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LI et al.(10) **Pub. No.: US 2023/0231139 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **BINDER, NEGATIVE-ELECTRODE SLURRY,
NEGATIVE ELECTRODE, AND
LITHIUM-ION BATTERY**(71) Applicants: **Envision Dynamics Technology
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ABSTRACT

The present application discloses a binder, a negative-electrode slurry, a negative electrode, and a lithium-ion battery. In the present application, the binder comprises a first block polymer and a second block polymer. The first block polymer is a lithiated tetrablock polymer having a structure shown as B-C-B-A, wherein A represents a polymer block A, B represents a polymer block B, and C represents a polymer block C; the polymer block A is polymerized from alkenyl formic acid monomers; the polymer block B is polymerized from aromatic vinyl monomers; and the polymer block C is polymerized from acrylate monomers. The second block polymer is a lithiated triblock polymer having a structure shown as E-F-E, wherein E represents a polymer block E, and F represents a polymer block F; the polymer block E is polymerized from alkenyl formic acid monomers; and the polymer block F is polymerized from acrylate monomers.