Electronic Supplementary Material (ESI) for Materials Advances.

Electronic Supporting Information

Fabrication of microcapsule extinguishing agent with core-shell structure for lithium-ions battery fire safety

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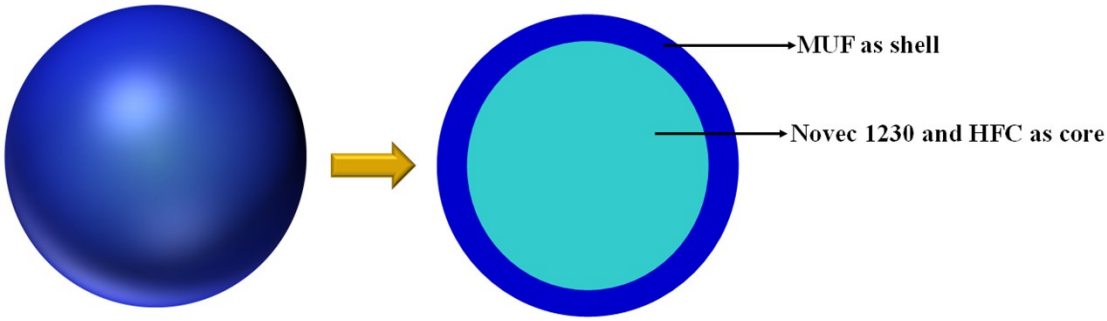

Fig. S1 Microencapsulated fire extinguishing agent as core-shell structure.

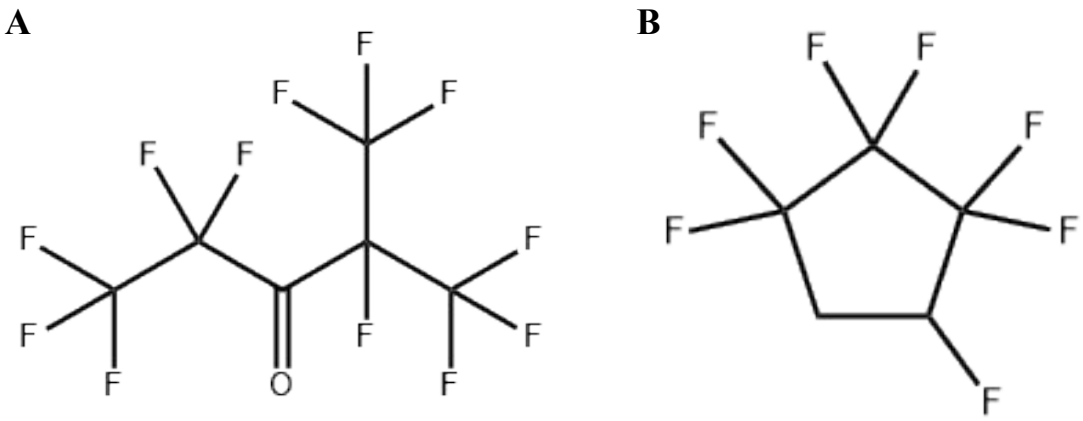

Fig. S2 Molecular formula of (A)Novec1230. (B)HFC.

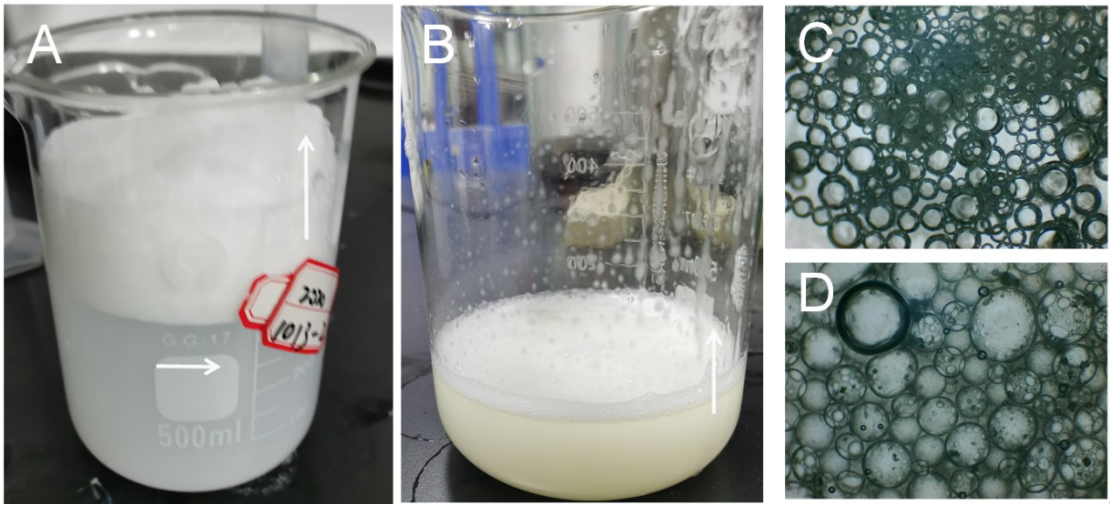

Fig. S3 Photograph of MUF microcapsule solution. (A) without antifoaming agents. (B) with octanol as antifoaming agent and optical microscopy of (C) foam. (D) emulsion in microcapsule solution.

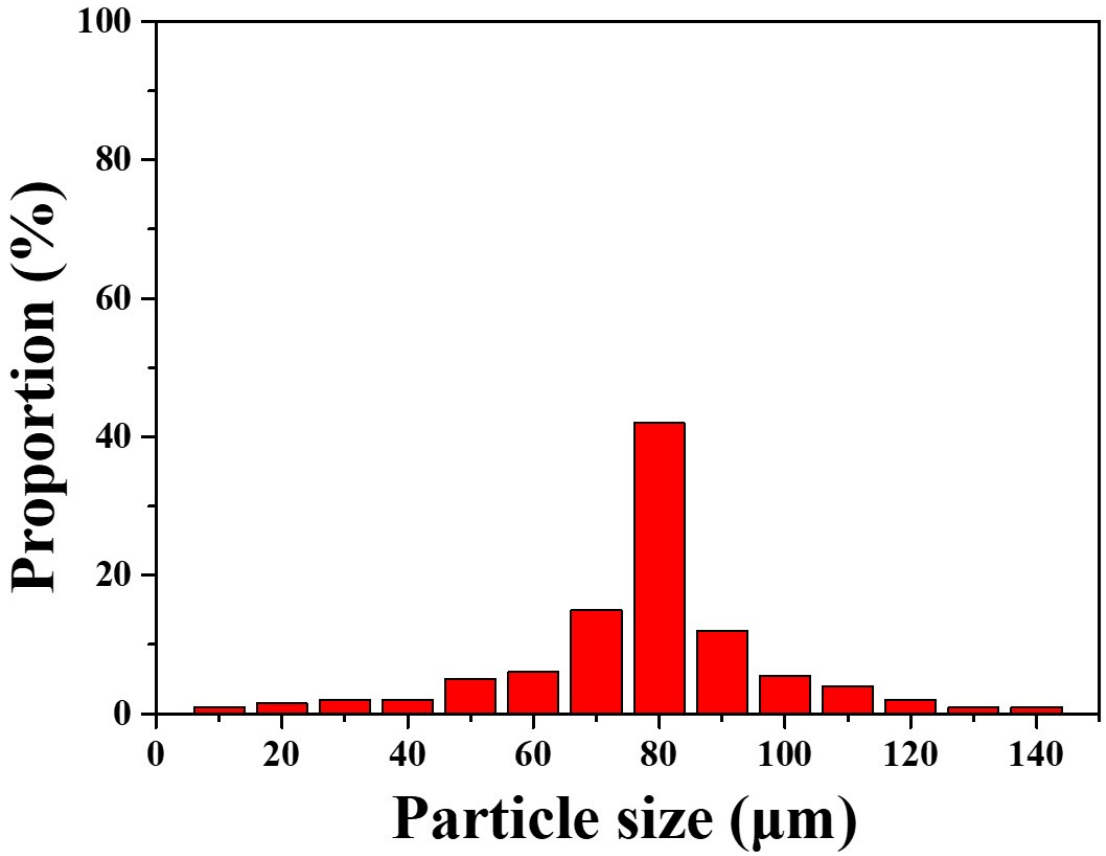

Fig. S4 Particle size analysis chart of N-H-microcapsule

Table S1. Weight statistics of different elements of N-H-microcapsules and cracked N-H-microcapsule

	Weight percent of elements (%)			
	C	N	O	F
N-H-microcapsule	26.67	18.12	7.94	47.27
Cracked N-H-microcapsule	40.54	36.20	14.17	9.09

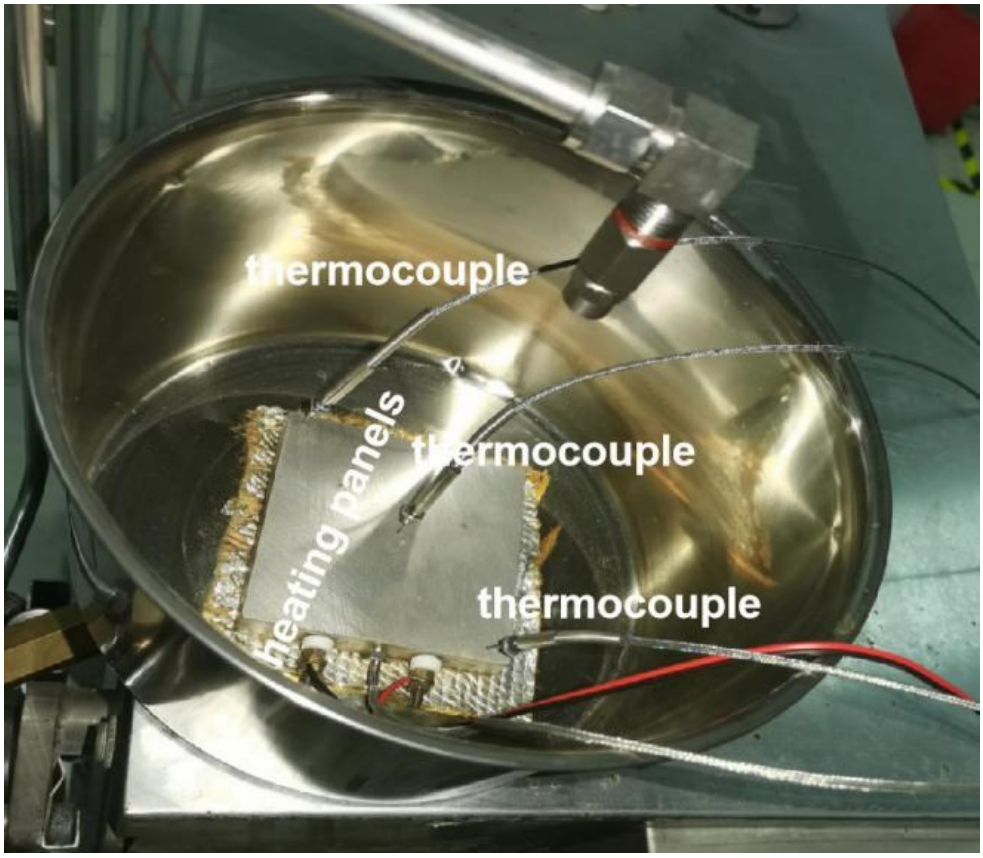

Fig. S5 experimental model diagram of cooling by fire extinguishing agent heating plate

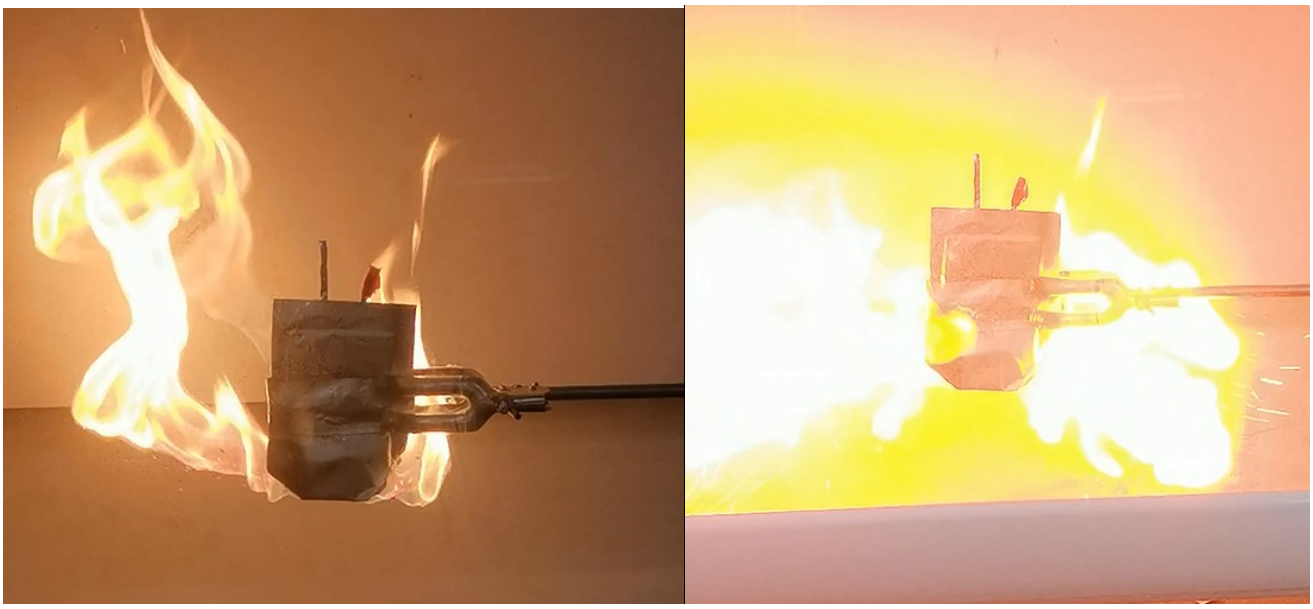

Fig. S6 Action on pouch cell wrapped in outside of plastic film for NCM523 battery.