Table S1: Observed and certified values of heavy metals for SRM 1646a (μg g−1, Fe %).

Element	Observed value (mean ± SD)	Certified value (mean ± SD)	Recovery (%)
As	6.49 ± 0.36	6.23 ± 0.21	104.2
Cd	0.16 ± 0.05	0.15 ± 0.01	106.6
Cr	39.82 ± 2.18	40.9 ± 1.9	97.36
Cu	8.98 ± 0.09	10.01 ± 0.34	89.71
Fe	1.81 ± 0.07	2.01 ± 0.04	90.05
Ni	21.86 ± 0.39	23.00a	95.04
Pb	12.16 ± 0.83	11.7 ± 1.2	103.9
Zn	45.21 ± 2.06	48.9 ± 1.6	92.45

aNon-certified value

Table S2: Descriptive classes of the geoaccumulation index (Igeo) and indication of enrichment factor (EF).

Igeo value	Class	Description of sediment quality	Enrichment factor values	indication of enrichment factor
Igeo ≤ 0	0	practically unpolluted	EF < 1	no enrichment
0 < Igeo < 1	1	unpolluted to moderately polluted	EF < 3	minor enrichment
1 < Igeo < 2	2	moderately polluted	EF = 3–5	moderate enrichment
2 < Igeo < 3	3	moderately to heavily polluted	EF = 5–10	moderately severe enrichment
3 < Igeo < 4	4	heavily polluted	EF = 10–25	severe enrichment
4 < Igeo < 5	5	heavily to extremely polluted	EF = 25–50	very severe enrichment
Igeo ≥ 5	6	extremely polluted	EF > 50	extremely severe enrichment

Table S3: A comparison of Pb isotope ratios from different sources to those in sediments of SMART ponds.

Samples		$^{206}Pb/^{207}Pb$	$^{208}Pb/^{207}Pb$	Reference
Manmade source				
Coal in Indonesia		1.184	2.477	Dı́az-Somoano et al. [1]
Coal in Australia		1.206	2.488	Dı́az-Somoano et al. [1]
Coal in Shanghai		1.182	2.471	Zheng et al. [2]
Coal in Beijing		1.172	2.46	Mukai et al. [3]
Vehicle exhaust (leaded) in Shanghai		1.110	2.435	Chen et al. [4]
Vehicle exhaust (unleaded) in Shanghai		1.147	2.436	Chen et al. [4]
Vehicle exhaust (unleaded) in Chengdu		1.170	2.461	Bi et al. [5]
Aerosols in Singapore		1.148	2.425	Lee et al. [6]
Aerosols in Delhi, India		1.125	2.404	Kumar et al. [7]
Aerosols in Kuala Lumpur		1.141	2.410	Bollhöfer and Rosman [8]
Aerosols in Bangkok		1.127	2.404	Bollhöfer and Rosman [8]
Aerosols in Hanoi, Vietnam		1.167	2.453	Bollhöfer and Rosman [8]
Aerosol in Jakarta		1.131	2.395	Bollhöfer and Rosman [8]
Aerosol in Hong Kong		1.161	2.451	Lee et al. [9]
Aerosol in Guangzhou		1.168	2.456	Lee et al. [9]
Cement in Shanghai		1.163	2.447	Tan et al. [10]
Industrial emissions in France		1.155	2.112	Monna et al. [11]
Natural background source				
Volcanic rocks in Foshan,		1.199	2.497	Bing-Quan et al. [12]
Granite in the Pearl River Delta		1.184	2.482	Bing-Quan et al. [12]
Uncontaminated soils in the Pearl River Delta		1.195	2.482	Lee et al. [9]
Country Park soils in Hong Kong		1.200	2.495	Lee et al. [9]
This study				
HSP	January	1.178 ± 0.003	2.449 ± 0.008	
	March	1.181 ± 0.002	2.493 ± 0.005	
	May	1.184 ± 0.001	2.456 ± 0.001	
	mean	1.181 ± 0.002	2.466 ± 0.005	
SSP	January	1.190 ± 0.002	2.469 ± 0.005	
	March	1.193 ± 0.005	2.493 ± 0.004	
	May	1.190 ± 0.002	2.492 ± 0.001	
	mean	1.191 ± 0.003	2.485 ± 0.003	

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