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Reference for the supplement

22   **Table S1.** Comparisons of the concentrations of OC and EC between different cities in China and
23   around the world.

Site	Sampling period	OC	EC	OC/EC	Method	References
Beijing	Mar 2013-Feb 2014	14.0	4.1	3.4	TOT	(Ji et al., 2016)
Shanghai	Oct 2005-Jul 2006	14.7	2.8	5.0	TOT	(Feng et al., 2009)
Chengdu	May 2012-Apr 2013	19.0	4.6	4.3	TOT	(Chen et al., 2014)
Chongqing	May 2012-Apr 2013	15.2	4.0	3.8	TOT	(Chen et al., 2014)
Nanjing	Annual 2014	5.7	3.2	1.8	TOT	(Chen et al., 2017)
Guangzhou	Mar 2012–Feb 2013	6.1	0.8		TOT	(Lai et al., 2016)
Hongkong	Aug 2011-May 2012	3.0	1.9		TOT	(Zhou et al., 2014)
Mount Tai	Mar-Apr 2007	6.1	1.8	5.0	TOT	(Wang et al., 2011)
Mount Tai	Jun-Jul 2007	5.1	1.0	6.2	TOT	(Wang et al., 2011)
Mount Heng	Mar-May 2009	3.0	0.5	5.2	TOT	(Zhou et al., 2012)
Mexico	Mar 2006	6.4	2.1	4.5	TOT	(Yu et al., 2009)
Delhi	Nov 2010-Feb 2011	54.1	10.4	5.2	TOT	(Tiwari et al., 2012)
Philadelphia	Jul 2002-Aug 2002	4.8	0.4	18.7	TOT	(Jeong et al., 2004)
Rochester	Jun 2002	9.2	0.3	23.6	TOT	(Jeong et al., 2004)
Italy	Nov 2011–Mar 2012	9.9	1.3	6.8	TOT	(Costa et al., 2016)
Italy	Oct 2012–Mar 2013	6.9	2.2	3.3	TOT	(Costa et al., 2016)
Spain	Dec 2011	3.6	1.1	4.7	TOT	(Escudero et al., 2015)
Nanjing	Jun 2015-Aug 2016	8.6	2.9	3.6	TOT	This study

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25 **Table S2.** Statistics on the meteorological factors in four seasons at NUIST site during the study
26 period.

	Atmospheric Pressure (hPa)	Relative Humidity (%)	Temperature (°C)	Wind Speed (m s^{-1})	Total Precipitation (mm)
Spring	1009.9	66.0	16.8	1.9	256.3
Summer	1000.7	72.6	26.7	1.4	586.0
Autumn	1014.6	71.0	19.5	1.7	218.5
Winter	1027.0	63.9	5.7	1.7	82.1

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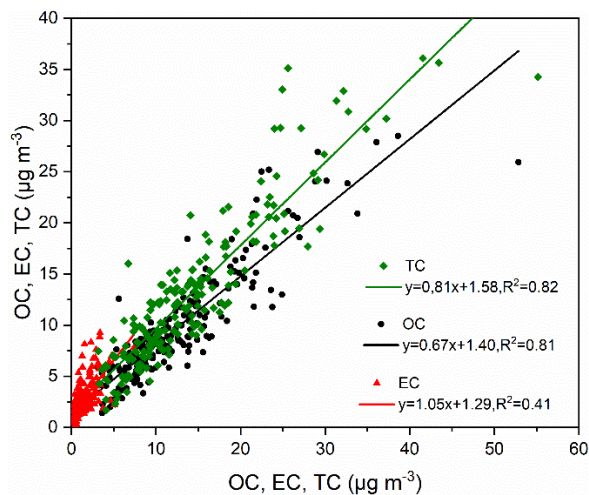
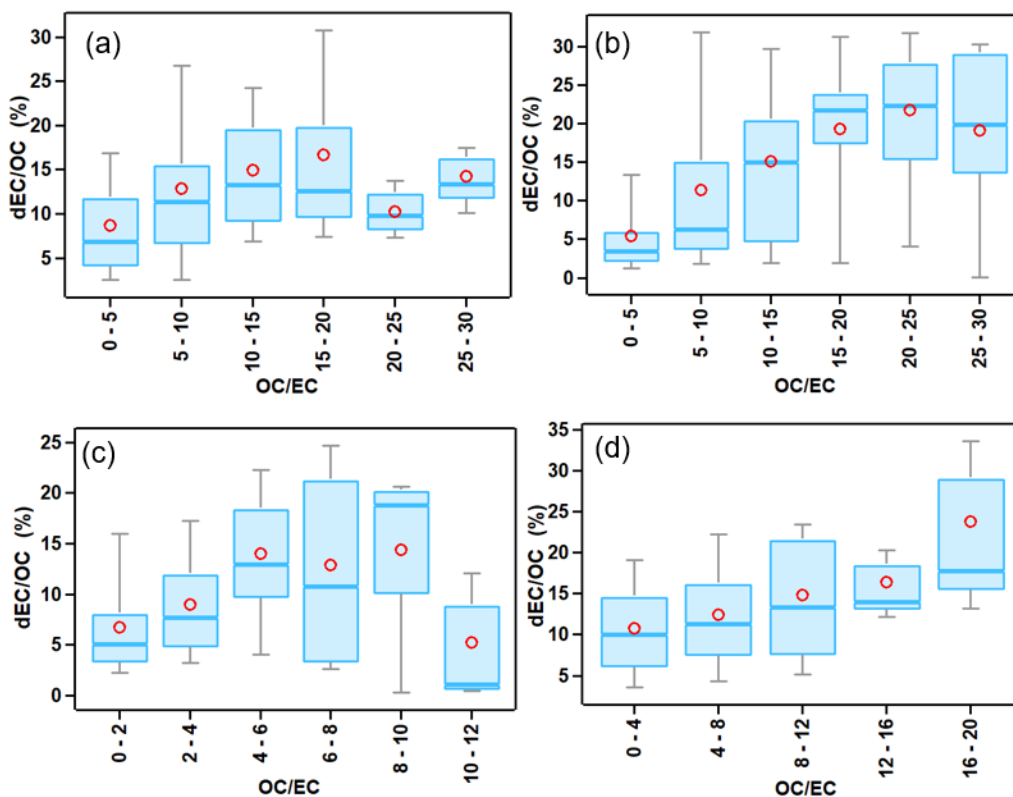

28

29 **Figure S1.** Correlations between the real-time OC, EC and TC concentrations and sampling OC,

30 EC and TC concentrations during the corresponding periods.

31

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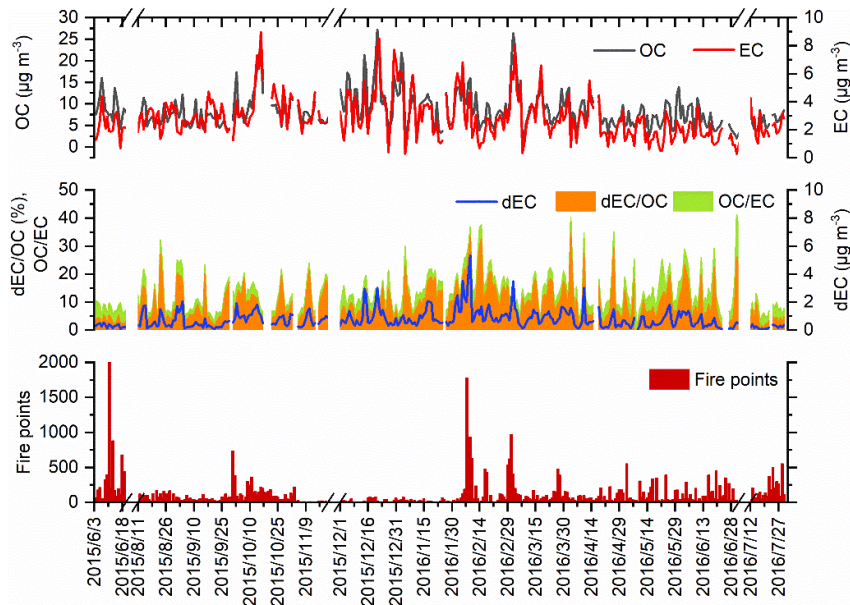
33 **Figure S2.** dEC/OC variation at different intervals of OC/EC ratios in spring (a), summer (b),

34 autumn (c) and winter (d).

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36 **Figure S3.** Time variations of OC, EC, dEC, dEC/OC, OC/EC and fire points obtained from the

37 Fire Information for Resource Management System (FIRMS) derived from the Moderate

38 Resolution Imaging Spectroradiometer (MODIS).

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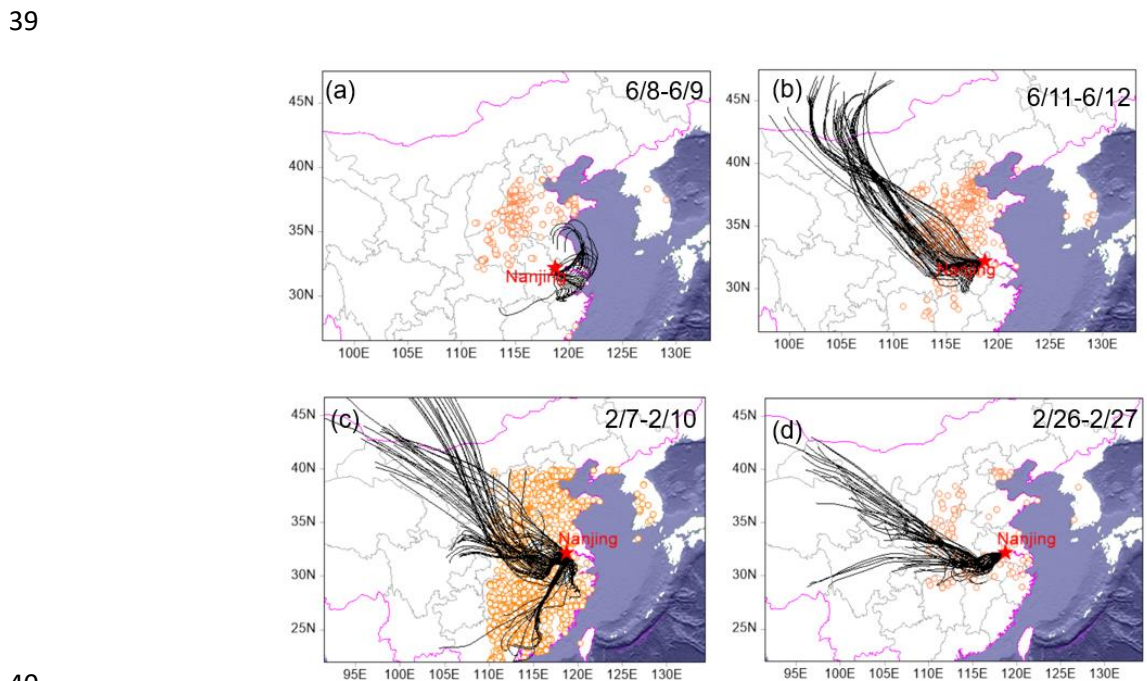
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41 **Figure S4.** 48-h back trajectories at 500 m from the study site from 8 June 2015 to 9 June 2015(a),

42 11 June 2015 to 12 June 2015 (b), respectively and from 7 February 2016 to 10 February 2016 (c)

43 and 26 February 2016 to 27 February 2016 (d), respectively.

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