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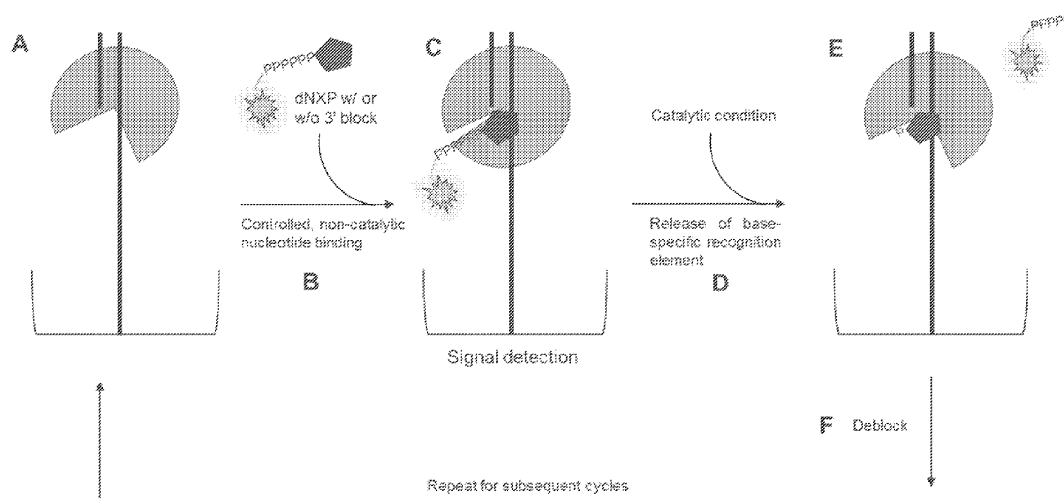
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(54) Title: CATALYTICALLY CONTROLLED SEQUENCING BY SYNTHESIS TO PRODUCE SCARLESS DNA



FIGS. 1A-1F

(57) Abstract: The present disclosure relates to methods comprising (a) contacting a polymerase with a template polynucleotide and a plurality of free nucleotides, wherein the template polynucleotide is hybridized to a complementary polynucleotide comprising a 3' end overhung by a 5' terminal fragment of the template polynucleotide, and the plurality of free nucleotides comprise a compound Formula (I); wherein said contacting occurs under a complexation condition, the complexation condition effective to form a complex but not effective to form polymerization, wherein the complex comprises the polymerase, the template polynucleotide, the complementary polynucleotide, and one of the plurality of free nucleotides that is complementary to a first nucleotide of the 5' terminal fragment of the template polynucleotide; (b) detecting a signal from the fluorescent label; and (c) exposing the complex to a polymerization condition.

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