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(54) **ADDITIVE FOR ELECTROLYTE,
ELECTROLYTE FOR RECHARGEABLE
LITHIUM BATTERY, AND RECHARGEABLE
LITHIUM BATTERY INCLUDING THE
SAME**

(71) Applicant: **SAMSUNG SDI CO., LTD.**, Yongin-si
(KR)

(72) Inventors: **Olga TSAY**, Yongin-si (KR); **Dahyun
KIM**, Yongin-si (KR); **Hyunbong
CHOI**, Yongin-si (KR); **Pavel
SHATUNOV**, Yongin-si (KR); **Sundae
KIM**, Yongin-si (KR); **Yeji YANG**,
Yongin-si (KR); **Hongryeol PARK**,
Yongin-si (KR); **Sangwoo PARK**,
Yongin-si (KR)

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ABSTRACT

An additive for an electrolyte to be utilized in a rechargeable lithium battery. The electrolyte includes a non-aqueous organic solvent, a lithium salt, and the additive that has a halogen-substituted sulfonyl group and a heteroarene having unshared electron pairs. The additive may enhance or improve the room-temperature cycle-life characteristics and suppress or reduce an increase in resistance of the rechargeable lithium battery during high-temperature storage.

