

## **ELECTRONIC SUPPLEMENTARY INFORMATION**

### **Synthesis and characterization of acrylic polyols and polymers from soybean oils for pressure-sensitive adhesives**

Yonghui Li, Xiuzhi Susan Sun\*

Bio-Materials and Technology Lab, Department of Grain Science and Industry, Kansas  
State University, Manhattan, KS 66506

\*Correspondence to: Xiuzhi Susan Sun, E-mail: [xss@ksu.edu](mailto:xss@ksu.edu), Ph: 785-532-4077, fax:  
785-532-7193

**Table S1. Effect of soft monomer, hard monomer, and polar monomer on peel**

DAESO1, g	2-EHA, g	BA, g	MA, g	AA, g	MAA, g	PI, g	Rosin, g	Peel strength, N/in	Note
1	0.9			0.1		0.06	0.5	4.47±0.13	
1		0.9		0.1		0.06	0.5	1.25±1.05	Rigid
1			0.9	0.1		0.06	0.5	0.85±0.80	Rigid
1	0.9				0.1	0.06	0.5	6.88±0.53	100% CF

**Table S2. Effect of AA amount on PSA peel adhesion**

DAESO1, g	2-EHA, g	AA, g	PI, g	Rosin, g	Peel strength, N/in	Note
1	1	0	0.06	0.5	2.62±0.06	
1	0.9	0.1	0.06	0.5	4.47±0.13	
1	0.8	0.2	0.06	0.5	2.65±1.20	rigid

**Table S3. Effect of acrylic polyol/2-EHA ratio on PSA peel adhesion**

DAESO1, g	2-EHA, g	AA, g	PI, g	Rosin, g	Peel strength, N/in	Note
0.75	1.15	0.1	0.06	0.5	4.29±0.17	Too soft, 1/3CF
0.9	1.0	0.1	0.06	0.5	4.75±0.18	
1	0.9	0.1	0.06	0.5	4.47±0.13	
1.1	0.8	0.1	0.06	0.5	3.71±0.87	Slightly rigid
1.25	0.65	0.1	0.06	0.5	2.87±0.60	some rigid
1.5	0.4	0.1	0.06	0.5	1.82±0.87	Rigid

**Table S4. Effect of rosin on PSA peel adhesion**

DAESO1, g	2-EHA, g	AA, g	PI, g	Rosin, g	Peel strength, N/in	Note
1	0.9	0.1	0.06	0	0.76±0.06	
1	0.9	0.1	0.06	0.5	4.47±0.13	
1	0.9	0.1	0.06	0.7	7.50±1.04	CF
1	0.9	0.1	0.06	1	9.04±3.68	CF
1	0.9	0.1	0.06	1.5	3.61±1.80	CF

Note: 2-EHA, 2-ethylhexyl acrylate; BA, butyl acrylate; MA, methyl acrylate; AA, acrylic acid; MAA, methacrylic acid; PI, photoinitiator

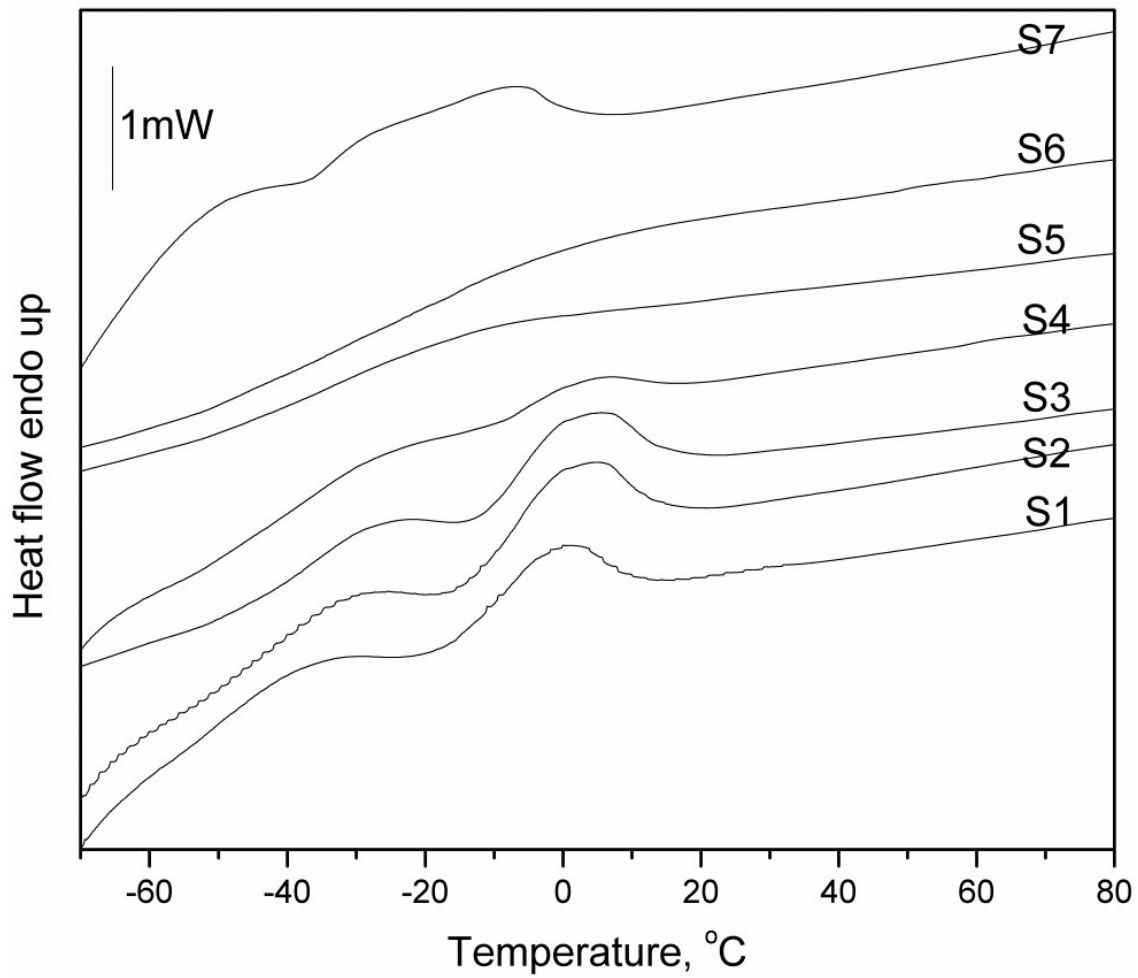


Figure S1. DSC thermograms of polymers.