

Supporting information

A low-cost and water resistant biomass adhesive derived from hydrolysate of leather wastes

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Table S1 ²⁹Si chemical shifts (δ (ppm)) and relative peak area (I (%)) for T_i and D_i units derived from ²⁹Si CP-MAS NMR spectra.

Sample	T ₁		T ₂		T ₃		D ₁		D ₂	
	δ	I	δ	I	δ	I	δ	I	δ	I
GPDMS-CH							-7.9	30.55	-14.8	69.45
GPTMS-CH	-48.8	5.15	-59.2	26.02	-70.1	68.83				
GPTES-CH	-50.3	7.37	-60.3	21.47	-69.8	71.16				

Table S2 Wood failure results of the plywood panels bonded with CH-based adhesives in soak tests.

SCA	The molar ratio of SCA to CH	Specimens failed in soak test	
Without SCA treated	0	3/5	
	GPTDM	0.1	1/5
		0.5	1/5
		1.0	0/5
		1.5	0/5
		2.0	0/5
		GPTMS	0.1
0.5	0/5		
1.0	0/5		
1.5	0/5		
2.0	0/5		
GPTES	0.1		1/5
	0.5		1/5
	1.0	0/5	
	1.5	0/5	
	2.0	0/5	