

Supporting Information

Combustion Characterization and Modeling of Novel Nanoenergetic Composites of $\text{Co}_3\text{O}_4/\text{nAl}$

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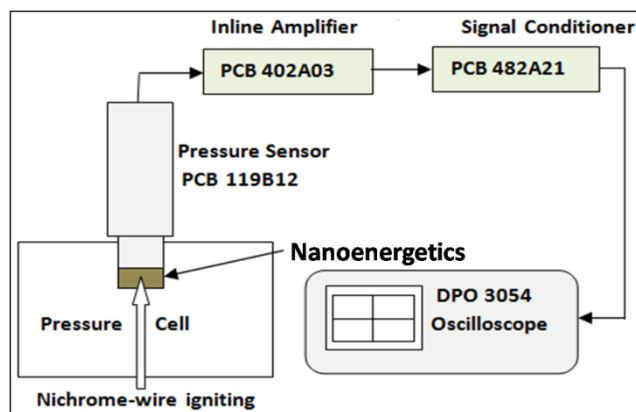


Figure S1. Pressure-time characteristics measuring set-up

Table S1. Reactive mass distribution of Co₃O₄/nAl nanoenergetics at equivalence ratio of 1.6

Mass of nanoenergetics excluding Al ₂ O ₃ (mg)	% Al ₂ O ₃	Al (mg)	Co ₃ O ₄ (mg)
26.360	46.56	6.063	20.297

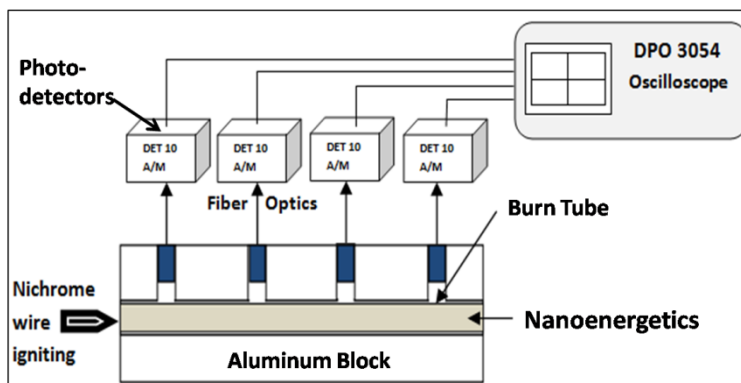


Figure S2. Combustion wave speed measuring set-up

Table S2. Combustion front-wave speed and pressure-time measurements of $\text{Co}_3\text{O}_4/\text{nAl}$ and $\text{Co}_3\text{O}_4\text{-400/nAl}$ nanoenergetics

Nanoenergetic Composites	Equivalence ratio (ϕ)	Combustion front-wave speed (m/sec)	Pressure-time measurements	
			Peak pressure (MPa)	Pressurization rate (MPa/ μs)
$\text{Co}_3\text{O}_4/\text{nAl}$	1.4	480 \pm 25	19.8 \pm 2	0.11 \pm 0.05
	1.6	625 \pm 50	20 \pm 2	0.14 \pm 0.05
	1.8	781 \pm 50	12.6 \pm 1	0.08 \pm 0.05
$\text{Co}_3\text{O}_4\text{-400/nAl}$	1.4	590 \pm 50	26 \pm 2	0.29 \pm 0.1
	1.6	830 \pm 75	32.6 \pm 3	0.47 \pm 0.1
	1.8	760 \pm 50	30.4 \pm 3	0.38 \pm 0.1