FIG. 1A

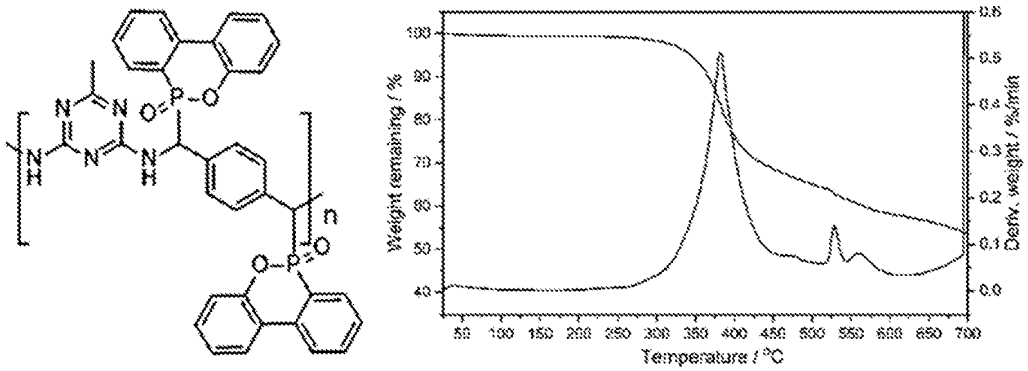
Weight remaining / %
Deriv. weight / %/min
Temperature / °C

FIG. 1B

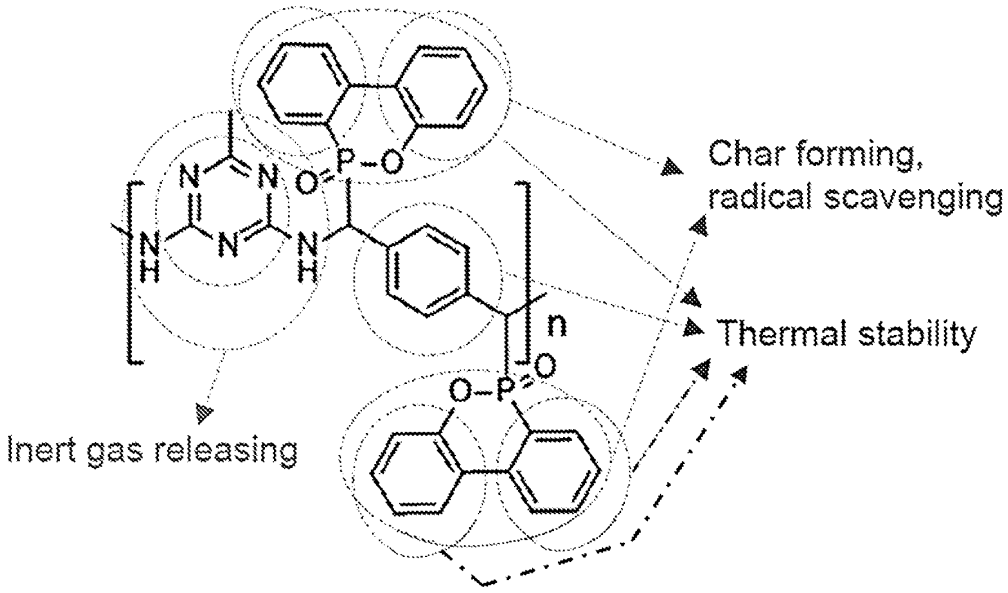
Char forming,
radical scavenging
Thermal stability
Inert gas releasing

FIG. 2

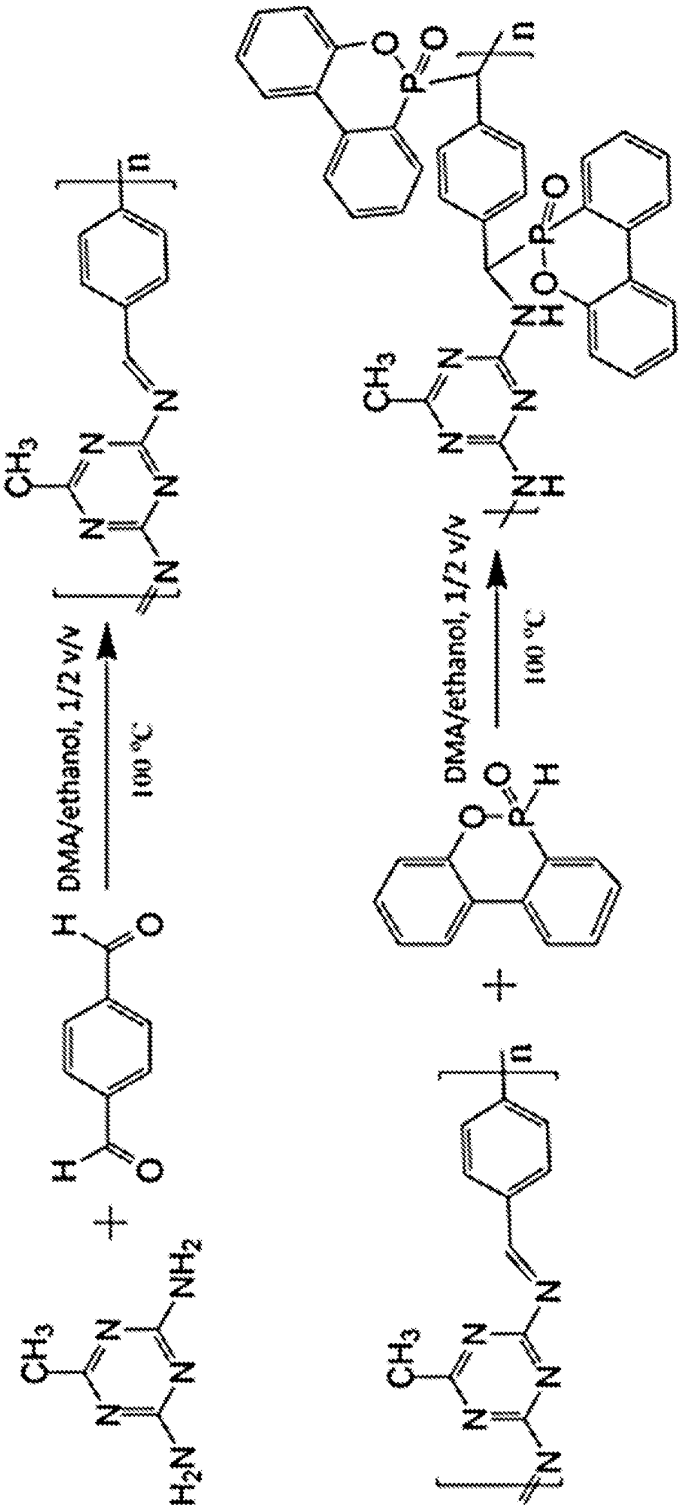

FIG. 3

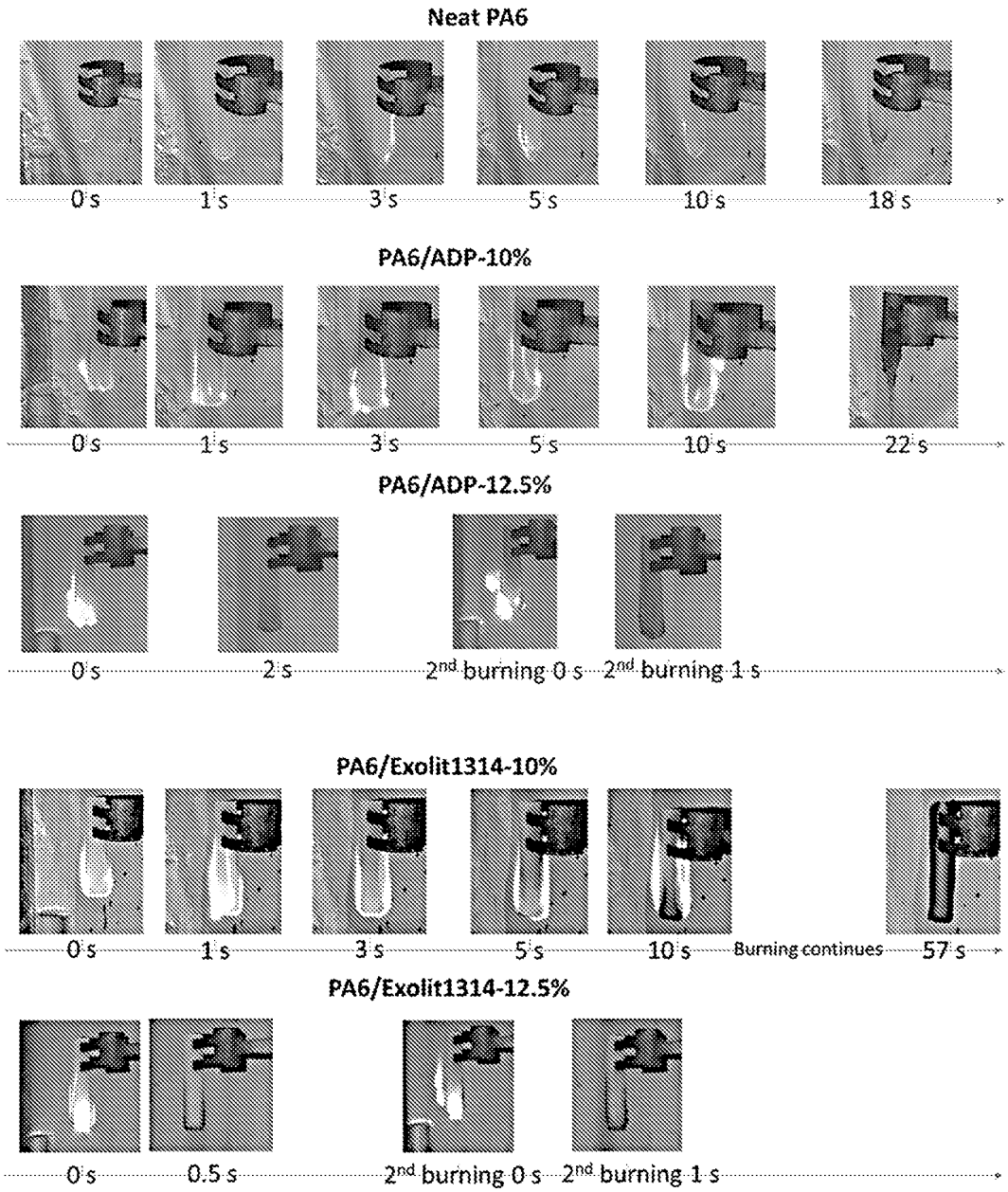
Neat PA6
0 s
1 s
3 s
5 s
10 s
18 s
PA6/ADP-10%
0 s
1 s
3 s
5 s
10 s
22 s
PA6/ADP-12.5%
0 s
2 s
2nd burning 0 s
2nd burning 1 s
PA6/Exolit1314-10%
0 s
1 s
3 s
5 s
10 s
Burning continues
57 s
PA6/Exolit1314-12.5%
0 s
0.5 s
2nd burning 0 s
2nd burning 1 s

FIG. 3 (Continued)

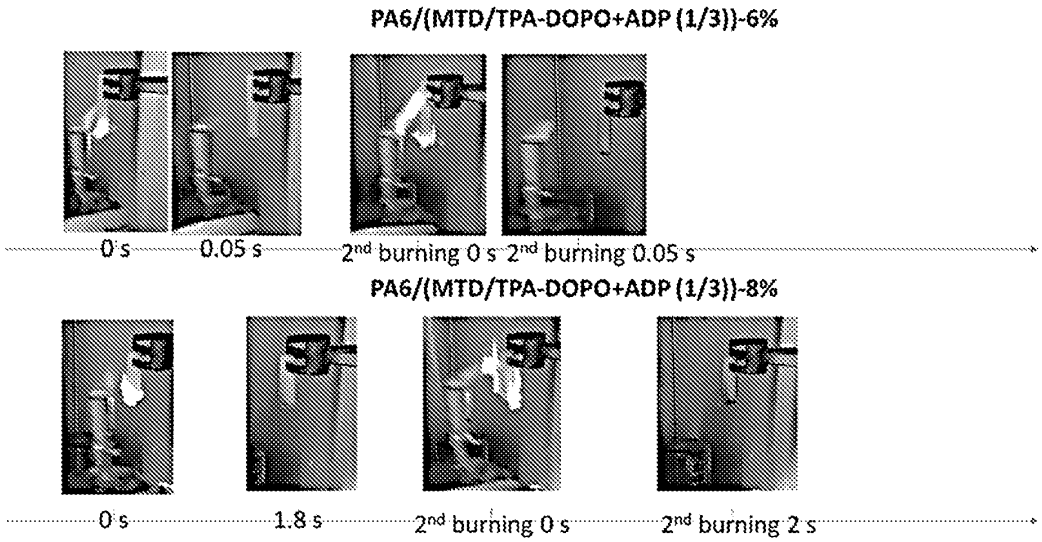

FIG. 4

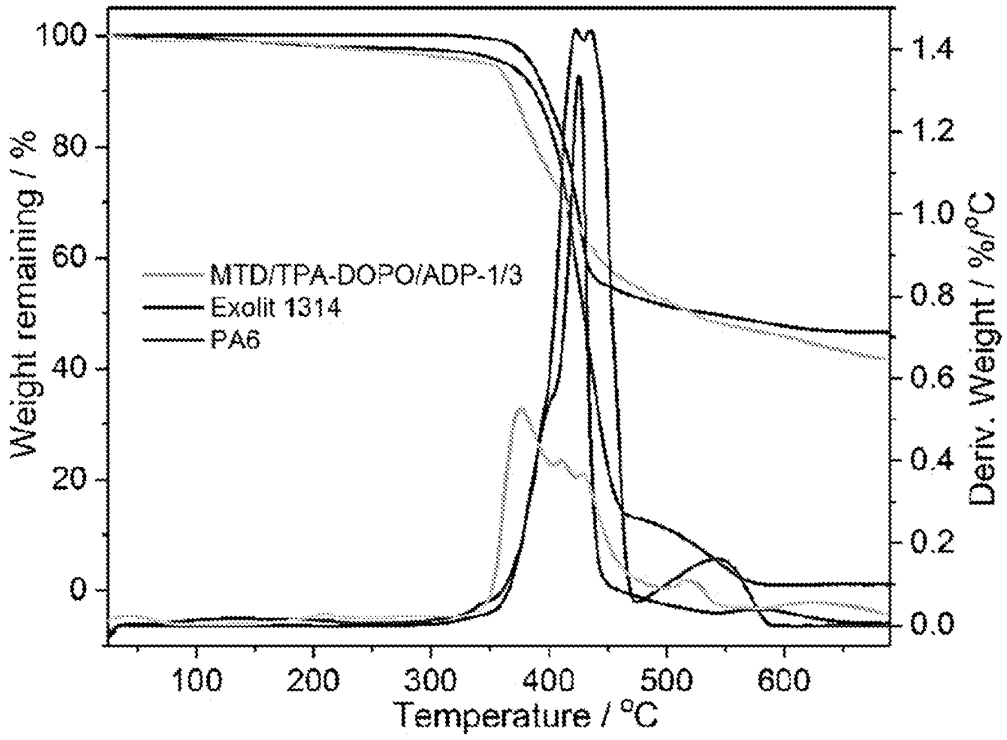

FIG. 5

Sample	Modulus (MPa)	Max Tensile Strength (MPa)	Impact toughness (KJ/m^2)
Neat PA6	3011±72	77.3±1.2	5.82±0.83
PA6_ADP-12.5 wt%	3311±204	66.6±2.7	4.07±0.14
PA6_Exolit 1314-12.5 wt%	2992±55	67.3±1.5	3.82±0.20
PA6_MTD/TPA-DOPO/ADP-1/3-6 wt%	2961±119	75.2±1.0	3.45±0.08
PA6_MTD/TPA-DOPO/ADP-1/3-8 wt%	3036±142	86.1±1.2	3.95±0.02

FIG. 6

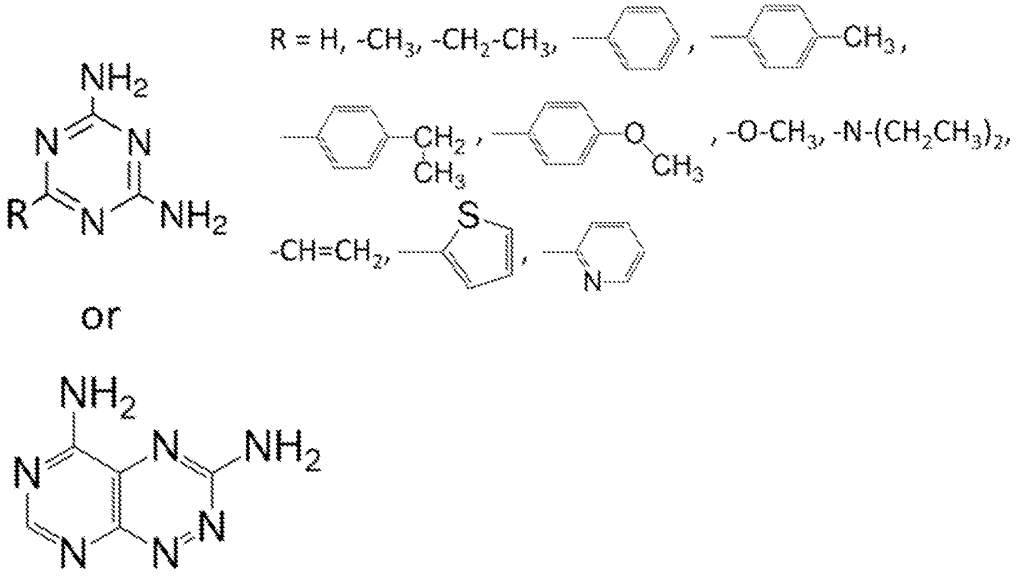

FIG. 7

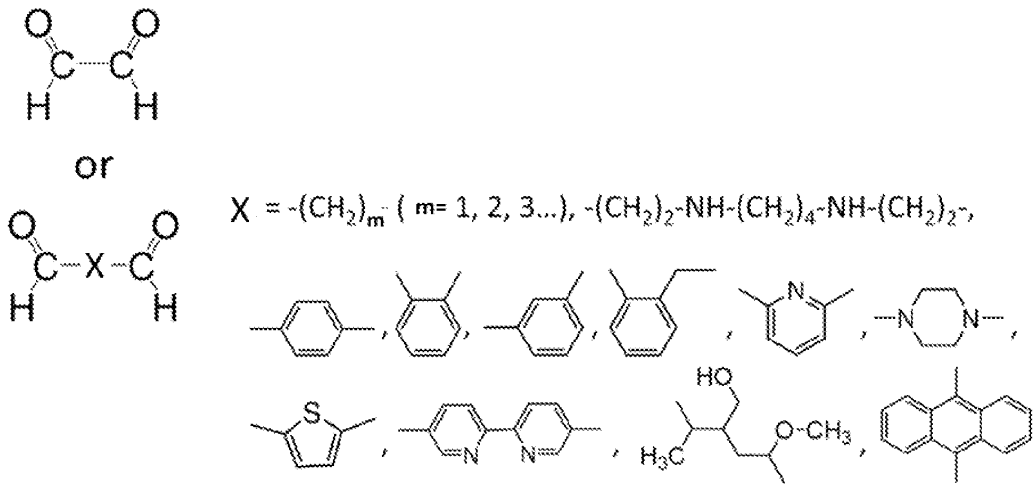
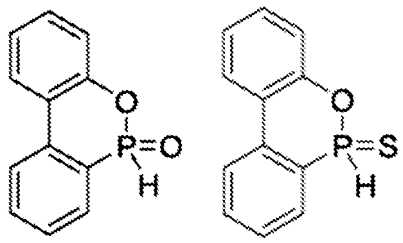
FIG. 8