

Supplementary information

Table S1. Wood reference materials in this study.

Order	Family	Species	Common name
Fagales	Fagaceae	<i>Quercus robur</i>	Oak
	Fagaceae	<i>Quercus pyrenaica</i>	Oak bull
	Fagaceae	<i>Quercus petrae</i>	Sessile oak
	Fagaceae	<i>Castanea sativa</i>	Chestnut tree
	Fagaceae	<i>Fagus sylvatica</i>	Beech
	Juglandaceae	<i>Juglans regia</i>	Walnut tree
Rosales	Rosaceae	<i>Prunus avium</i>	Cherry tree
	Rosaceae	<i>Pyrus communis</i>	Pear tree
Urticales	Ulmaceae	<i>Ulmus glabra</i>	Scots elm
Sapindales	Sapindaceae	<i>Acer campestre</i>	Maple
Malpighiales	Salicaceae	<i>Populus nigra italica</i>	Black poplar
	Salicaceae	<i>Salix babylonica</i>	Weeping willow
Lamiales	Oleaceae	<i>Olea europea</i>	Olive tree
	Oleaceae	<i>Fraxinus excelsior</i>	Ash
Pinales	Pinaceae	<i>Pinus sylvestris</i>	Scots pine
	Pinaceae	<i>Pinus halepensis</i>	Aleppo pine
	Pinaceae	<i>Cedrus libani</i>	Lebanon cedar
	Cupressaceae	<i>Juniperus sabina</i>	Savin juniper
	Cupressaceae	<i>Cupressus sempervivens</i>	Cypres
	Taxaceae	<i>Taxus baccata</i>	Yew
Buxales	Buxaceae	<i>Buxus sempervivens</i>	Box

Figure S1. a,b) CVs and c,d) their semi-derivative convolution, of microparticulate films deposited on GCE of ethanolic extracts of a,c) quercetin and b,d) *Olea europea* immersed into air-saturated 0.25 M aqueous acetate buffer, pH 4.75. Potential scan initiated at 0.0 V in the positive direction; potential scan rate 50 mV s⁻¹.

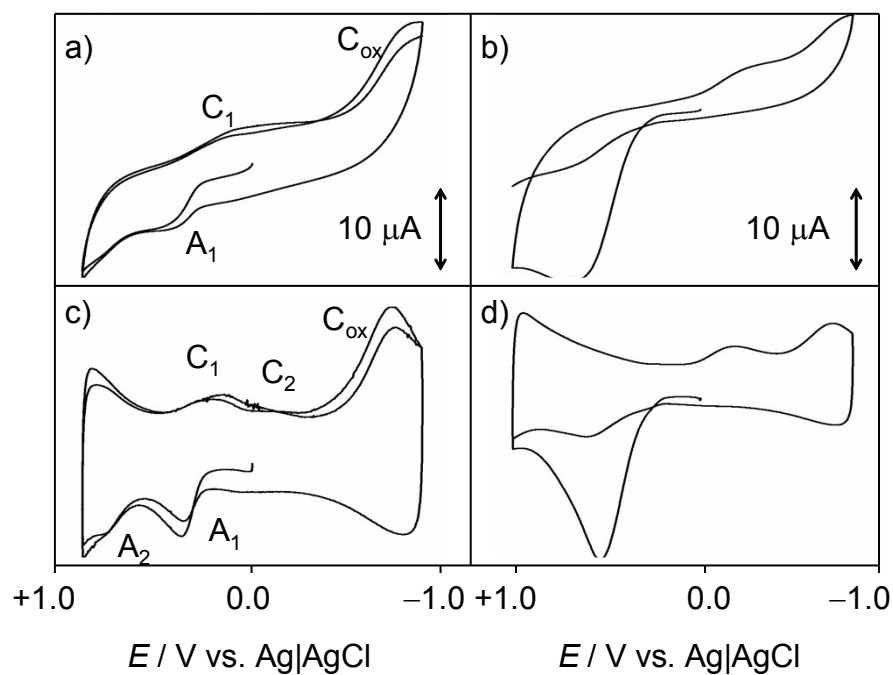


Figure S2. SWVs of microparticulate films deposited on GCE of a) ethanolic and b) acetone extracts of *Quercus robur* immersed into air-saturated 0.25 M aqueous acetate buffer, pH 4.75. Potential scan initiated at -0.85 V in the positive direction; potential step increment 4 mV; square wave amplitude 25 mV; frequency 5 Hz.

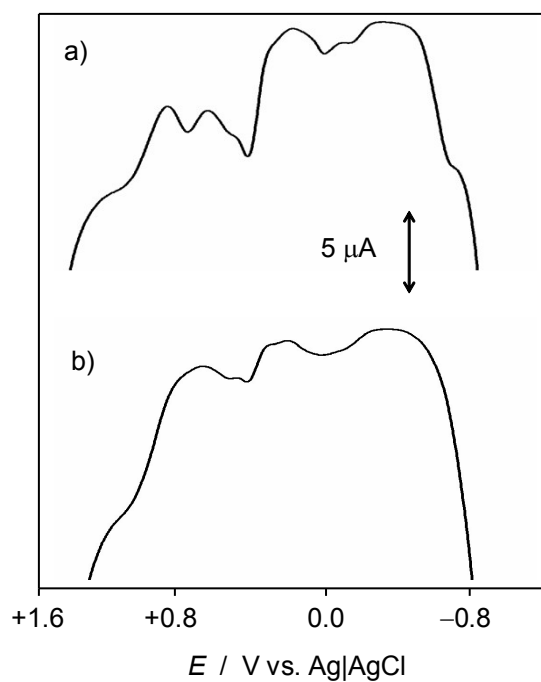


Table S2. Polyphenolic compounds identified in the ethanolic extracts of *Quercus robur*^a and *Prunus avium*^b from HPLC/MS data.

Compound ^a	Formula ^a	<i>M</i> (error) ^a	Compound ^b	Formula ^b	<i>M</i> (error) ^b
6-Geranylnaringenin	C ₂₅ H ₂₈ O ₅	407.18(-0.1)	Trans-ferulic acid	C ₁₀ H ₁₀ O ₄	193.05(0.1)
7-Hydroxysecoisolariciresinol	C ₂₀ H ₂₆ O ₇	377.16(0.1)	Kaempferol 3-O-rhamnoside	C ₂₁ H ₂₀ O ₁₀	431.09(0.2)
Prodelphinidin dimer B3	C ₃₀ H ₂₆ O ₁₃	593.13(-0.4)	Dihydroquercetin	C ₁₅ H ₁₂ O ₇	303.05(0.2)
7,4 dihydroxyflavone	C ₁₅ H ₁₀ O ₄	253.05(-1.1)	4-vinylphenol	C ₈ H ₈ O	119.05(-0.3)
Chrysin	C ₁₅ H ₁₀ O ₄	253.05(-1.1)	Engeletin	C ₂₁ H ₂₂ O ₁₀	433.11(0.4)
Pirocembrin-7-methyleter	C ₁₆ H ₁₄ O ₄	269.08(-1.6)	Nepetin	C ₁₆ H ₁₂ O ₇	315.05(0.5)
5,4' Dihydroxy-3,3'-dimethoxy-6:7-methylenedioxyflavone	C ₁₈ H ₁₄ O ₈	357.06(-1.7)	Gardenin B	C ₁₉ H ₁₈ O ₇	357.09(0.7)
6-Hydroxyluteolin	C ₁₅ H ₁₀ O ₇	357.06(-1.7)	Eriodictyol	C ₁₅ H ₁₂ O ₆	287.05(0.8)
4-ethylguaiacol	C ₉ H ₁₂ O ₂	151.07(-1.9)	5,4' Dihydroxy-3,3'-dimethoxy-6:7-methylenedioxyflavone	C ₁₈ H ₁₄ O ₈	357.06(1)
Baicalein	C ₁₅ H ₁₀ O ₅	269.04(-2)	Glycitin	C ₂₂ H ₂₂ O ₁₀	445.11(1)
Trans-ferulic acid	C ₁₀ H ₁₀ O ₄	193.05(-2.4)	Hesperetin	C ₁₆ H ₁₄ O ₆	301.07(1.1)
Nepetin	C ₁₆ H ₁₂ O ₇	315.05(-2.5)	Luteolin	C ₁₅ H ₁₀ O ₆	285.04(1.2)
Kaempferol	C ₁₅ H ₁₀ O ₆	285.04(-2.5)	Pinocembrin	C ₁₅ H ₁₂ O ₄	255.06(1.2)
Dihydrocapsaicin	C ₁₈ H ₂₉ NO ₃	306.2(-2.7)	4-Hydroxyphenyllactic	C ₉ H ₁₀ O ₄	181.05(1.3)
Patuletin	C ₁₆ H ₁₂ O ₈	331.04(-2.7)	Homovanilic acid	C ₉ H ₁₀ O ₄	181.05(1.3)
Glycitin	C ₂₂ H ₂₂ O ₁₀	445.11(-3.6)	Glycitein	C ₁₆ H ₁₂ O ₅	283.06(1.4)
Carnosol	C ₂₀ H ₂₆ O ₄	329.17(-3.8)	Dihydrocapsaicin	C ₁₈ H ₂₉ NO ₃	306.2(1.6)
6-Hydroxyluteolin 7-O-rhamnoside	C ₂₁ H ₂₀ O ₁₁	447.09(-4.7)	Spinacetin	C ₁₇ H ₁₄ O ₈	345.06(-1.7)
Luteolin-8-C-glucoside	C ₂₁ H ₂₀ O ₁₁	447.09(-4.7)	3,7-dimethylquercetin	C ₁₇ H ₁₄ O ₇	329.06(1.8)
Luteolin-7-O-glucuronide	C ₂₁ H ₁₈ O ₁₂	461,07(-5.4)	Butein	C ₁₅ H ₁₂ O ₅	271.06(2)
[6]-Gingerol	C ₁₇ H ₂₆ O ₄	461,07(-5.4)	Piceatannol	C ₁₄ H ₁₂ O ₄	243.06(2.3)
			Sakuranetin	C ₁₆ H ₁₄ O ₅	285.07(2.4)
			Prodelphinidin dimer B3	C ₃₀ H ₂₆ O ₁₃	593.13(2.5)
			Chysoeriol	C ₁₆ H ₁₂ O ₆	299.05(3.1)
			7, 3',4'-Trihydroxyflavor	C ₁₅ H ₁₀ O ₅	269.04(3.1)

			6-Geranylnaringenin	C ₂₅ H ₂₈ O ₅	407.18(3.2)
			Cirsimaritin	C ₁₇ H ₁₄ O ₆	313.07(3.3)
			Phloridzin	C ₂₁ H ₂₄ O ₁₀	435.12(3.4)
			Avenanthramide 1p	C ₁₆ H ₁₃ NO ₄	282.07(-5.5)