

Characteristics of PM_{2.5}-bound polycyclic aromatic hydrocarbons and nitro-polycyclic aromatic hydrocarbons at a Roadside Air Pollution Monitoring Station, Kanazawa, Japan

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Figure S1. Q-Q plot diagram of (a) PAHs and (b) NPAHs.

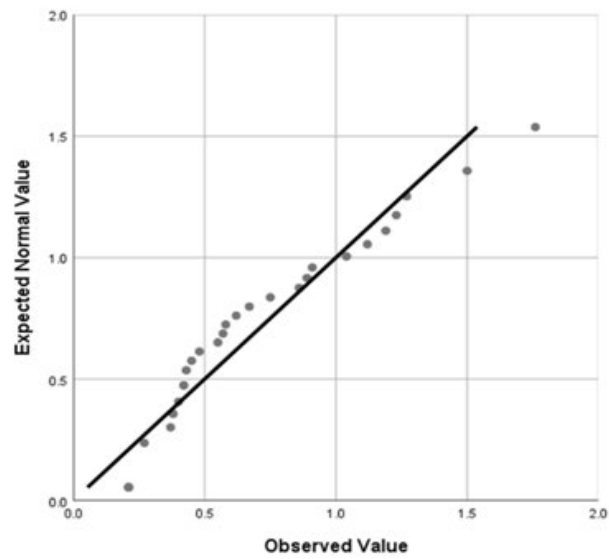
Figure S2. Seasonal variation of PM_{2.5}.

Table S1. TEF of PAHs and NPAHs.

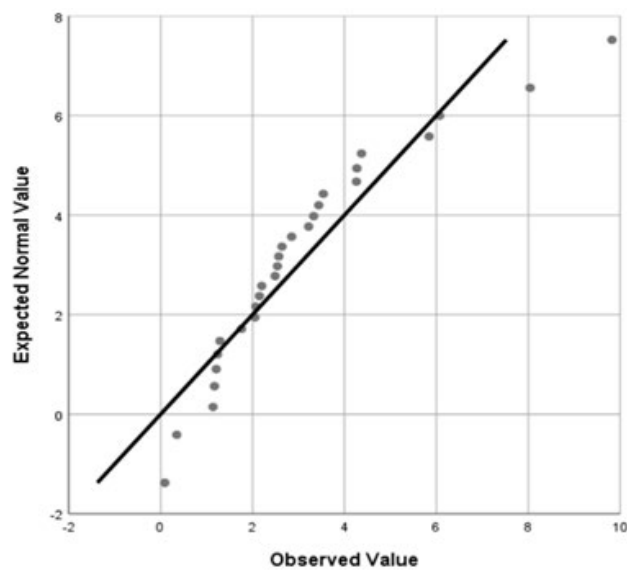
Table S2. Meteorological data during sampling periods.

References

24. Nisbet, I.C.; Lagoy, P.K. Toxic equivalency factors (TEFs) for polycyclic aromatic hydrocarbons (PAHs). *Regul. Toxicol. Pharmacol.* **1992**, *16*, 290–300.
25. RIDEM. Rhode Island Air Toxics Guideline. State of Rhode Island Department of Environmental Management. 2008. Available online (accessed on 18 December 2019).



(a)



(b)

Figure S1. Q-Q plot diagram of (a) PAHs and (b) NPAHs.

We used the data of atmospheric PAHs and NPAHs for the normality test. As shown in Figure S1, the points of our data are basically coincided with theoretical straight line, which means our data accord with normal distribution. Therefore, we think that our data can represent the actual situation to a certain extent.

Table S1. TEF of PAHs and NPAHs.

Group	Compound	TEF of PAHs ¹	Group	Compound	TEF of NPAHs ²	
PAHs	Flt	0.001	NPAHs	1-NP	0.1	
	Pyr	0.001				
	BaA	0.1				
	Chr	0.01				
	BbF	0.1				
	BkF	0.1				
	BaP	1				
	BgPe	0.01				
	IDP	0.1				

¹ [24]; ² [25].

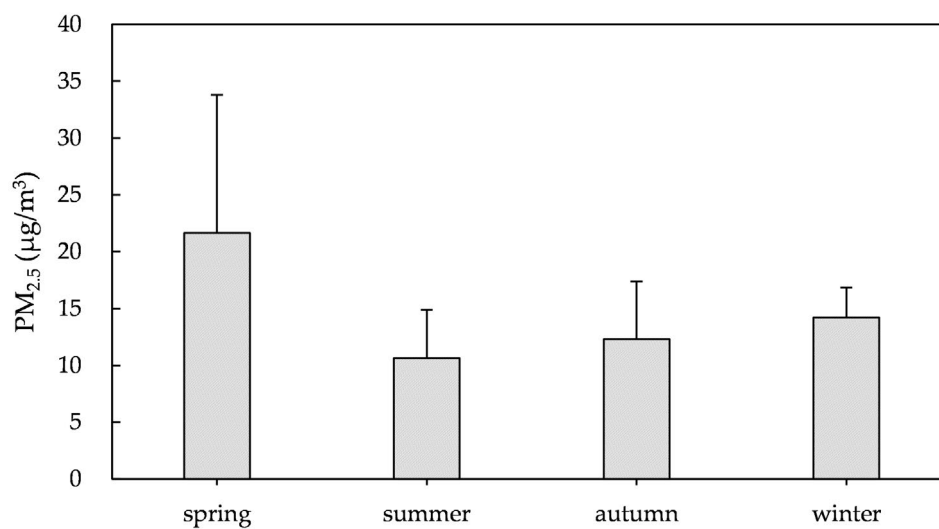


Figure S2. Seasonal variation of PM_{2.5}.

Table S2. Meteorological data during sampling periods.

	Date	T (mean, °C)	P (mm)	RH (%)	WS (m/s)
spring	2017.4.24	15.2	--	47.0	2.5
	2017.4.25	18.7	0.0	47.0	3.9
	2017.4.26	14.1	46.5	84.0	3.8
	2017.4.27	12.8	0.5	62.0	3.4
	2017.4.28	15.1	--	45.0	3.7
	2017.4.29	16.2	0.0	52.0	6.1
	2017.4.30	19.7	0.0	38.0	5.9
summer	2017.8.21	28.8	--	69.0	2.4
	2017.8.22	28.9	5.0	66.0	4.0
	2017.8.23	28.4	18.0	77.0	5.8
	2017.8.24	29.9	0.5	67.0	6.7
	2017.8.25	27.9	67.0	76.0	4.2
	2017.8.26	26.6	11.5	62.0	3.1
	2017.8.27	25.7	--	65.0	3.4
autumn	2017.11.6	13.0	--	65.0	2.7
	2017.11.7	14.9	--	63.0	2.4
	2017.11.8	17.9	0.5	66.0	5.3
	2017.11.9	13.1	0.0	60.0	3.9
	2017.11.10	13.3	0.0	53.0	3.1
	2017.11.11	12.7	54.5	63.0	6.8
	2017.11.12	9.7	1.0	65.0	3.3
winter	2018.2.19	2.3	0.0	70.0	1.7
	2018.2.20	4.3	1.5	72.0	3.6
	2018.2.21	2.6	0.0	76.0	2.5
	2018.2.22	2.7	0.5	61.0	3.0
	2018.2.23	4.2	5.0	68.0	4.1
	2018.2.24	4.4	0.5	62.0	4.7
	2018.2.25	3.5	--	63.0	3.1

T: temperature (°C), P: precipitation (mm), RH: relative humidity (%), WS: wind speed (m/s). -- means no available data.