

Supporting information

The bright side of lignin depolymerization: towards new platform chemicals

Zhuohua Sun^a, Bálint Fridrich^{a#}, Alessandra de Santi^{a#}, Saravanakumar Elangovan^a, Katalin Barta^{a*}

^a Stratingh Institute for Chemistry, University of Groningen, Nijenborgh 4, 9747 AG, Groningen, The Netherlands.

[#] Equal contribution

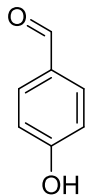
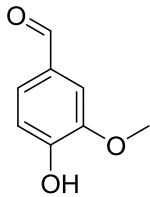
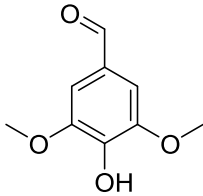
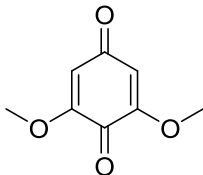
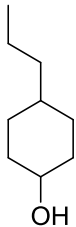
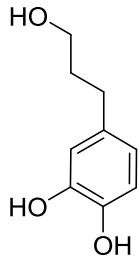
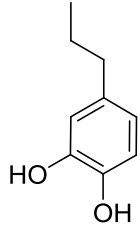
Corresponding author: Katalin Barta

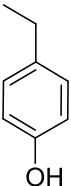
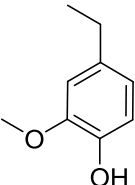
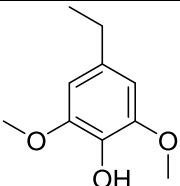
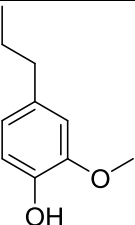
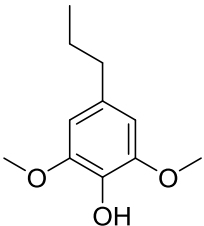
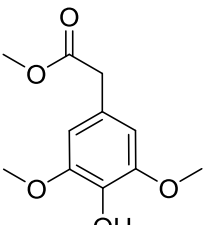
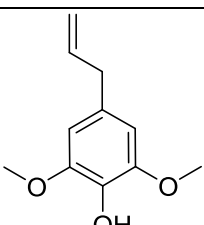
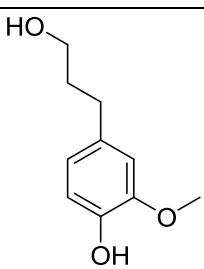
Email: k.barta@rug.nl

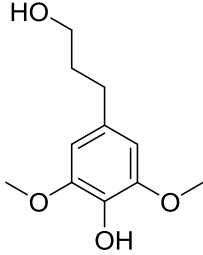
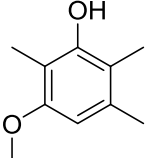
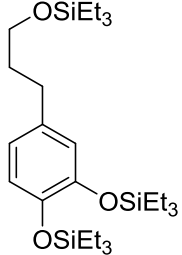
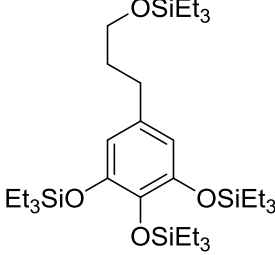
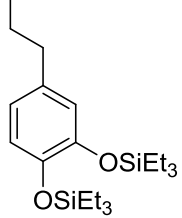
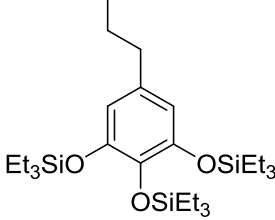
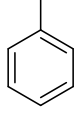
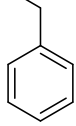
Table of Contents

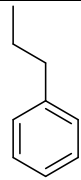
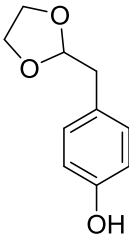
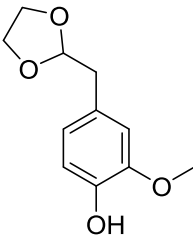
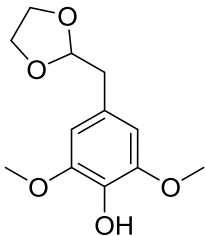
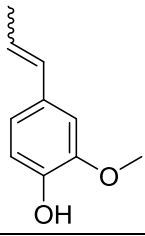
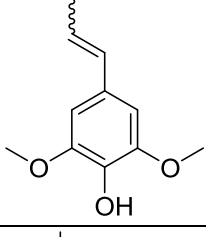
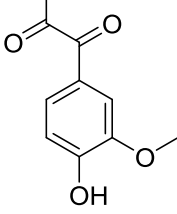
Table S1. Codes, structures and names of identified lignin monomers.....	S2
--	----

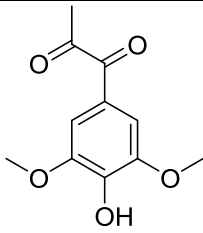
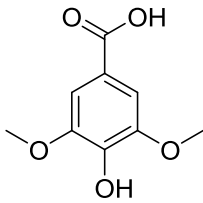
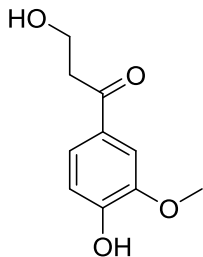
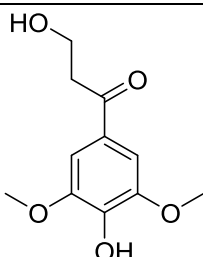
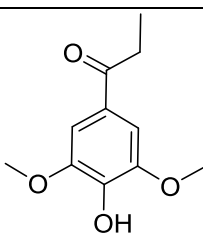
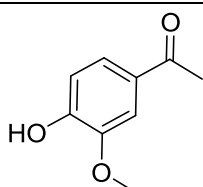
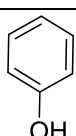
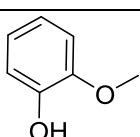
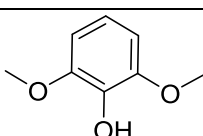
Table S1. Codes, structures and names of identified lignin monomers.

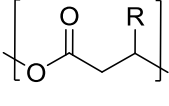
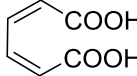
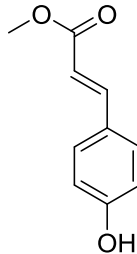
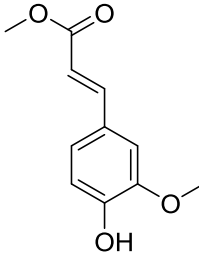
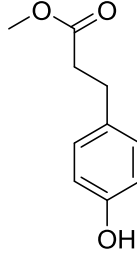
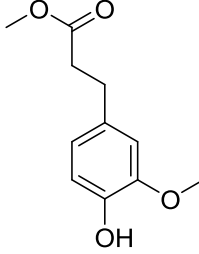
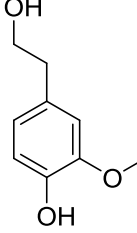
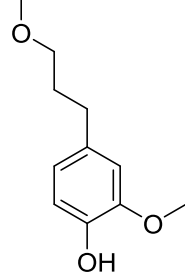
Entry	Code	Monomer structure	IUPAC name	alternative name
1	M1P		4-hydroxybenzaldehyde	-
2	M1G		4-hydroxy-3-methoxybenzaldehyde	Vanillin
3	M1S		4-hydroxy-3,5-dimethoxybenzaldehyde	Syringaldehyde
4	M2S		2,6-dimethoxycyclohexa-2,5-diene-1,4-dione	2,6-dimethoxy-1,4-benzoquinone
5	M3		4-propylcyclohexan-1-ol	-
6	M4		4-(3-hydroxypropyl)benzene-1,2-diol	4-propanolcatechol
7	M5		4-propylbenzene-1,2-diol	4-propylcatechol

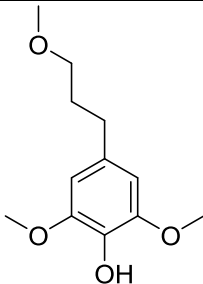
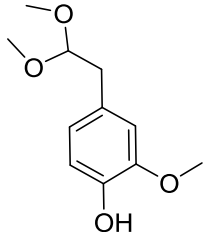
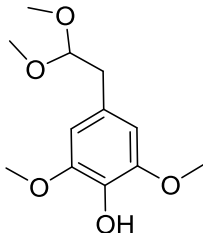
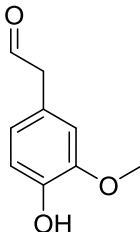
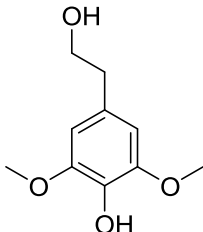
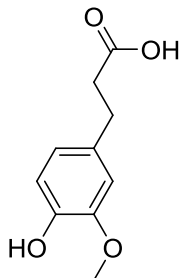
8	M6P		4-ethylphenol	-
9	M6G		4-ethyl-2-methoxyphenol	4-ethylguaiacol
10	M6S		4-ethyl-2,6-dimethoxyphenol	4-ethylsyringol
11	M7G		2-methoxy-4-propylphenol	4-propylguaiacol
12	M7S		2,6-dimethoxy-4-propylphenol	4-propylsyringol
13	M8S		methyl 2-(4-hydroxy-3,5-dimethoxyphenyl)acetate	4-hydroxy-3,5-dimethoxy- benzeneacetic acid methyl ester
14	M9S		4-allyl-2,6-dimethoxyphenol	4-allyl-2,6-dimethoxyphenol
15	M10G		4-(3-hydroxypropyl)-2-methoxyphenol	4-propanolguaiacol

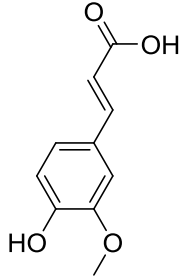
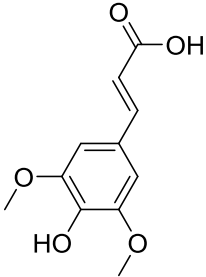
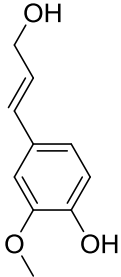
16	M10S		4-(3-hydroxypropyl)-2,6-dimethoxyphenol	4-propanolsyringol
17	M11		3-methoxy-2,5,6-trimethylphenol	-
18	M12G		((4-(3-((triethylsilyl)oxy)propyl)-1,2-phenylene)bis(oxy))bis(triethylsilane)	-
19	M12S		((5-(3-((triethylsilyl)oxy)propyl)benzene-1,2,3-triyl)tris(oxy))tris(triethylsilane)	-
20	M13G		((4-propyl-1,2-phenylene)bis(oxy))bis(triethylsilane)	-
21	M13S		((5-propylbenzene-1,2,3-triyl)tris(oxy))tris(triethylsilane)	-
22	M14		toluene	-
23	M15		ethylbenzene	-

24	M16		propylbenzene	-
25	M17P		4-((1,3-dioxolan-2-yl)methyl)phenol	-
26	M17G		4-((1,3-dioxolan-2-yl)methyl)-2-methoxyphenol	-
27	M17S		4-((1,3-dioxolan-2-yl)methyl)-2,6-dimethoxyphenol	-
28	M18G		2-methoxy-4-(prop-1-en-1-yl)phenol	4-(1-propenyl)guaiacol
29	M18S		2,6-dimethoxy-4-(prop-1-en-1-yl)phenol	4-(1-propenyl)syringol
30	M19G		1-(4-hydroxy-3-methoxyphenyl)propane-1,2-dione	-

31	M19S		1-(4-hydroxy-3,5-dimethoxyphenyl)propane-1,2-dione	-
32	M20S		4-hydroxy-3,5-dimethoxybenzoic acid	Syringic acid
33	M21G		3-hydroxy-1-(4-hydroxy-3-methoxyphenyl)propan-1-one	-
34	M21S		3-hydroxy-1-(4-hydroxy-3,5-dimethoxyphenyl)propan-1-one	-
35	M22S		1-(4-hydroxy-3,5-dimethoxyphenyl)propan-1-one	-
36	M23G		1-(4-hydroxy-3-methoxyphenyl)ethan-1-one	-
37	M24P		phenol	-
38	M24G		2-methoxyphenol	-
39	M24S		2,6-dimethoxyphenol	-

40	M25			-
41	M26		hexa-2,4-dienedioic acid	muconic acid
42	M27P		methyl (E)-3-(4-hydroxyphenyl)acrylate	methyl coumarate
43	M27G		methyl (E)-3-(4-hydroxy-3-methoxyphenyl)acrylate	methyl ferulate
44	M28P		methyl 3-(4-hydroxyphenyl)propanoate	-
45	M28G		methyl 3-(4-hydroxy-3-methoxyphenyl)propanoate	-
46	M29G		4-(2-hydroxyethyl)-2-methoxyphenol	-
47	M30G		2-methoxy-4-(3-methoxypropyl)phenol	4-n-methoxypropylguaicol

48	M30S		2,6-dimethoxy-4-(3-methoxypropyl)phenol	4-n-methoxypropylsyringol
49	M31G		4-(2,2-dimethoxyethyl)-2-methoxyphenol	homovanillyl aldehyde dimethyl acetal
50	M31S		4-(2,2-dimethoxyethyl)-2,6-dimethoxyphenol	homosyringaldehyde dimethyl acetal
51	C2AldG		2-(4-hydroxy-3-methoxyphenyl)acetaldehyde	Homovanillin
52	C2AlkS		4-(2-hydroxyethyl)-2,6-dimethoxyphenol	
53	C3Acid G		4-(4-hydroxy-3-methoxyphenyl)propanoic acid	Dihydroferulic acid

54	FA		(E)-3-(4-hydroxy-3-methoxyphenyl)acrylic acid	Ferulic acid
55	SA		(E)-3-(4-hydroxy-3,5-dimethoxyphenyl)acrylic acid	Sinapic acid
56	CoA		(E)-4-(3-hydroxyprop-1-en-1-yl)-2-methoxyphenol	Coniferyl alcohol