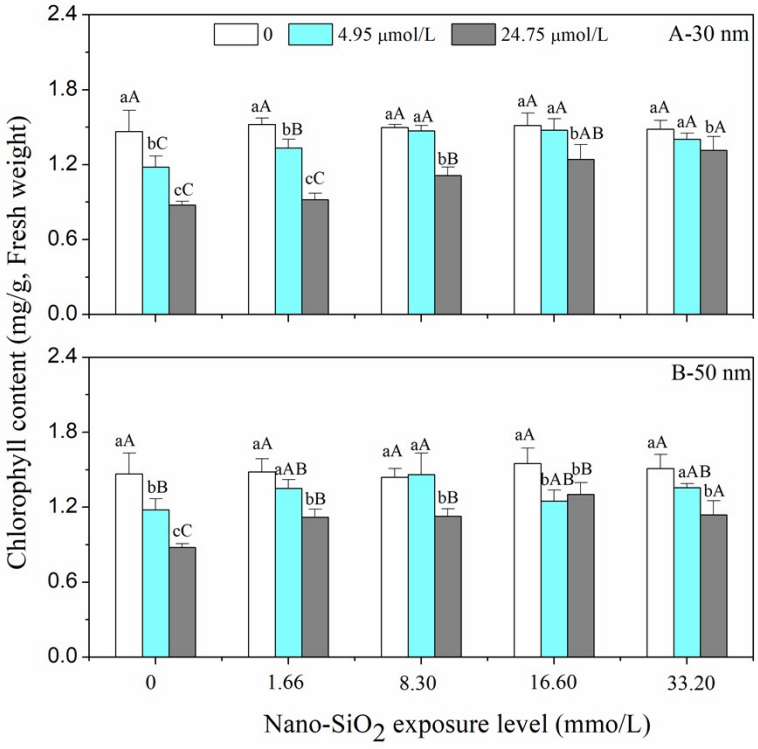

Figure S1 Chlorophyll content in leaf (A for 30 nm, B for 50 nm) under different treatment group. Different capital letters above the columns indicate significant differences between the different levels of nano-SiO_2 treatment under the same Hg exposurelevel (p<0.05). Different lowercase letters above the columns indicate significant differences between different levels of Hg exposureunder the same nano-SiO_2 treatment (p<0.05). Error bars are standard deviations of the means (n=3).

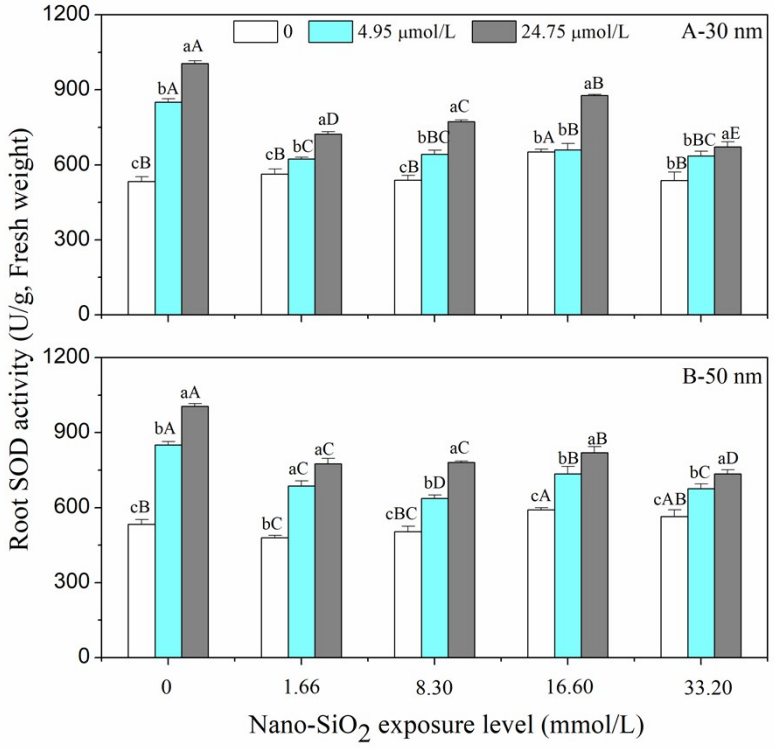

Figure S2 Root SOD acvitly (A for 30 nm, B for 50 nm) under different treatment group. Different capital letters above the columns indicate significant differences between the different levels of nano-SiO_2 treatment under the same Hg exposure level (p<0.05). Different lowercase letters above the columns indicate significant differences between different levels of Hg exposureunder the same nano-SiO_2 treatment (p<0.05). Error bars are standard deviations of the means (n=3).

Table S1 Treatments of experment

	NP SiO_2 levels		Hg exposure levels		
			0	1 mg/L	5 mg/L
Nano-SiO_2	30 nm	0	Control	Hg1	Hg5
		100 mg/L	30NP-100	Hg1-30NP-100	Hg5-30NP-100
		500 mg/L	30NP-500	Hg1-30NP-500	Hg5-30NP-500
		1000 mg/L	30NP-1000	Hg1-30NP-1000	Hg5-30NP-1000
		2000 mg/L	30NP-2000	Hg1-30NP-2000	Hg5-30NP-2000
	50 nm	0	Control	Hg1	Hg5
		100 mg/L	50NP-100	Hg1-50NP-100	Hg5-50NP-100
		500 mg/L	50NP-500	Hg1-50NP-500	Hg5-50NP-500
		1000 mg/L	50NP-1000	Hg1-50NP-1000	Hg5-50NP-1000
		2000 mg/L	50NP-2000	Hg1-50NP-2000	Hg5-50NP-2000

Table S2 The working conditions of ICP-MS

ICP-MS Conditions	
Mode	standard mode
Nebulizer	Glass concentric
RF power (W)	1300
Plasma gas flow (L/min)	13.0
Auxiliary gas flow (L/min)	0.80
Nebulizer gas flow (L/min)	0.72
Collision gas	7.28% (V/V) H_2 in He
Collision gas flow (mL/min)	5.6
Dwell time (ms)	100
Monitored ion	^{202}Hg