

Supplementary tables

Table S1

A three-way ANOVA for the effect of treatment (Trt.) with eCO₂, the plant species (Sp.) and the stage of plant leaf (St.) as well as their interaction on the biomass and photosynthesis as well as the molecular antioxidants and the oxidative markers (numbers represent F values; ns= non-significant; * = P < 0.05; ** = P < 0.01; *** = P < 0.001, **** = P < 0.0001)

Dependent variables	Independent variables						
	Trt	St.	Sp.	Trt.*St.	Trt.*Sp.	St.*Sp.	Trt.*St.*Sp.
Fresh weight	58.3****	19.45**	260.5****	5.78**	22.17***	13.03*	1.67 ^{ns}
Dry weight	116.8****	159.2****	23.69****	8.63***	16.14****	16.19***	2.710 ^{ns}
Photosynthesis	84.26****	40.25****	8.14**	3.88*	2.75 ^{ns}	5.22*	2.10 ^{ns}
RuBisco	133.1***	58.69****	10.50**	1.82 ^{ns}	6.30***	1.00 ^{ns}	5.06**
H₂O₂	42.25****	48.51****	53.40****	188.2****	1010****	1148****	606.5****
MDA	868.4****	137.5****	1.086 ^{ns}	221.1****	287.4****	362.3****	352.1****
TAC	24205****	17315****	41738****	52630****	53543****	36653****	78152****
Polyphenols	1552****	5112****	891.5****	203.1****	10.49****	2080****	222.4****
Tocopherols	125.2****	181.3****	70.31****	11..93****	16.55****	8.185**	10.91****
Flavonoids	305.9****	477.4****	0.000 ^{ns}	64.53****	0.000 ^{ns}	0.000 ^{ns}	2.119 ^{ns}

Table S2

A three-way ANOVA for the effect of treatment (Trt.) with eCO₂, the plant species (Sp.) and the stage of plant leaf (St.) as well as their interaction on the ascorbate/glutathione biosynthetic pool as well as detoxification system and anthocyanin metabolism (numbers represent F values; ns= non-significant; *= P < 0.05; ** = P < 0.01; *** = P < 0.001, **** = P < 0.0001)

Dependent variables	Independent variables						
	Trt.	St.	Sp.	Trt.*St.	Trt.*Sp.	St.*SP.	Trt.*St.*Sp.
ASC	115.8****	5.524*	416.7****	0.377 ^{ns}	29.99****	0.0295 ^{ns}	1.208
GSH	597.2****	218.5****	355.2****	18.26****	94.03****	34.97****	3.47*
APX	558.4****	120.9****	4836****	7.931***	182.7***	42.90****	3379****
DHAR	111.6****	38.86****	4.043 ^{ns}	2.155 ^{ns}	4.052*	77.41****	8.732***
MDHAR	153.3****	64.96****	86.14****	0.0022 ^{ns}	9.686***	150.1****	5.521**
GR	1139***	337.7****	8.785**	51.59****	160.7****	261.6****	11.38****
POX	3200****	876.1****	1297****	73.35****	647.2****	11.08**	87.02****
CAT	2499****	1626****	1347****	1513****	3103****	1687****	4028****
SOD	18288****	9176****	1088****	3713****	2835****	2096****	12027****
GPX	851.5***	1.012 ^{ns}	649.7****	65.47****	36.12****	671.9****	19.50****
Grx	773.3****	143.7****	245.2****	2.041 ^{ns}	11.38****	77.18****	4.051*
Prx	1832****	2716****	7340****	287.9****	307.5****	424.4****	161.8****
Trx	129.7****	254.4****	71.88****	63.49****	10.88****	9.55**	10.52****
PCs	1424****	192.4****	23.06****	6.339**	201.3****	547.5****	43.91**
MTC	364.89***	463.78****	136.89**	634.89****	1275.1****	349.3***	125.78**
tGSH	174.2****	32.66****	90.42****	2.51 ^{ns}	77.61****	32.12****	12.46****
GST	243.8****	0.195 ^{ns}	32.49****	15.86****	3.452*	78.36****	5.55*
Anthocyanin	378.5****	246.6****	104.3****	9.941****	24.49****	393.7****	17.70****
Phenylalanine	69.71****	22.97****	16.74***	5.45**	4.278*	117.2****	4.088*
Cinnamic acids	136.45***	456.9****	567.5**	234.7****	59.89***	47.87**	158.8***
PAL	2297****	7354****	119.4****	357.7****	48.29****	342.1****	97.67****
Naringenin	356.8****	942.7****	463.7****	185.8*	163.89****	57.89**	327.7***
CHS	136.89****	237.56****	8934.89****	694.56****	223.6****	234.9****	463.9****
C4H	972.13****	379.19****	731.84****	896.72****	612.91****	982.15****	138.45*
4CL	179.9****	50.07****	51.60****	3.2085*	12.60****	0.101****	11.16 ^{ns}

Supplementary Figure

Figure S1

A photograph that illustrates the differential effects of eC2 either lonely or in combination with In2O₃-NPs upon the biomass of C3 and C4 plants.

