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# Supplementary for

## Controlled Thermal Release of L-Menthol with

## Cellulose Acetate Fiber Shelled Metal-Organic

## Framework

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Table S1. Shifts in corresponding IR peaks of MIL-101 (Cr) and LM@ MIL-101 (Cr)

Assignment	MIL-101 (Cr)	LM@MIL-101 (Cr)
OH- stretching vibration	3450 cm <sup>-1</sup>	3380 cm <sup>-1</sup>
-C-H, -CH <sub>3</sub> , and -CH <sub>2</sub> asymmetric stretching vibrations	/	2960 cm <sup>-1</sup>
-C-H, -CH <sub>2</sub> asymmetric stretching	/	2930 cm <sup>-1</sup>
-C-H symmetric stretching vibrations	/	2870 cm <sup>-1</sup>
C=C stretching vibration	1630 cm <sup>-1</sup>	1630 cm <sup>-1</sup>
C=C stretching vibration	1500 cm <sup>-1</sup>	1500 cm <sup>-1</sup>
O-C-O symmetric stretching vibration	1380 cm <sup>-1</sup>	1400 cm <sup>-1</sup>
C-H stretching vibration	1050 cm <sup>-1</sup>	1050 cm <sup>-1</sup>
C-H stretching vibration	1020 cm <sup>-1</sup>	1020 cm <sup>-1</sup>
C-H stretching vibration	750 cm <sup>-1</sup>	747 cm <sup>-1</sup>
Cr-O stretching vibration	550 cm <sup>-1</sup>	592 cm <sup>-1</sup>

Table S2. BET date analysis of MIL-101 (Cr) and LM@ MIL-101 (Cr)

Samples	BET Area	Micropore Area	Micropore volume
MIL-101 (Cr)	2636.8 m <sup>2</sup> .g <sup>-1</sup>	406.8167 m <sup>2</sup> .g <sup>-1</sup>	1.06 cm <sup>3</sup> .g <sup>-1</sup>
LM@MIL-101 (Cr)	1344.8 m <sup>2</sup> .g <sup>-1</sup>	386.8031 m <sup>2</sup> .g <sup>-1</sup>	0.56 cm <sup>3</sup> .g <sup>-1</sup>

Table S3. Pseudo-first order and pseudo-second order kinetic fitting parameters

Modle	$q_e$	$k$	$R^2$
Pesudo-first order	432.1 mg g <sup>-1</sup>	4.46 min <sup>-1</sup>	0.996
Pesudo-second order	448.8 mg g <sup>-1</sup>	0.02 g (mg.min) <sup>-1</sup>	0.980

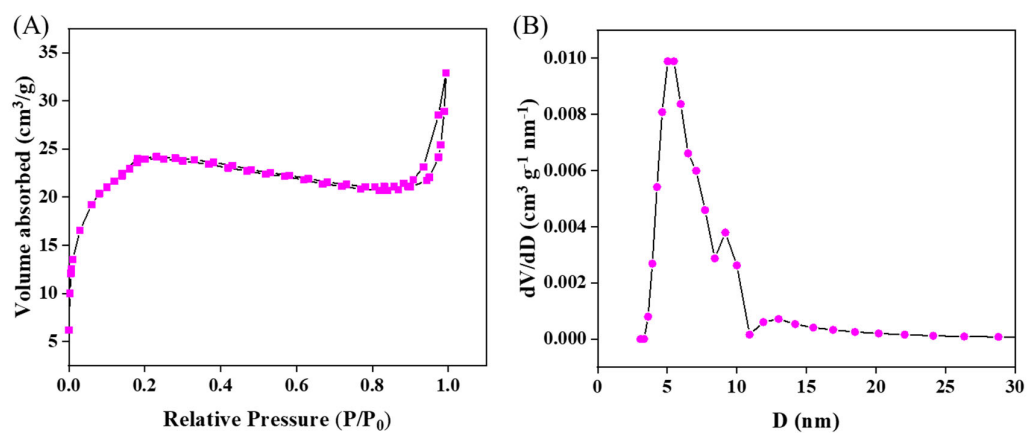
Figure S1. (A) N<sub>2</sub> adsorption/desorption isotherms; (B) Pore size distribution of LM@MIL-101 (Cr)-CAF<sub>0.9</sub>.

Table S4. Heat release of LM in different systems

Samples	The amount of LM released (μg)							
	32s	64s	96s	128s	160s	192s	224s	256s
LM	14.41	15.29	16.68	14.81	13.46	12.81	12.60	11.79
LM-CAF <sub>0.9</sub>	9.11	11.73	8.69	8.10	6.89	6.38	5.98	5.59
LM@MIL-101 (Cr)-CAF <sub>0.7</sub>	6.69	8.40	8.14	7.30	6.79	6.82	5.98	5.64
LM@MIL-101 (Cr)-CAF <sub>0.9</sub>	10.29	11.56	10.77	10.95	10.74	9.67	9.12	8.59
LM@MIL-101 (Cr)-CAF <sub>1.1</sub>	8.06	7.71	7.23	7.96	7.11	7.76	7.31	7.23
LM@MIL-101 (Cr)-CAF <sub>1.3</sub>	6.58	8.18	7.72	8.08	7.71	7.62	7.20	7.22