

Supporting information to the manuscript:

The influence of environmental drivers on the enrichment of organic carbon in the sea surface microlayer and in submicron aerosol particles – measurements from the Atlantic Ocean

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Table S1. Concentrations of dissolved and particulate organic carbon (DOC, POC) in the sea surface microlayer (SML) and in bulk water (BW) and their enrichment factors (EF) together with chl-a concentrations and wind speed.

Campaign	Sampling area ^a	Sampling date	DOC	DOC	POC	POC	EF SML	EF SML	film thickness	chl-a		Wind speed ^d
			BW	SML	BW	SML	POC	DOC		LC-FLD ^b	Satellite	
			µmol/L	µmol/L	µmol/L	µmol/L			µm	mg/L	mg/L	m/s
Cape Verde, SOPRAN 2011-I	n. off. spring 2011	02.05.2011	64.8	64.1	2.7	10.2	3.7	1.0	50	0.10 ^c	0.10	3.9
Cape Verde, SOPRAN 2011-I	n. off. spring 2011	03.05.2011	-	132.3	-	12.1	-	-	52	0.10 ^c	0.12	5.1
Cape Verde, SOPRAN 2011-I	n. off. spring 2011	04.05.2011	44.4	167.8	3.7	12.6	3.4	3.8	65	0.10 ^c	0.08	7.1
Cape Verde, SOPRAN 2011-I	n. off. spring 2011	04.05.2011	56.0	206.8	3.8	20.0	5.3	3.7	66	0.10 ^c	0.08	8.1
Cape Verde, SOPRAN 2011-I	n. off. spring 2011	07.05.2011	128.8	84.2	3.8	12.9	3.4	0.7	60	0.10 ^c	0.10	7.8
Cape Verde, SOPRAN 2011-I	n. off. spring 2011	09.05.2011	54.8	116.9	3.1	15.5	5.1	2.1	71	0.10 ^c	0.11	6.2
Cape Verde SOPRAN 2011-II	n. off. fall 2011	10.11.2011	136.8	341.8	22.9	-	-	2.5	100	0.29	0.16	6.0

Cape Verde SOPRAN 2011-II	n. off. fall 2011	11.11.2011	191.5	314.2	14.4	33.4	2.3	1.6	107	0.30 ^c	0.15	4.0
Cape Verde SOPRAN 2011-II	n. off. fall 2011	11.11.2011	131.8	148.8	28.5	44.5	1.6	1.1	80	0.30 ^c	0.15	5.0
Cape Verde SOPRAN 2011-II	n. off. fall 2011	11.11.2011	110.8	162.6	24.4	14.2	0.6	1.5	104	0.30 ^c	0.15	5.0
Cape Verde SOPRAN 2011-II	n. off. fall 2011	12.11.2011	135.1	166.6	18.0	22.7	1.3	1.2	107	0.30 ^c	0.14	3.0
Cape Verde SOPRAN 2011-II	n. off. fall 2011	12.11.2011	154.8	152.7	22.3	9.7	0.4	1.0	114	0.30 ^c	0.14	4.0
Cape Verde SOPRAN 2011-II	n. off. fall 2011	13.11.2011	56.9	115.4	6.3	26.8	4.3	2.0	106	0.30 ^c	0.10	8.0
Cape Verde SOPRAN 2011-II	n. off. fall 2011	14.11.2011	136.6	132.0	23.6	41.4	1.8	1.0	111	0.39	0.10	11
Cape Verde SOPRAN 2011-II	n. off. fall 2011	17.11.2011	165.5	127.3	23.5	30.6	1.3	0.8	106	0.30 ^c	0.20	10
Cape Verde SOPRAN 2011-II	n. off. fall 2011	18.11.2011	121.8	147.3	34.2	40.3	1.2	1.2	89	0.30 ^c	0.18	11
Cape Verde SOPRAN 2011-II	n. off. fall 2011	21.11.2011	97.7	140.1	8.4	7.7	0.9	1.4	96	0.30 ^c	0.20	10
Cape Verde SOPRAN 2011-II	n. off. fall 2011	21.11.2011	139.6	116.1	13.7	16.7	1.2	0.8	98	0.30 ^c	0.20	10
Cape Verde SOPRAN 2011-II	n. off. fall 2011	24.11.2011	66.1	148.7	4.7	11.9	2.5	2.2	100	0.30 ^c	0.13	8.0
Cape Verde SOPRAN 2011-II	n. off. fall 2011	24.11.2011	170.3	133.8	15.8	19.4	1.2	0.8	104	0.30 ^c	0.13	7.0
Cape Verde SOPRAN 2011-II	n. off. fall 2011	25.11.2011	92.8	166.1	23.0	30.4	1.3	1.8	111	0.30 ^c	-	7.0
Bergen 2011	n. on. spring 2011	08.05.2011	222.1	176.5	5.7	11.2	2.0	0.8	176	1.83	1.45	5.0
Bergen 2011	n. on. spring 2011	10.05.2011	93.6	147.5	19.8	39.3	2.0	1.6	202	1.82	2.11	5.0
Bergen 2011	n. on. spring 2011	12.05.2011	233.3	219.4	2.0	10.2	5.1	0.9	233	1.64	0.50	5.0
Bergen 2011	n. on. spring 2011	13.05.2011	142.0	254.5	26.8	5.4	0.2	1.8	241	0.96	0.33	4.0
Bergen 2011	n. on. spring 2011	14.05.2011	198.9	150.3	11.3	19.3	1.7	0.8	243	1.10	0.60	3.0
Bergen 2011	n. on. spring	22.05.2011	86.3	453.1	10.1	21.6	2.1	5.3	241	1.79	0.59	5.0

		2011										
Bergen 2011	n. on. spring 2011	26.05.2011	141.7	192.9	7.4	18.7	2.5	1.4	243	1.27	-	1.0
Bergen 2011	n. on. spring 2011	27.05.2011	82.5	119.5	29.9	5.4	0.2	1.4	243	1.28	0.62	6.0
Bergen 2011	n. on. spring 2011	31.05.2011	130.4	250.2	39.9	15.5	0.4	1.9	243	1.26	0.69	5.0
Bergen 2011	n. on. spring 2011	03.06.2011	-	248.2	4.1	2.0	0.5	-	241	0.83	0.53	5.0
Ant-XXVIII-5	s. off. spring 2012	13.04.2012	92.5	115.1	32.9	59.6	1.8	1.2	77	0.36	0.13	3.7
Ant-XXVIII-5	s. off. spring 2012	14.04.2012	327.0	203.5	34.8	24.1	0.7	0.6	88	0.35	0.41	6.0
Ant-XXVIII-5	s. off. spring 2012	15.04.2012	179.5	228.8	27.1	18.4	0.7	1.3	72	0.30	0.29	9.3
Ant-XXVIII-5	s. off. spring 2012	16.04.2012	122.5	91.9	43.2	6.0	0.1	0.8	82	0.15	0.16	9.3
Ant-XXVIII-5	s. off. spring 2012	17.04.2012	81.1	230.8	2.7	34.5	13	2.8	75	0.08	0.11	8.3
Ant-XXVIII-5	s. off. spring 2012	18.04.2012	96.0	159.0	25.9	13.7	0.5	1.7	72	0.03	0.09	7.3
Ant-XXVIII-5	s. off. spring 2012	19.04.2012	112.6	202.3	9.9	12.2	1.2	1.8	78	0.03	0.08	6.0
Ant-XXVIII-5	s. off. spring 2012	20.04.2012	204.7	147.0	24.5	21.2	0.9	0.7	75	0.01	0.08	8.0
Ant-XXVIII-5	s. off. spring 2012	21.04.2012	98.4	147.4	11.0	15.4	1.4	1.5	70	0.02	0.14	11
Ant-XXVIII-5	s. off. spring 2012	22.04.2012	100.0	191.9	7.9	21.6	2.7	1.9	95	0.04	0.15	10
Ant-XXVIII-5	s. off. spring 2012	23.04.2012	128.6	159.7	31.0	6.1	0.2	1.2	78	0.13	-	11
Ant-XXVIII-5	s. off. spring 2012	24.04.2012	88.4	111.0	37.5	10.2	0.3	1.3	65	0.11	0.22	10
Ant-XXVIII-5	s. off. spring 2012	26.04.2012	145.4	102.8	15.4	11.9	0.8	0.7	65	0.06	-	10
Ant-XXVIII-5	s. off. spring 2012	27.04.2012	100.8	199.0	3.5	13.7	3.9	2.0	71	0.42	0.13	8.0
Ant-XXVIII-5	s. off. spring 2012	29.04.2012	123.2	297.0	6.7	18.4	2.7	2.4	71	0.11	0.13	7.0

Ant-XXVIII-5	n. off. spring 2012	30.04.2012	88.8	142.2	3.4	9.9	2.9	1.6	79	0.05	0.17	7.0
Ant-XXVIII-5	n. off. spring 2012	04.05.2012	67.3	184.2	23.7	19.6	0.8	2.7	80	0.05	-	9.0
Ant-XXVIII-5	n. off. spring 2012	05.05.2012	148.8	175.1	32.1	28.1	0.9	1.2	80	0.04	0.07	4.0
Ant-XXVIII-5	n. off. spring 2012	07.05.2012	132.4	148.0	19.6	7.3	0.4	1.1	74	0.05	0.06	5.0
Ant-XXVIII-5	n. off. spring 2012	08.05.2012	228.0	163.7	4.8	35.1	7.3	0.7	79	0.05	0.05	5.0
Ant-XXVIII-5	n. off. spring 2012	09.05.2012	105.1	169.2	11.9	7.5	0.6	1.6	84	0.04	0.03	3.0
Ant-XXVIII-5	n. off. spring 2012	10.05.2012	91.2	153.3	29.0	12.9	0.4	1.7	84	0.01	0.03	4.0
Cape Verde, SOPRAN 2013	n. on. fall 2013	11.11.2013	80.0	726.1	8.1	18.5	2.3	9.1	56	0.04	0.16	5.0
Cape Verde, SOPRAN 2013	n. on. fall 2013	12.11.2013	351.0	890.2	3.4	12.3	3.6	2.5	75	0.29	0.11	5.0
Cape Verde, SOPRAN 2013	n. on. fall 2013	12.11.2013	250.2	423.5	4.1	9.6	2.4	1.7	85	0.11	0.11	5.0
Cape Verde, SOPRAN 2013	n. on. fall 2013	13.11.2013	433.7	187.9	4.6	8.1	1.7	0.4	53	0.05	0.16	5.0
Cape Verde, SOPRAN 2013	n. on. fall 2013	15.11.2013	104.1	113.2	3.0	12.8	4.2	1.1	77	0.19	-	5.5
Cape Verde, SOPRAN 2013	n. on. fall 2013	15.11.2013	680.8	468.5	3.2	9.6	3.0	0.7	89	0.19	-	6.0
Cape Verde, SOPRAN 2013	n. on. fall 2013	19.11.2013	104.8	760.4	3.9	19.9	5.1	7.3	75	0.15	0.19	7.5
Cape Verde, SOPRAN 2013	n. on. fall 2013	19.11.2013	856.2	134.5	4.8	17.7	3.7	0.2	86	0.19	0.19	7.0
Cape Verde, SOPRAN 2013	n. on. fall 2013	21.11.2013	604.8	946.4	4.3	9.9	2.3	1.6	92	0.43	0.21	6.0
Cape Verde, SOPRAN 2013	n. on. fall 2013	21.11.2013	270.3	98.4	4.1	22.3	5.5	0.4	100	0.60	0.21	6.5
Cape Verde, SOPRAN 2013	n. on. fall 2013	23.11.2013	554.3	97.8	3.2	8.3	2.6	0.2	83	0.07	0.17	5.0
ANT XXIX/10	s. off. spring 2014	11.03.2014	98.3	168.2	6.9	16.9	2.5	1.7	81	0.03	0.08	8.8
ANT XXIX/10	s. off. spring	13.03.2014	186.4	164.8	6.3	11.1	1.8	0.9	87	0.01	0.09	8.2

		2014										
ANT XXIX/10	s. off. spring 2014	14.03.2014	202.6	370.2	6.4	9.1	1.4	1.8	82	0.02	0.07	7.8
ANT XXIX/10	s. off. spring 2014	15.03.2014	154.1	302.0	3.7	8.3	2.2	2.0	83	0.01	0.06	8.1
ANT XXIX/10	s. off. spring 2014	16.03.2014	105.9	240.0	3.4	7.8	2.3	2.3	88	0.02	0.06	6.4
ANT XXIX/10	s. off. spring 2014	17.03.2014	105.3	122.0	4.7	8.7	1.9	1.2	90	0.02	-	9.1
ANT XXIX/10	s. off. spring 2014	18.03.2014	160.1	-	5.1	8.7	1.7		99	0.04	0.10	7.8
ANT XXIX/10	n. off. spring 2014	20.03.2014	147.3	-	4.4	9.3	2.1		89	0.06	0.11	6.2
ANT XXIX/10	n. off. spring 2014	21.03.2014	105.9	559.9	3.8	9.6	2.5	5.3	89	0.02	-	4.8
ANT XXIX/10	n. off. spring 2014	22.03.2014	116.2	141.4	4.8	11.4	2.4	1.2	95	0.09	-	4.4
ANT XXIX/10	n. off. spring 2014	23.03.2014	105.3	504.1	4.6	15.3	3.4	4.8	86	0.10	0.19	8.0
ANT XXIX/10	n. off. spring 2014	30.03.2014	91.8	135.0	4.7	14.1	3.0	1.5	108	0.11	0.21	3.3
ANT XXIX/10	n. off. spring 2014	31.03.2014	107.3	175.3	5.1	20.3	4.0	1.6	99	0.24	0.56	4.0
ANT XXIX/10	n. off. spring 2014	04.04.2014	90.7	74.0	4.3	11.2	2.6	0.8	92	0.27	0.21	7.5
ANT XXIX/10	n. off. spring 2014	05.04.2014	70.5	147.8	9.5	11.5	1.2	2.1	96	0.30	-	7.6
ANT XXIX/10	n. off. spring 2014	06.04.2014	79.4	459.8	11.5	12.2	1.1	5.8	92	0.87	0.46	9.9
ANT XXIX/10	n. off. spring 2014	08.04.2014	75.5	109.5	7.2	13.2	1.8	1.5	88	0.93	-	3.3

^a n: north, s: south, on: onshore, off: offshore

^b Liquid Chromatography with Fluorescence Detection

^c LODs for chl-a were quite high (0.1 and 0.3 mg/L) in the first campaigns because low volumes of water were available for filtration

^d at sampling time

