

Electronic Supplementary Information

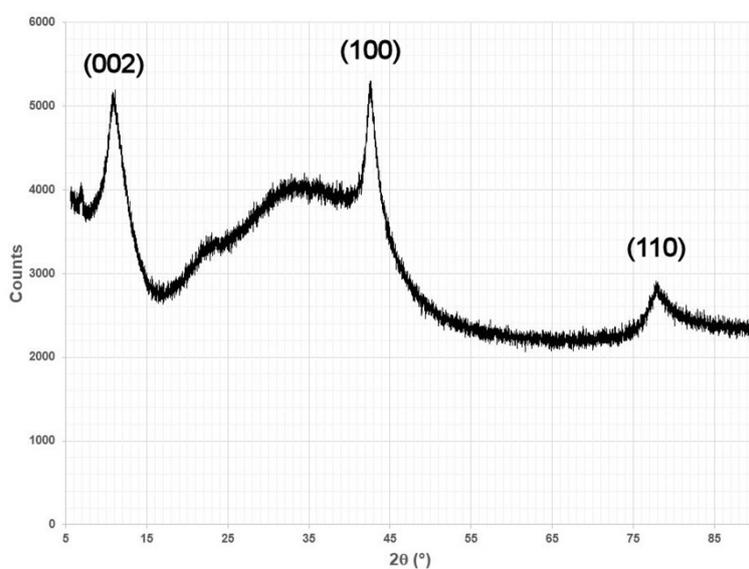


Fig. S1 X-Ray powder diffraction analysis of GO.

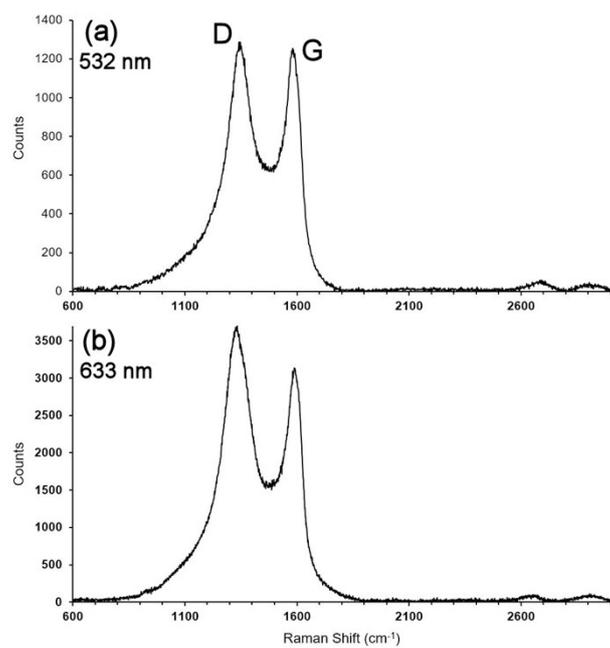


Fig. S2 Raman analysis of GO at two different wavelengths: (a) 532 nm and (b) 633 nm.

Table S1 GO elemental composition measured by us by XPS analysis compared to the data provided by Grupo Antolin (GA). Data are expressed as atomic (at.) and weight (wt., only GA data) percentage (%).

	C	H	N	S	O	C/O
XPS (at.%)	69.70	-	-	-	30.30	2.30
GA (wt.%)	47.99	3.17	0.11	0.51	48.22	0.99
at.% (calculated from wt.%)	39.26	30.90	0.08	0.16	29.61	1.32

Table S2 Summary of factorial ANOVA outcomes for *Nicotiana tabacum* pollens treated for 1 and 2 h (**Germination time**) in BK_{suc} or BK_{PEG} with 0, 25, 50 or 100 µg GO mL⁻¹ (**GO concentration**). G%: pollen germination percentage; L%: pollen tube length percentage with respect to the control; *df*: degrees of freedom; *F*: F statistic; *P*: p-value; *r*²_{adj}: adjusted r².

	BK _{suc}						BK _{PEG}					
	G%			L%			G%			L%		
	<i>df</i>	<i>F</i>	<i>P</i>	<i>df</i>	<i>F</i>	<i>P</i>	<i>df</i>	<i>F</i>	<i>P</i>	<i>df</i>	<i>F</i>	<i>P</i>
Intercept	1	911.3	0.000	1	4519.3	0.000	1	2147.1	0.000	1	16559.7	0.000
Germination time (G_t)	1	4.3	0.053	1	5.6	0.021	1	24.6	0.000	1	0.8	0.363
GO concentration (C)	2	5.7	0.012	2	9.9	0.000	3	3.7	0.026	3	20.5	0.000
G_t × C	2	0.4	0.662	2	4.2	0.019	3	3.5	0.031	3	4.0	0.007
Error	18			80			24			492		
Total	23			85			31			499		
<i>r</i>²_{adj}	0.33			0.26			0.56			0.12		

Table S3 Summary of factorial ANOVA outcomes for *Corylus avellana* pollens germinated for 3 and 5.5 h (**Germination time**) in BK_{suc} with 0, 25, 50 or 100 µg GO mL⁻¹ (**GO concentration**). G%: pollen germination percentage; L%: pollen tube length percentage with respect to the control; *df*: degrees of freedom; *F*: F statistic; *P*: p-value; *r*²_{adj}: adjusted r².

	G%			L%		
	<i>df</i>	<i>F</i>	<i>P</i>	<i>df</i>	<i>F</i>	<i>P</i>
Intercept	1	5882.9	0.000	1	6395.0	0.000
Germination time (G_t)	1	9.2	0.006	1	0.2	0.634
GO concentration (C)	3	378.3	0.000	3	99.2	0.000
G_t × C	3	0.4	0.774	3	12.6	0.000
Error	22			219		
Total	29			226		
<i>r</i> ² _{adj}		0.98			0.63	

Table S4 Summary of factorial ANOVA outcomes for *Corylus avellana* pollens treated for 3 and 5.5 h (**Germination time**) in (**Treatment**) BK_{suc} or in BK_{suc} acidified to pH 4.2 and in BK_{suc} with 100 µg GO mL⁻¹ (GO100) or in GO100 neutralized to pH 6.3.). G%: pollen germination percentage; L%: pollen tube length percentage with respect to the control; *df*: degrees of freedom; *F*: F statistic; *P*: p-value; *r*²_{adj}: adjusted r².

	G%			L%		
	<i>df</i>	<i>F</i>	<i>P</i>	<i>df</i>	<i>F</i>	<i>P</i>
Intercept	1	1153.8	0.000	1	6004.8	0.000
Germination time (G_t)	1	1.3	0.263	1	4.7	0.031
Treatment (T)	3	102.7	0.000	3	147.9	0.000
G_t × T	3	0.3	0.801	3	1.4	0.243
Error	16			479		
Total	23			486		
<i>r</i>²_{adj}		0.93			0.48	