Supplementary material

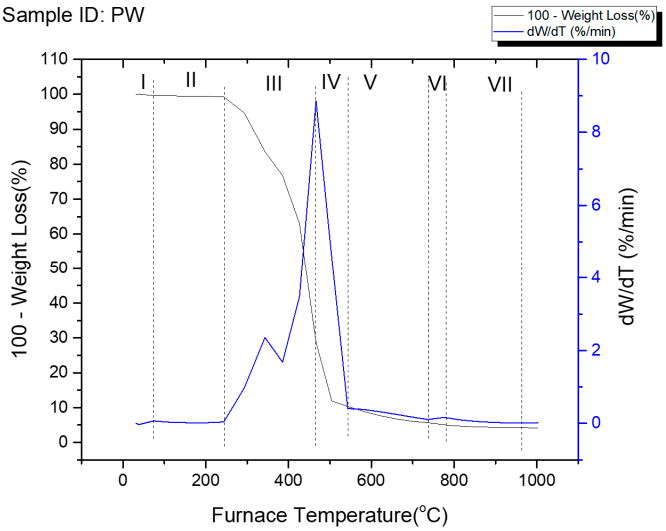
Thermochemical and kinetic analysis of combustion of plastic wastes and their blends with lignite

Agapi Vasileiadou[1,2*], Costas Tsioptsias[3*]

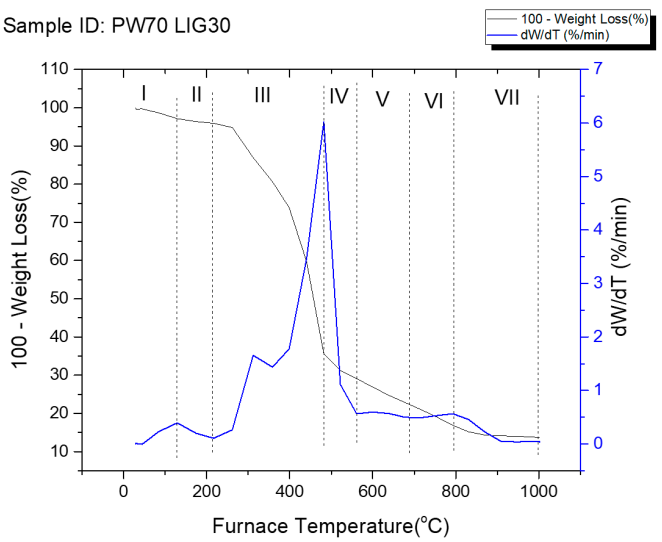
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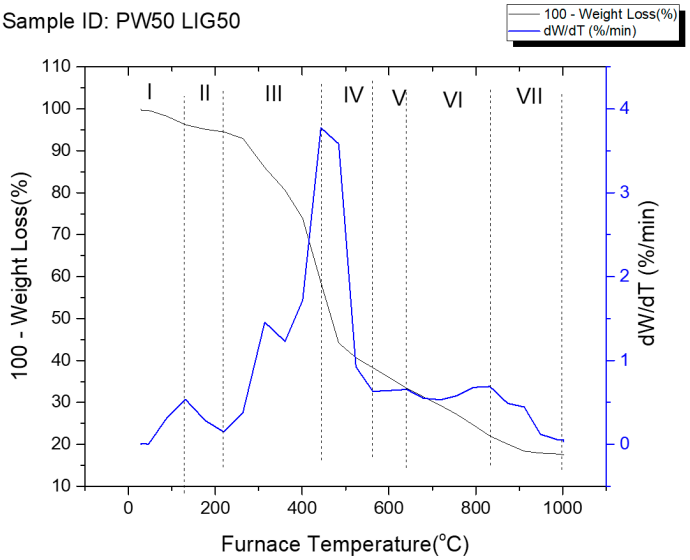
a.



b.


Sample ID: PW70 LIG30
100 - Weight Loss(%)
dW/dT (%/min)
I
II
III
IV
V
VI
VII
100 - Weight Loss(%)
dW/dT (%/min)
Furnace Temperature(°C)

c.


Sample ID: PW50 LIG50
100 - Weight Loss(%)
dW/dT (%/min)
I
II
III
IV
V
VI
VII
100 - Weight Loss(%)
dW/dT (%/min)
Furnace Temperature(°C)

d.

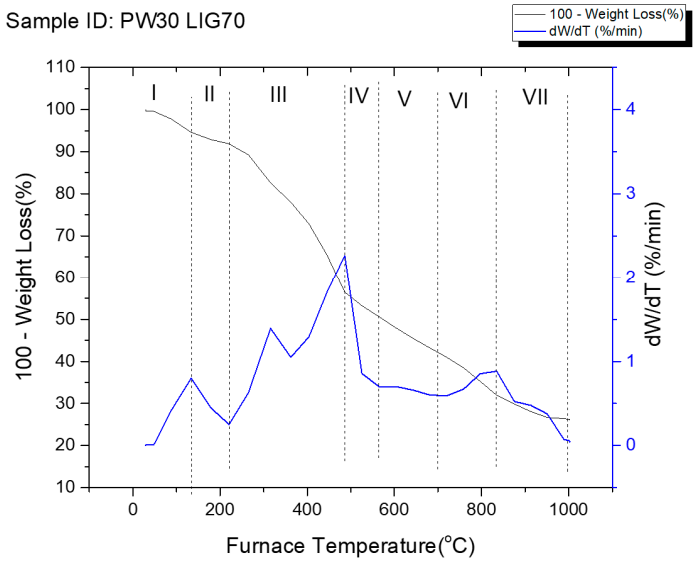
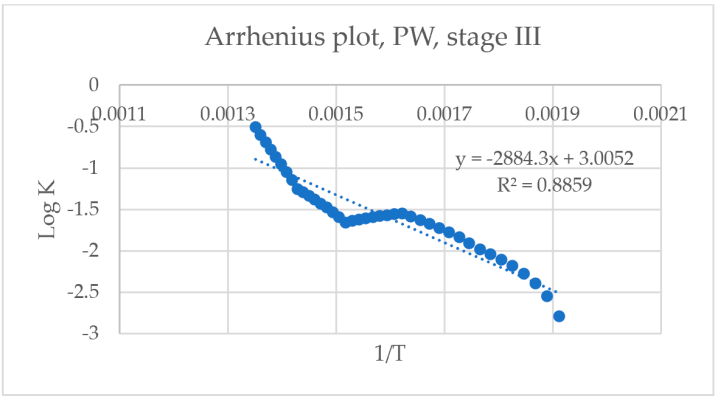
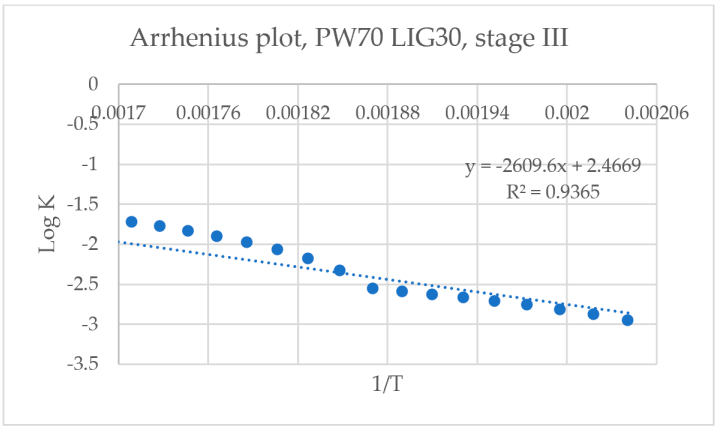

Sample ID: PW30 LIG70
100 - Weight Loss(%)
dW/dT (%/min)
I
II
III
IV
V
VI
VII
100 - Weight Loss(%)
dW/dT (%/min)
Furnace Temperature(°C)

Figure S1. Stages of TG/DTG graphs of PW sample and its blends with lignite. **a.** PW sample, **b.** PW70 LIG30 blend, **c.** PW50 LIG50 blend, **d.** PW30 LIG70 blend.

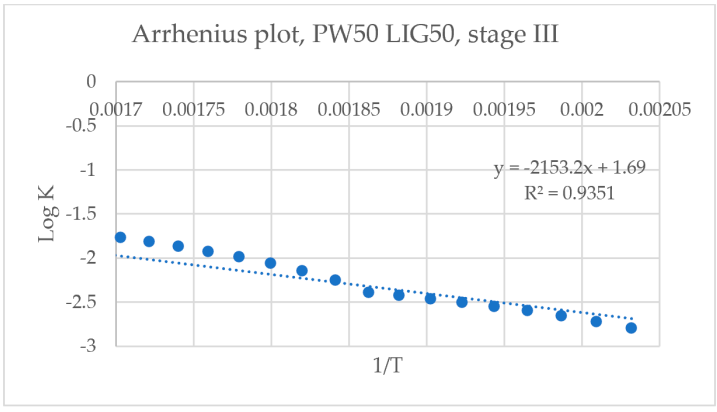
a.



b.



c.



d.

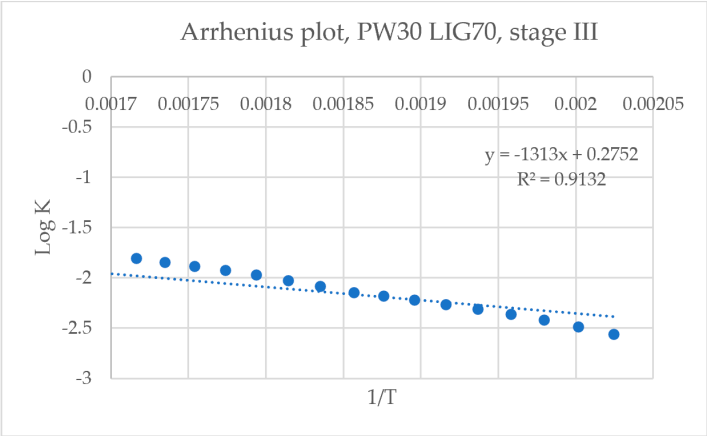


Figure S2. Arrhenius plots of the analyzed PW sample waste and its blends with lignite. **a.** PW sample, **b.** PW70 LIG30 blend, **c.** PW50 LIG50 blend, **d.** PW30 LIG70 blend.

Table S1. Results of the proximate analysis of plastic wastes sample (PW), and its blends with lignite, in wt.%.

Sample ID	Moisture	s.d.	Ash	s.d.	Volatiles	s.d.	Fixed Carbon
PW	0.05	±0.03	5.16	±0.31	92.03	±1.17	2.76
PW70 LIG30	1.95	±0.05	14.58	±0.13	78.19	±0.00	5.29
PW50 LIG50	3.18	±0.02	21.31	±0.64	66.61	±0.95	8.91
PW30 LIG70	4.46	±0.00	28.51	±0.33	55.25	±0.76	11.78
LIGA[a]	6.33	±0.41	38.90	±0.22	42.93	±0.71	11.85

[a] LIGA results was taken from previous study of the author [24]