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(54) Title: LITHIUM ION CELLS WITH SILICON BASED ACTIVE MATERIALS AND NEGATIVE ELECTRODES WITH WATER-BASED BINDERS HAVING GOOD ADHESION AND COHESION

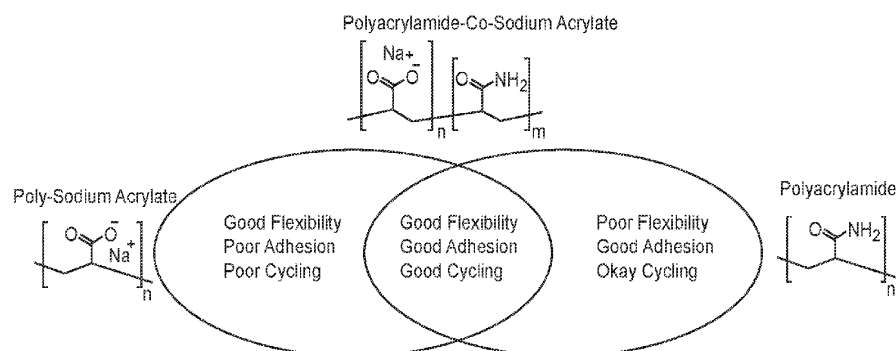


FIG. 1

(57) Abstract: Polymer binders for negative electrodes with silicon based active materials are described based on poly(acrylamide-co-acrylate salts). Lithium ion batteries incorporating electrodes formed with the binders achieve longer cycling with suitable performance. Mechanical properties associated with each of the moieties of the copolymers are studied to guide polymer selection.

[Continued on next page]

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