

Table S1. 2006 Asian total NMVOC emissions and source profiles*

Sector	Fuel/Product	Profile used in this work	NMVOC Emissions /Gg
Power	Coal	1178	1130.7
	Biofuel	Tsai et al. (2003), Liu et al. (2008), Wang et al. (2009), 1167, 4420, 4421, 5561 (Andreae and Merlet, 2001)	27.2
Industry Combustion	Coal/Boiler, Kilns	Liu et al. (2008), 1185	1701.2
	Coke Oven Blast Furnace	5	297.7
	Gas/Boiler		
	Biofuel/Boiler	Tsai et al. (2003), Liu et al. (2008), Wang et al. (2009), 1167, 4420, 4421, 5561 (Andreae and Merlet, 2001)	16.8
Industry Non-combustion	Coke	11, 217	477.6
	Iron/Steel	13, 16	198.5
	Asphalt Roofing	23, 24	45.0
	Pharmaceutical Solvent	3040, 3144	291.5
	Asphalt Production	Liu et al. (2008)	61.7
	Paint Production	1094	113.7
	Printing Ink	72	34.7
	Glue Production	2423	133.7
	Tire	272, 273, 274	277.8
	Rubber	1008	84.3
	PVC	1091	434.2
	Polystyrene	1004	393.6
	Pulp/Paper Production	4730, 4731, 4732	107.1
	Ammonia	2420	241.2
	Black Carbon	1002	199.0
	Ethylene	2461	88.4
	Polyethylene	2547	91.6
	Styrene	1066, 1067, 1068	1.5
	Polystyrene	1004	6.6
	VinylCl	1091	32.5
	PVC	1091	35.9
	Polypropylene	68	129.7
	Storage	1055, 1069, 1087	319.5
	NG Production and Handle	2442	128.1
	Crude Oil Production and Refinery	Liu et al. (2008), 296, 305, 1207, 1208, 1212, 2487	1481.7
	Gasoline Deposition	Liu et al. (2008)	1691.7
	Diesel Deposition	Liu et al. (2008)	3.7
	Food and Drink	8538	924.6
	Fabrics	1092, 1095, 1096	285.0
	Waste Treatment	122, 202, 3002	85.3
	New Vehicle Varnish Paint	Yuan et al. (2010)	211.8
	Vehicle Refurnish Paint	Yuan et al. (2010)	226.7
	Other Industry Varnish	1003, 1013, 1016	2444.3

	Paint		
	Printing Ink	Yuan et al. (2010), 182, 183, 1191, 2543, 2544	156.6
	Passenger Vehicle	1194	50.0
	Treatment Solvent		
	Wood Treatment Solvent	2404	73.8
	Printing Cleaning Gasoline Solvent	Liu et al. (2008), 1195	430.3
Residential Combustion	Coal/Boiler, Stoves	Tsai et al. (2003), Liu et al. (2008)	566.5
	Biofuel	Tsai et al. (2003), Liu et al. (2008), Wang et al. (2009), 1167, 4420, 4421, 5561 (Andreae and Merlet, 2001)	15649.7
Residential Non-combustion	Paint Use	Na et al. (2004), Liu et al. (2008), Yuan et al. (2010)	2692.8
	Domestic Solvent Use	197, 8500	2349.1
	Dry Clean C2Cl4 Solvent	1193	163.7
On-road Transportation	MC	Liu et al. (2008)	8447.8
	Light Duty Gasoline Vehicle	Duffy et al. (1999), Liu et al. (2008), 1203, 4556 (Schauer et al., 2002)	4370.2
	Heavy Duty Gasoline Vehicle	Duffy et al. (1999), Liu et al. (2008), 1186, 1203, 4556 (Schauer et al., 2002)	2559.6
	Diesel Vehicle	Liu et al. (2008), 4674 (Schauer et al., 1999)	784.6
Off-road Transportation	Diesel	Liu et al. (2008), 3161	1762.0
	Air	1099	70.8
Others	Oil	1, 2	195.7
	Natural Gas	3	33.5

* Profiles taken from the SPECIATE database are presented as corresponding “P_NUMBER”s in the database.

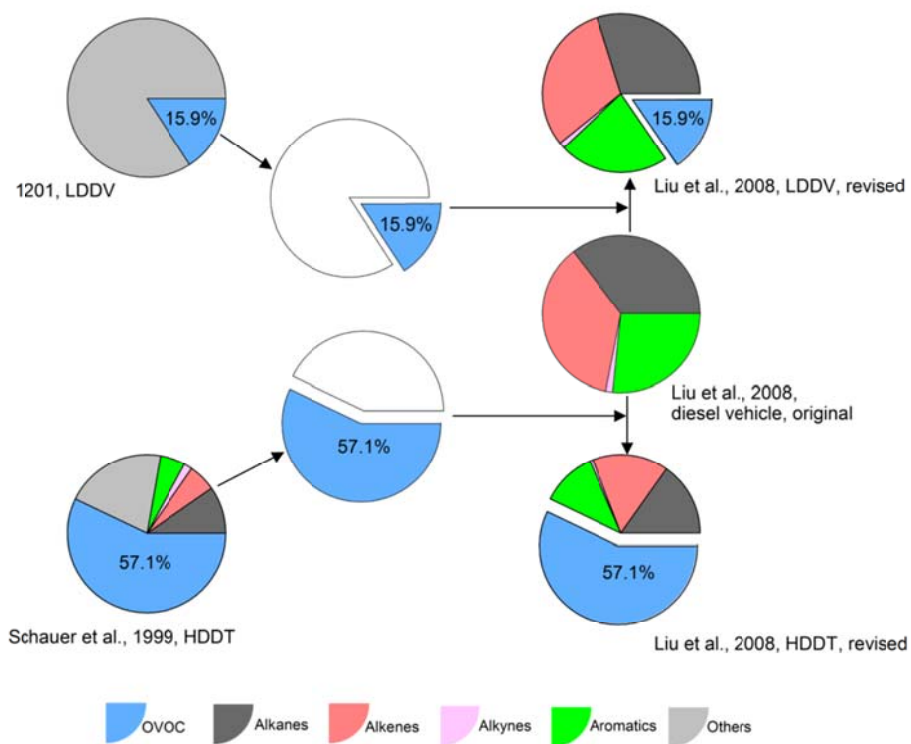


Figure S1. Inclusion of OVOC fraction for diesel truck profiles. LDDV: light duty diesel vehicles; HDDT: heavy duty diesel trucks. 1201 and 4674 are the “P_NUMBER”’s of profiles in the SPECIATE 4.0 database.

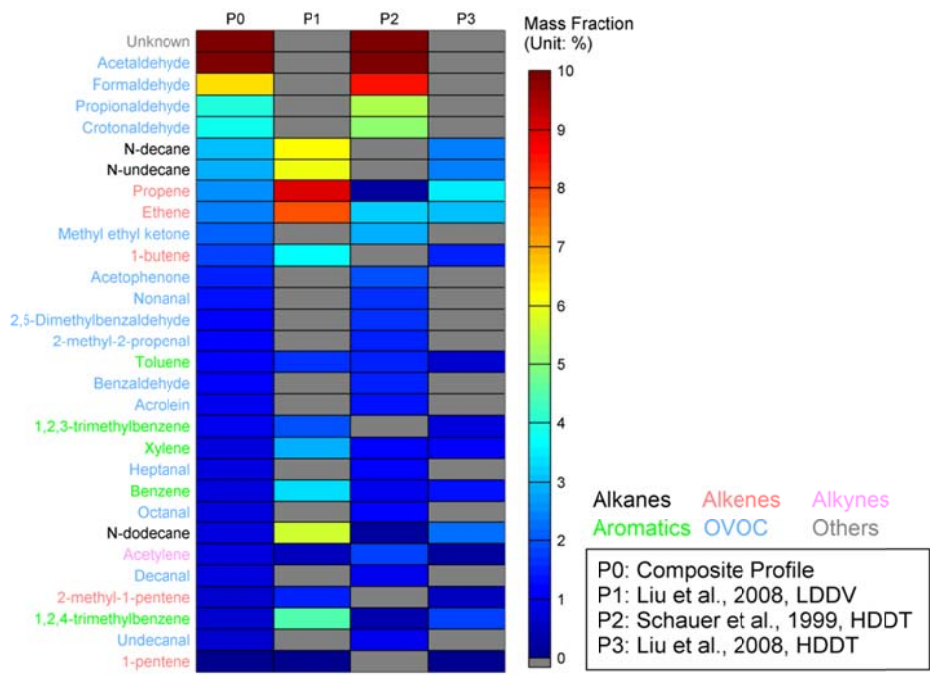


Figure S2. Sensitivity of emissions for individual species for the diesel vehicle source

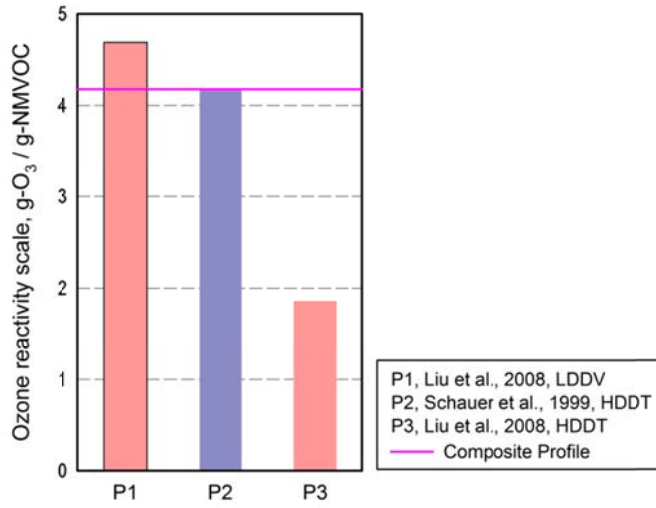


Figure S3. Sensitivity of OFPs to profile selection for the diesel vehicle source

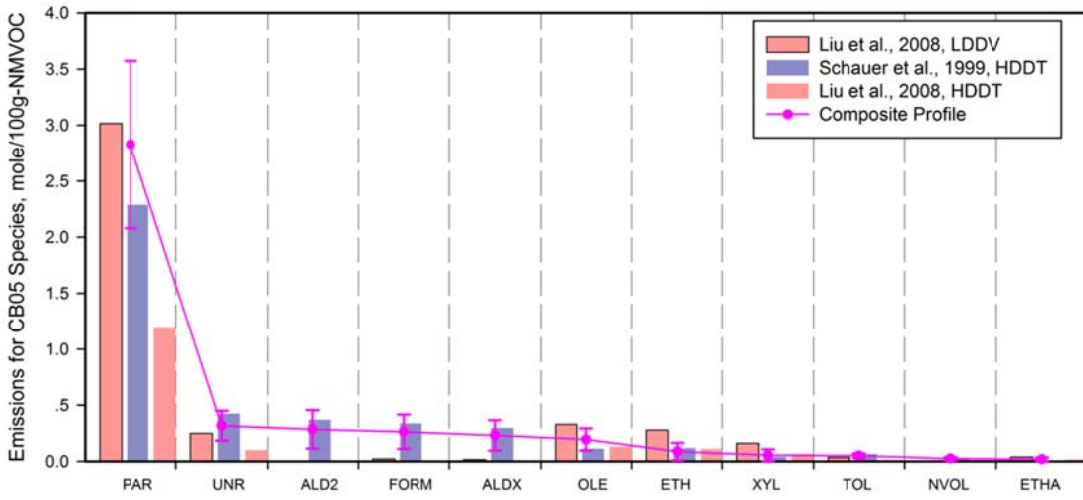
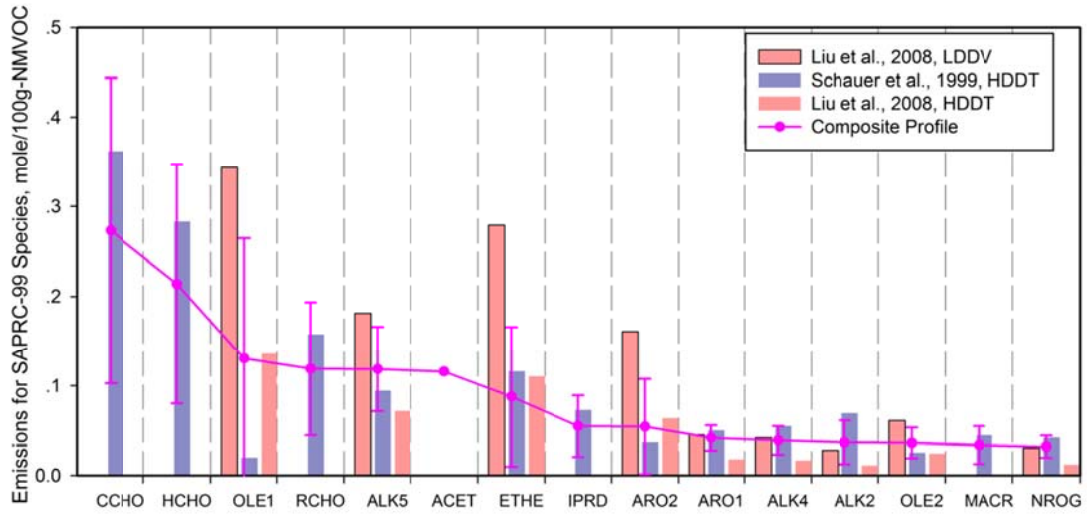


Figure S4. Sensitivity of model-ready emissions to profile selection for the diesel vehicle source

References

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