

Supplementary Material for:

A Multi-Streamline Approach for Upcycling PET into Biodiesel and Asphalt Modifier

**Kainan Chen¹, Zeinab Mraiza², Yunqiao Pu³, and Jinghao Li¹, Zhihua Liu¹, Arthur J. Ragauskas^{3,4,5},
Fujie Zhou^{2*}, Joshua S. Yuan^{1,6*}**

¹ Synthetic and Systems Biology Innovation Hub, Department of Plant Pathology and Microbiology, Texas A&M University, College Station, TX 77843, USA

² Texas A&M Transportation Institute, Texas A&M University, College Station, TX 77843, USA

³ Joint Institute for Biological Sciences, Biosciences Division, Oak Ridge National Laboratory, Oak Ridge, TN 37831, USA

⁴ Department of Chemical and Biomolecular Engineering, The University of Tennessee, Knoxville, TN 37996-2200, USA

⁵ Department of Forestry, Wildlife and Fisheries, Center for Renewable Carbon, Institute of Agriculture, The University of Tennessee, Knoxville, TN 37996-2200, USA

⁶ Department of Energy, Environmental, and Chemical Engineering, McKelvey School of Engineering, Washington University in St. Louis, St. Louis, MO 63130-4899, USA

* Correspondence: Fujie Zhou: f-zhou@tamu.edu and Joshua S. Yuan: joshua.yuan@wustl.edu

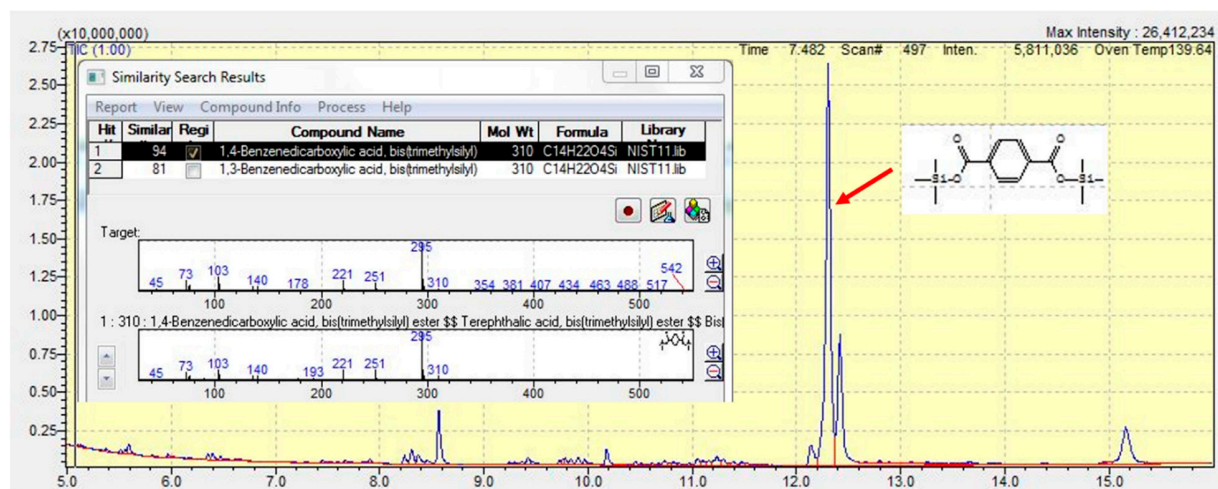


Figure S1. Gas chromatography/mass spectrometry (GC/MS) characterization of the solubilized PET.

Table S1. Relative contents of aromatic hydrogens and benzylic protons in asphalt binders quantified by ^1H NMR.

Asphalt samples	Original asphalt	Asphalt modified with 5% original PET	Asphalt modified with 5% fractionated PET
Aromatic H	6.83%	6.95%	7.0%
Benzylic H	12.9%	14.0%	14.1%