

Supplementary material for

Contributions of vehicular carbonaceous aerosols to PM_{2.5} in a roadside environment in Hong Kong

X. H. Hilda Huang¹, Q. J. Bian^{2,‡}, Peter K. K. Louie³, and Jian Zhen Yu^{1,2,*}

¹Institute for the Environment, ²Department of Chemistry, the Hong Kong University of Science & Technology, Clear Water Bay, Kowloon, Hong Kong, China

³Hong Kong Environmental Protection Department, 47/F, Revenue Tower, 5 Gloucester Road, Wan Chai, Hong Kong, China

*Corresponding author. *Tel:* (852) 2358 7389, *Fax:* (852) 2358 1594, *Email:* jian.yu@ust.hk

‡Currently at Department of Atmospheric Science, Colorado State University, USA

This supplementary document contains three tables and two figures.

Table S1. Temperature program used for RT-OCEC analysis.

Gas	Temperature, °C	Hold Time, s
He	room temp.	10
He	600	95
He	840	90
He	no heat	30
He/O ₂	550	35
He/O ₂	650	45
He/O ₂	870	110
CalGas	no heat	120

Table S2. Sampling duration, data capture rates and valid rates for individual month during May 2011–April 2012 at MK AQMS.

Month	No. of hours	No. of samples collected	Data capture rate, %	Data valid rate, %
May 2011	744	735	98.8	90.5
Jun. 2011	720	461	64.0	97.0
Jul. 2011	744	265	35.6	86.8
Aug. 2011	744	518	69.6	91.7
Sep. 2011	720	713	99.0	98.9
Oct. 2011	744	738	99.2	98.1
Nov. 2011	720	713	99.0	99.3
Dec. 2011	744	727	97.7	97.2
Jan. 2012	744	738	99.2	99.2
Feb. 2012	696	688	98.9	99.3
Mar. 2012	744	735	98.8	90.1
Apr. 2012	720	706	98.1	98.0

Table S3. The 1-hr average OC and EC concentrations in individual sampling months and the monthly average OC and EC contributions to the PM_{2.5} mass at MK AQMS during the study period from May 2011 to April 2012.

Month	OC, $\mu\text{gC}/\text{m}^3$	EC, $\mu\text{gC}/\text{m}^3$	OC/PM _{2.5}	EC/PM _{2.5}
May 2011	7.10 (2.25–24.78)	4.87 (0.49–15.28)	20.8%	14.2%
Jun. 2011	3.82 (0.66–13.24)	3.81 (0.28–13.80)	17.7%	17.7%
Jul. 2011	3.51 (0.60–9.95)	4.00 (0.28–9.85)	15.5%	17.6%
Aug. 2011	4.25 (0.64–14.29)	4.12 (0.21–11.97)	15.8%	15.3%
Sep. 2011	6.21 (1.21–15.23)	4.35 (0.25–11.68)	16.8%	11.8%
Oct. 2011	7.76 (1.73–16.21)	4.43 (0.49–12.77)	19.8%	11.3%
Nov. 2011	7.99 (0.92–35.16)	4.63 (0.22–14.06)	23.2%	13.5%
Dec. 2011	13.65 (4.27–30.46)	4.55 (0.23–16.59)	27.5%	9.2%
Jan. 2012	10.76 (3.19–23.61)	4.16 (0.20–10.18)	29.3%	11.3%
Feb. 2012	9.01 (2.00–23.85)	4.08 (0.23–20.36)	29.3%	13.3%
Mar. 2012	7.30 (1.95–16.05)	4.25 (0.23–12.74)	21.2%	12.4%
Apr. 2012	6.70 (1.46–24.27)	4.57 (0.42–16.25)	19.4%	13.3%

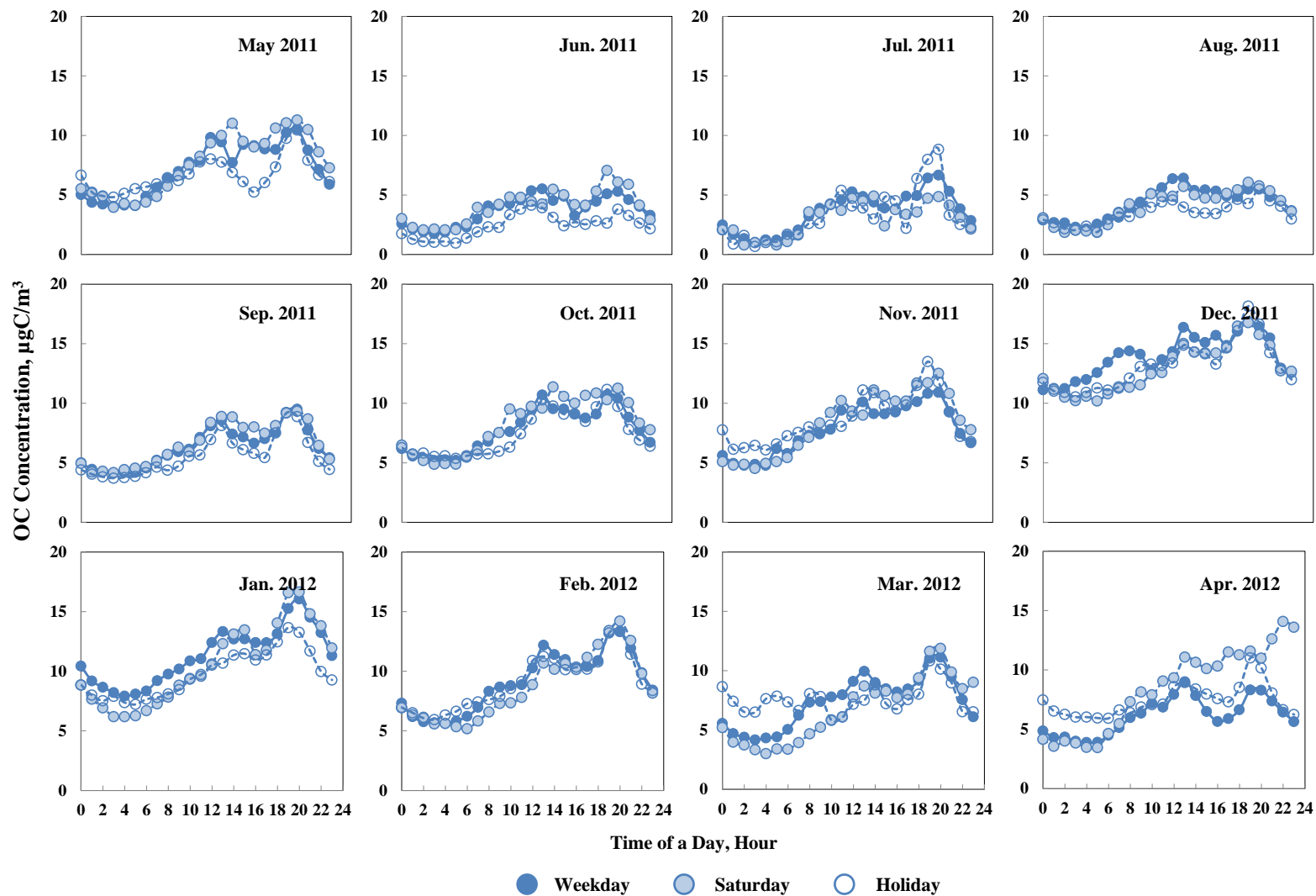


Figure S1. Diurnal variations of OC ($\mu\text{gC}/\text{m}^3$) for weekdays, Saturdays and holidays at MK AQMS during the study period.

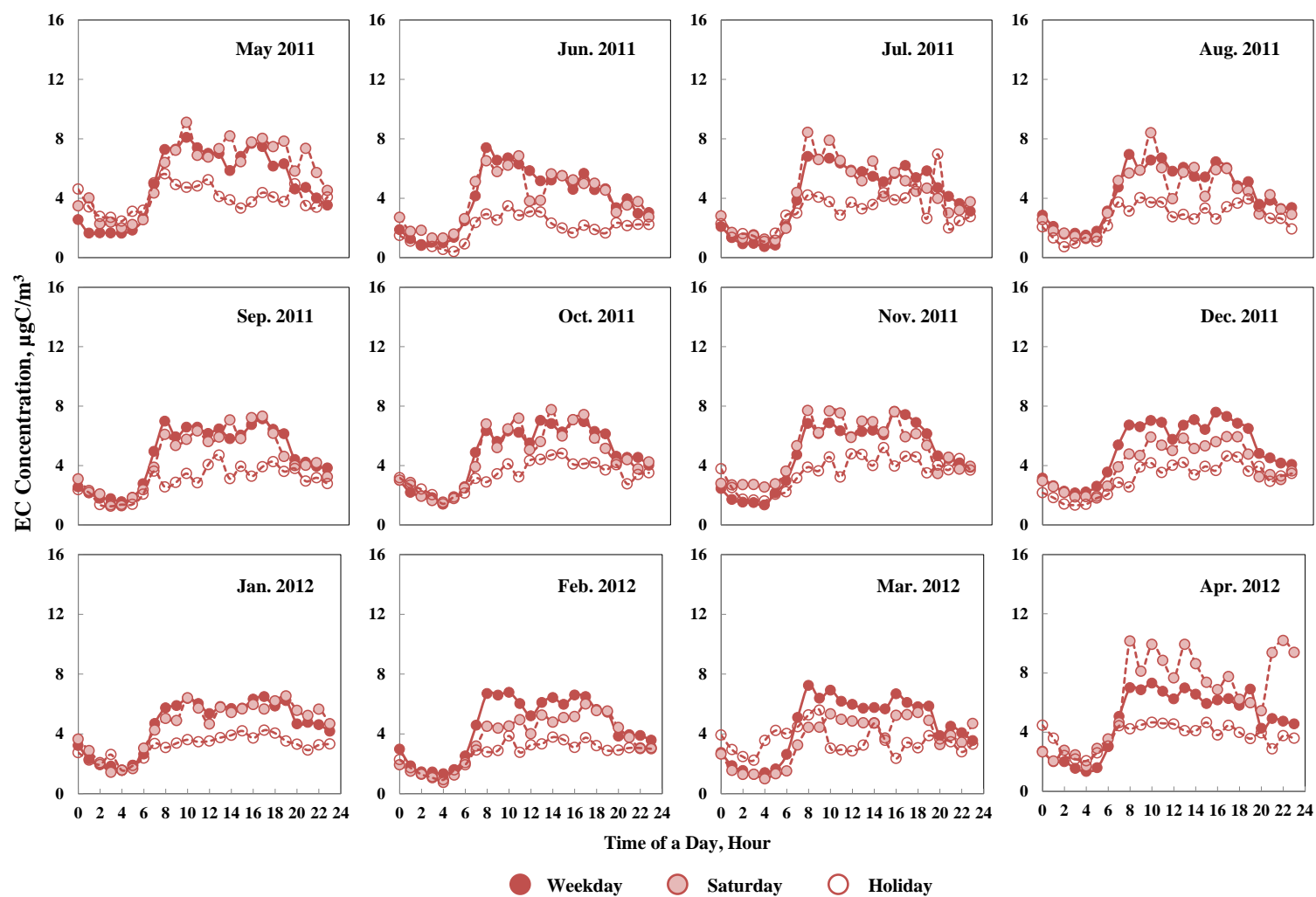


Figure S2. Diurnal variations of EC ($\mu\text{gC}/\text{m}^3$) for weekdays, Saturdays and holidays at MK AQMS during the study period.