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*Supplement of*

## **The Arctic picoeukaryote *Micromonas pusilla* benefits synergistically from warming and ocean acidification**

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Table S1: Statistical results from two-way ANOVAs investigating the individual and interactive effects of temperature and pCO<sub>2</sub> on all measured properties of *M. pusilla*.

		temp	pCO <sub>2</sub>	temp x pCO <sub>2</sub>
$\mu$	F value	327.61	8.75	11.78
	p value	<b>&lt;0.001</b>	<b>0.001</b>	<b>&lt;0.001</b>
Chl <i>a</i> quota	F value	1.15	1.16	17.96
	p value	0.30	0.36	<b>&lt;0.001</b>
C quota	F value	24.01	0.55	9.88
	p value	<b>&lt;0.001</b>	0.66	<b>&lt;0.001</b>
N quota	F value	4.75	0.56	10.12
	p value	<b>0.05</b>	0.65	<b>&lt;0.001</b>
C:N	F value	13.70	3.16	2.23
	p value	<b>0.002</b>	<b>0.06</b>	0.12
C:Chl <i>a</i>	F value	13.45	1.67	5.89
	p value	<b>0.002</b>	0.21	<b>0.01</b>
POC prod.	F value	356.17	7.10	29.28
	p value	<b>&lt;0.001</b>	<b>0.003</b>	<b>&lt;0.001</b>
Fv/Fm	F value	0.26	1.33	0.07
	p value	0.62	0.30	0.98
$\sigma_{PSII}$	F value	0.11	0.17	2.28
	p value	0.75	0.92	0.12
$\tau_{ES}$	F value	5.82	0.98	3.79
	p value	<b>0.03</b>	0.43	<b>0.03</b>
NPQ <sub>max</sub>	F value	0.17	8.02	0.86
	p value	0.68	<b>0.002</b>	0.49
$\alpha$	F value	0.03	1.44	1.16
	p value	0.87	0.27	0.36
ETR <sub>max</sub>	F value	1.16	0.55	1.31
	p value	0.30	0.66	0.31
E <sub>K</sub>	F value	0.68	0.82	1.28
	p value	0.42	0.51	0.32

Figure S1: Growth rate constants (A) and POC production (B) of *M. pusilla* under low (filled symbols) and high temperatures (open symbols) as a function of [CO<sub>2</sub>] (n=3; mean ±1 s.d.). Results from statistical analysis can be found in Table SI2.

