

Supplementary Materials:

Table S1. The Pearson correlation coefficient (r) between Chlorophyll *a* fluorescence (ChlF) parameters, pigments (P), content of MDA and antioxidants (A) in the leaves of *D. glomerata* sown on the fly ash deposits (L3).

Leaf					
ChlF / ChlF	r	ChlF / P	r	ChlF / MDA, A	r
Fv/Fm / t _{1/2}	0.82	Fv/Fm / Chl <i>a</i>	0.82	Fv/Fm / MDA	0.90
Fv/Fm / Fm	0.99	Fv/ Fm / Chl <i>b</i>	0.86	Fv/Fm / Free Ph	0.95
Fv/Fm / Fo	0.51	Fv/Fm / Chl <i>a+b</i>	0.84	Fv/Fm / Bound Ph	0.85
Fv/Fm / Fv	0.99	Fv/Fm / Chl <i>a/b</i>	0.74	Fv/Fm / Tot Ph	0.94
Fv/Fm / Fm/Fo	0.99	Fv/Fm / Carot	0.90	Fv/Fm / AsA	0.99
t _{1/2} / Fm	-0.84	Fv/Fm / Anthoc	-0.94	Fv/Fm / DPPH	-0.90
t _{1/2} / Fo	0.49	t _{1/2} / Chl <i>a</i>	0.97	t _{1/2} / MDA	0.91
t _{1/2} / Fv	-0.82	t _{1/2} / Chl <i>b</i>	0.95	t _{1/2} / Free Ph	0.80
t _{1/2} / Fm/Fo	0.83	t _{1/2} / Chl <i>a+b</i>	0.97	t _{1/2} / Bound Ph	0.91
Fm / Fo	-0.47	t _{1/2} / Chl <i>a/b</i>	0.95	t _{1/2} / Tot Ph	0.83
Fm / Fv	0.99	t _{1/2} / Carot	0.94	t _{1/2} / AsA	0.83
Fm / Fm/Fo	-0.99	t _{1/2} / Anthoc	0.89	t _{1/2} / DPPH	-0.88
Fv / Fo	-0.47	Fm / Chl <i>a</i>	0.83	Fm / MDA	-0.92
Fv / Fm / Fo	-0.99	Fm / Chl <i>b</i>	0.97	Fm / Free Ph	-0.95
Fo / Fm/Fo	0.53	Fm / Chl <i>a+b</i>	0.85	Fm / Bound Ph	-0.86
		Fm / Chl <i>a/b</i>	-0.77	Fm / Tot Ph	-0.95
		Fm / Carot	0.91	Fm / AsA	-0.99
		Fm / Anthoc	-0.94	Fm / DPPH	0.93
		Fv / Chl <i>a</i>	0.82	Fv / MDA	-0.92
		Fv / Chl <i>b</i>	0.86	Fv / Free Ph	-0.95
		Fv / Chl <i>a+b</i>	0.84	Fv / Bound Ph	-0.84
		Fv / Chl <i>a/b</i>	-0.75	Fv / Tot Ph	-0.94
		Fv / Carot	0.90	Fv / AsA	-0.99
		Fv / Anthoc	-0.93	Fv / DPPH	0.93
		Fo / Chl <i>a</i>	-0.58	Fo / MDA	0.50
		Fo / Chl <i>b</i>	-0.67	Fo / Free Ph	0.41
		Fo / Chl <i>a+b</i>	-0.60	Fo / Bound Ph	0.61
		Fo / Chl <i>a/b</i>	0.57	Fo / Tot Ph	0.40
		Fo / Carot	-0.56	Fo / AsA	0.51
		Fo / Anthoc	-0.51	Fo / DPPH	-0.38
		Fm/Fo / Chl <i>a</i>	-0.83	Fm/Fo / MDA	0.91
		Fm/Fo / Chl <i>b</i>	-0.87	Fm/Fo / Free Ph	0.95
		Fm/Fo / Chl <i>a+b</i>	-0.85	Fm/Fo / Bound Ph	0.87
		Fm/Fo / Chl <i>a/b</i>	0.75	Fm/Fo / Tot Ph	0.95
		Fm/Fo / Carot	-0.90	Fm/Fo / AsA	0.99
		Fm/Fo / Anthoc	-0.95	Fm/Fo / DPPH	-0.89

Table S2. The Pearson correlation coefficient (r) between content of pigments (P), MDA and antioxidants (A) in leaves of *D. glomerata* sown on the the fly ash deposits (L3).

Leaf					
P / MDA, A	r	MDA / A	r	A / A	r
Chl <i>a</i> / MDA	-0.95	MDA / Free Ph	0.80	Free Ph / Bound Ph	0.80
Chl <i>a</i> / Free Ph	-0.74	MDA / Bound Ph	0.93	Free Ph / Tot Ph	0.99
Chl <i>a</i> / Bound Ph	-0.95	MDA / Tot Ph	0.82	Free Ph / AsA	0.95
Chl <i>a</i> / Tot Ph	-0.77	MDA / AsA	0.90	Free Ph / DPPH	-0.85
Chl <i>a</i> / AsA	-0.82	MDA / DPPH	0.95	Bound Ph / Tot Ph	0.83
Chl <i>a</i> / DPPH	0.87			Bound Ph / AsA	0.85
Chl <i>b</i> / MDA	-0.95			Bound Ph / DPPH	-0.83
Chl <i>b</i> / Free Ph	-0.79			Tot Ph / AsA	0.95
Chl <i>b</i> / Bound Ph	-0.96			Tot Ph / DPPH	-0.86
Chl <i>b</i> / Tot Ph	-0.82			AsA / DPPH	-0.90
Chl <i>b</i> / AsA	-0.86				
Chl <i>b</i> / DPPH	0.88				
Chl <i>a+b</i> / MDA	-0.95				
Chl <i>a+b</i> / Free Ph	-0.77				
Chl <i>a+b</i> / Bound Ph	-0.96				
Chl <i>a+b</i> / Tot Ph	-0.81				
Chl <i>a+b</i> / AsA	-0.84				
Chl <i>a+b</i> / DPPH	0.88				
Chl <i>a/b</i> / MDA	0.89				
Chl <i>a/b</i> / Free Ph	0.70				
Chl <i>a/b</i> / Bound Ph	0.88				
Chl <i>a/b</i> / Tot Ph	0.72				
Chl <i>a/b</i> / AsA	0.75				
Chl <i>a/b</i> / DPPH	-0.87				
Carot / MDA	-0.97				
Carot / Free Ph	-0.84				
Carot / Bound Ph	-0.96				
Carot / Tot Ph	-0.87				
Carot / AsA	-0.90				
Carot / DPPH	0.92				
Anthocy / MDA	-0.95				
Anthocy / Free Ph	-0.87				
Anthocy / Bound Ph	-0.95				
Anthocy / Tot Ph	-0.89				
Anthocy / AsA	-0.93				
Anthocy / DPPH	0.93				

Table S3. The Pearson correlation coefficient (r) between content of MDA and antioxidants (A) in roots of *D. glomerata* sown on the fly ash deposits (L3).

Root			
MDA / A	r	A / A	r
MDA / Free Ph	-0.87	Free Ph / Bound Ph	0.99
MDA / Bound Ph	-0.87	Free Ph / Tot Ph	0.99
MDA / Tot Ph	-0.87	Free Ph / AsA	0.62
MDA / AsA	-0.69	Free Ph / DPPH	0.98
MDA / DPPH	-0.81	Bound Ph / Tot Ph	0.99
		Bound Ph / AsA	0.55
		Bound Ph / DPPH	0.95
		Tot Ph / AsA	0.57
		Tot Ph / DPPH	0.96
		AsA / DPPH	0.57