Electronic Supplementary Material (ESI) for Environmental Science: Nano.

Table S1. Primers used for qRT-PCR in this study.

Gene Name	**Forward Primers**	**Reverse Primers**
ACTIN1	TCCATCTTGGCATCTCTCAG	GTACCCTCATCAGGCATCTG
OsNramp1	CATCGCATACCTTGATCCTAGT	GGAGTACCCATAGCAACGAATA
OsNramp5	TTCGTTTATATTTGTGCGGTCC	CACCTCCCCTCAAATGCTTATA
OsIRT1	GCAATTCGCTGCATTGTTAGAT	GAGAAGTCACAGTCACTGTACA
OsIRT2	CTTCCACCAGATGTTCGAGG	GGTGGAGAAGAAGAAGACCAG
OsHMA2	ATACTCATGCTGATTGCTGGTA	CAAGCCAAAATGCATGCATTAG
OsHMA3	CAATGGTGTTGGTCGTTGC	CTCCCATTTCTGCAGTCTTTC
OsLCT1	AGCACATCTCTGGCTTCCAC	CGGCTCATTGCATTCTGCTC
OsNAP	CAAGAAGCCGAACGGTTC	GTTAGAGTGGAGCAGCAT
SGR	AGGGGTGGTACAACAAGCTG	GCTCCTTGCGGAAGATGTAG
RCCR1	CGCATTTCCTCATGGAATTT	CTTCTCACGCTGTTTGTCCA
NYC1	CATGCAACACCAACAAAAGG	GACCATTCCAGGAGAAGCAG
NYC3	TGTCGTTGCCATGTGAAGAT	TTGGTCACGCCACAAATCTA
Osh69	CCACAACACGGATAACTT	GGTGAACACTATGGAACA
Osh36	GCACGGAGGCGAACGA	TTGAGCGGTAGCACCCATT
OsI57	ACCCTAAAGTAAATGAAGTC	CCTGCTCTTGTCTTGTTA

Table S2. P value corresponding to Figure S10. P1, P value of CK versus +Cd; P2, P value of +Cd versus +Cd&CA; P3, P value of +Cd versus +Cd&M50; P4, P value of +Cd&M50 versus +Cd&M50-AuNPs; P5, P value of +Cd&M100 versus +Cd&M100-AuNPs; P6, P value of +Cd&M200 versus +Cd&M200-AuNPs. Student *t*'tests were used to generate P value. P < 0.05 was marked in red.

Gene	*P*-value	0d	5d	10d	Gene	*P*-value	0d	5d	10d
OsNramp1 in roots	P1	0.39917	0.00168	0.00055	*OsNramp1* in leaves	P1	0.21445	0.00015	0.00017
	P2	0.40585	0.46044	0.08265		P2	0.08008	0.13819	0.05496
	P3	0.30028	0.28642	0.44985		P3	0.13619	0.10344	0.12347
	P4	0.31075	0.00394	0.03718		P4	0.19013	0.04356	0.43464
	P5	0.37621	0.01564	0.02399		P5	0.48898	0.02520	0.00893
	P6	0.49805	0.00425	0.02259		P6	0.21204	0.01049	0.00563
OsNramp5 in roots	P1	0.47417	0.00034	0.00404	*OsNramp5* in leaves	P1	0.46831	0.00023	0.00020
	P2	0.35977	0.13978	0.15235		P2	0.16033	0.15943	0.41021
	P3	0.12855	0.43998	0.33198		P3	0.19057	0.47426	0.09335
	P4	0.26345	0.00018	0.00103		P4	0.08057	0.00540	0.03440
	P5	0.18091	0.00424	0.00043		P5	0.40106	0.00681	0.02434
	P6	0.21035	0.00361	0.00246		P6	0.12949	0.02801	0.00032
OsIRT1 in roots	P1	0.22088	0.00005	0.00142	*OsIRT1* in leaves	P1	0.16501	0.00172	0.29538
	P2	0.06756	0.40174	0.37752		P2	0.24298	0.48296	0.15080
	P3	0.46318	0.20199	0.28821		P3	0.45281	0.09252	0.07243
	P4	0.25661	0.00280	0.03175		P4	0.08298	0.00123	0.07636
	P5	0.07214	0.00019	0.01525		P5	0.13910	0.04237	0.18450
	P6	0.05657	0.00029	0.00029		P6	0.49634	0.01929	0.33353
OsIRT2 in roots	P1	0.25921	0.00036	0.00677	*OsIRT2* in leaves	P1	0.49792	0.00531	0.10411
	P2	0.06064	0.48351	0.19100		P2	0.10749	0.48317	0.19916
	P3	0.23843	0.13262	0.42825		P3	0.16332	0.23578	0.34102
	P4	0.25661	0.00135	0.00238		P4	0.33495	0.02386	0.38527
	P5	0.30064	0.00136	0.02021		P5	0.36216	0.00773	0.43732
	P6	0.31495	0.00037	0.00032		P6	0.30113	0.01051	0.09666
OsHMA2 in roots	P1	0.00761	0.00128	0.00214	*OsHMA2* in leaves	P1	0.27665	0.00189	0.46963
	P2	0.29231	0.10656	0.42997		P2	0.37036	0.23606	0.15279
	P3	0.42854	0.11063	0.28935		P3	0.43231	0.11172	0.14842
	P4	0.35838	0.00447	0.02749		P4	0.28283	0.01048	0.36487
	P5	0.37283	0.00071	0.00698		P5	0.28670	0.00707	0.11446

	P6	0.49223	0.00010	0.00180		P6	0.41183	0.02520	0.32877
OsHMA3 in roots	P1	0.27086	0.00025	0.00148	*OsHMA3* in leaves	P1	0.43786	0.00010	0.40838
	P2	0.35962	0.43063	0.48347		P2	0.38334	0.47339	0.23915
	P3	0.33794	0.34040	0.44742		P3	0.27129	0.18493	0.45693
	P4	0.42865	0.00489	0.01781		P4	0.24401	0.01849	0.10806
	P5	0.43979	0.00083	0.00284		P5	0.18505	0.00345	0.27264
	P6	0.49475	0.00332	0.00000		P6	0.26716	0.02093	0.40869
OsLCT1 in roots	P1	0.19456	0.00001	0.35815	*OsLCT1* in leaves	P1	0.21219	0.00051	0.29007
	P2	0.30302	0.19927	0.38987		P2	0.09464	0.11208	0.49092
	P3	0.30566	0.00366	0.21671		P3	0.46281	0.17528	0.30280
	P4	0.40205	0.00014	0.22445		P4	0.38069	0.03614	0.24697
	P5	0.31025	0.00592	0.36463		P5	0.16530	0.02587	0.40672
	P6	0.31578	0.00089	0.43968		P6	0.40160	0.00427	0.14660

Table S3. P value corresponding to Figure S9. P1, P value of CK versus +Cd; P2, P value of +Cd versus +Cd&CA; P3, P value of +Cd versus +Cd&M50; P4, P value of +Cd&M50 versus +Cd&M50-AuNPs; P5, P value of +Cd&M100 versus +Cd&M100-AuNPs; P6, P value of +Cd&M200 versus +Cd&M200-AuNPs. Student *t*'tests were used to generate P value. P < 0.05 was marked in red.

Gene	***P*-value**	**0d**	**5d**	**10d**	**Gene**	***P*-value**	**0d**	**5d**	**10d**
SGR	P1	0.44335	0.00031	0.00027	*RCCR1*	P1	0.19319	0.00022	0.00015
	P2	0.06973	0.19966	0.09556		P2	0.34371	0.21132	0.43621
	P3	0.09495	0.01383	0.02604		P3	0.16290	0.01074	0.00462
	P4	0.14037	0.01190	0.00885		P4	0.26137	0.03337	0.02480
	P5	0.24098	0.00228	0.00029		P5	0.38496	0.00155	0.00693
	P6	0.30002	0.00482	0.00260		P6	0.08681	0.00039	0.00179
NYC1	P1	0.22319	0.00044	0.00083	*NYC3*	P1	0.45831	0.00024	0.00026
	P2	0.13441	0.21595	0.23295		P2	0.12588	0.12343	0.09556
	P3	0.09828	0.03493	0.00980		P3	0.26922	0.00681	0.04188
	P4	0.38986	0.00916	0.02051		P4	0.40420	0.00679	0.00963
	P5	0.19149	0.00093	0.00373		P5	0.16211	0.00146	0.00154
	P6	0.08008	0.00017	0.00222		P6	0.02585	0.00001	0.00068
OsNAP	P1	0.13429	0.00113	0.00036	*Osh69*	P1	0.17539	0.00074	0.00163
	P2	0.19017	0.05175	0.07088		P2	0.12893	0.14465	0.11419
	P3	0.14014	0.00617	0.01094		P3	0.05986	0.00875	0.03010
	P4	0.03893	0.00012	0.00065		P4	0.41421	0.01190	0.00188
	P5	0.34606	0.00018	0.01900		P5	0.44249	0.00029	0.00341
	P6	0.09335	0.00656	0.00110		P6	0.39718	0.00431	0.00011
Osh36	P1	0.28576	0.00200	0.00024	*OsI57*	P1	0.07766	0.00030	0.00057
	P2	0.06973	0.18836	0.09556		P2	0.42444	0.14991	0.10553
	P3	0.09495	0.03763	0.00303		P3	0.05360	0.00755	0.03679
	P4	0.14037	0.00776	0.02279		P4	0.28908	0.01280	0.03181
	P5	0.41133	0.00202	0.00029		P5	0.15907	0.00212	0.00118
	P6	0.33346	0.00039	0.00109		P6	0.33346	0.00377	0.00697