

Article

Multilayer Nanofiber Composite Separator for Lithium-Ion Batteries with High Safety

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Table S1. Electrolyte uptake of separator with different materials.

	Poly ether ether ketone/ polyvinylpyrrolidone 8/82	Sb ₂ O ₃ modified PVDF-CTFE	Aramid/ polyphenylene sulfide	poly(vinylidene fluoride-co-trifluoroethylene)	APEAP
Electrolyte uptake (%)	340	356	238.6	160	592

Electrochemical performance

Table S2. Electrochemical performance of LIBs with different separators.

Samples	Bulk resistance (Ω)	Ionic conductivity (mS cm ⁻¹)	EIS(Ω)	Electrochemical stability window (V)
PP/PE/PP	8.16	0.15	99	4.2
PI	0.95	1.11	78	5.0
AP	0.52	1.73	62	5.3
APEAP	0.95	2.43	69	5.2

Battery performance

Table S3. Battery performance with different separators.

Samples	Initial discharge capacities (mAh g ⁻¹)	Discharge capacity after 100 cycles (mAh g ⁻¹)	Capacity retention (%)
PP/PE/PP	125.6	80.7	64.3
PI	157.5	133.7	84.9
AP	169.2	146.4	86.5
APEAP	162.1	141.0	87.0