

SUPPLEMENTARY MATERIAL TO  
**Co-pyrolysis of various plastic waste components as an environmentally sustainable source of alternative fuels**

IVANA JOVANČIĆEVIĆ<sup>1</sup>, MALIŠA ANTIĆ<sup>2</sup>, GORDANA GAJICA<sup>3</sup> and JAN SCHWARZBAUER<sup>1\*</sup>

<sup>1</sup>*RWTH Aachen University, Institute of Organic Biochemistry in Geo-Systems, Lochnerstrasse 4–20, 52056, Aachen, Germany,* <sup>2</sup>*University of Belgrade, Faculty of Agriculture, Nemanjina 6, 11 080, Zemun, Belgrade, Serbia and* <sup>3</sup>*University of Belgrade, Institute of Chemistry, Technology and Metallurgy, Njegoševa 12, 11000 Belgrade, Serbia*

*J. Serb. Chem. Soc.* 89 (7–8) (2024) 1053–1066

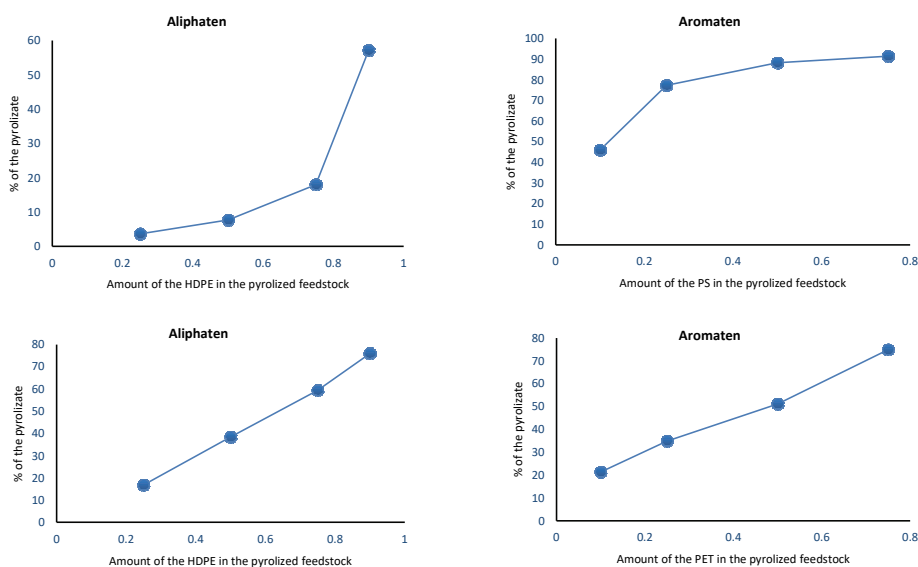


Fig. S-1. Quantitative analysis of the most abundant degradation products in the co-pyrolysis experiments of: a) Correlation between the pyrolyzed feedstock in the HDPE/PS mixture and the % of the pyrolysis products in the obtained pyrolyzate; and b) Correlation between the pyrolyzed feedstock in the HDPE/PET mixture and the % of the pyrolysis products in the obtained pyrolyzate.

\* Corresponding author. E-mail: jan.schwarzbauer@emr.rwth-aachen.de

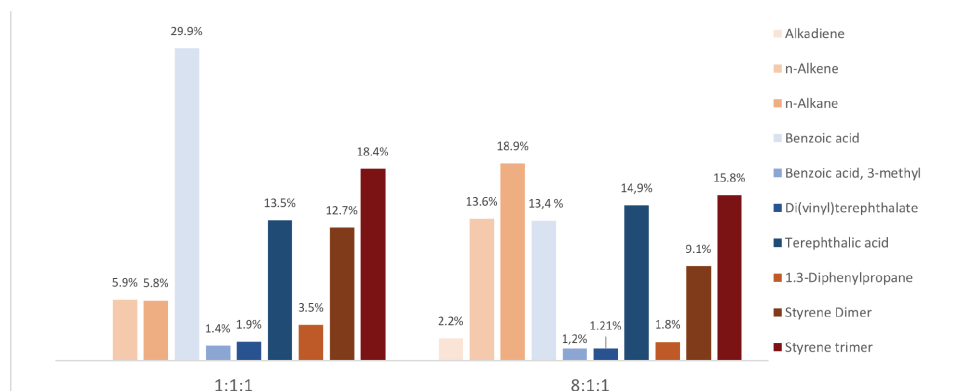


Fig. S-2. Distribution of the most abundant degradation products obtained from co-pyrolysis experiments on HDPE/PS/PET mixtures (%).

Table S-I. The identified pyrolysis products from the co-pyrolysis experiments of the HDPE:PS:PET mixture

Nr.	Compound
1	Aliphatic compounds C <sub>17</sub> -C <sub>27</sub>
2	Benzoic acid
3	3-Methyl-benzoic acid
4	Diphenyl
5	4-Ethylbenzoic acid
6	4-Vinylbenzoic acid
7	Di(vinyl)terephthalate
8	Ethyl vinyl terephthalate
9	Terephthalic acid
10	Ethyl-4-ethoxybenzoate
11	Monomethyl terephthalate
12	Ethan-1,2-diylidibenzoate
13	2-(Benzoyloxy)ethyl vinyl terephthalate
14	Diphenylmethane
15	1,2-Diphenylethylene
16	Bibenzyl
17	1,2-Diphenylpropane -
18	1,3-Diphenylpropane
19	2,4-Diphenyl-1-butene
20	1,2,3,4-Tetrahydro-1-phenylnaphthalene -
21	1,3-Diphenylbutene
22	1,4-Diphenylbutene
23	Unknown
24	1,5-Diphenyl-1,5-hexadiene
25	2,4,6-Triphenyl-1-hexene
26	1-Phenyl-4-(10-phenylethyl) tetralin isomer