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(54) **MASSIVE PARALLEL METHOD FOR DECODING DNA AND RNA**

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CPC ***C12Q 1/6874*** (2013.01); ***C07H 19/10*** (2013.01); ***C12Q 1/6876*** (2013.01)

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(57) **ABSTRACT**

This invention provides methods for attaching a nucleic acid to a solid surface and for sequencing nucleic acid by detecting the identity of each nucleotide analog after the nucleotide analog is incorporated into a growing strand of DNA in a polymerase reaction. The invention also provides nucleotide analogs which comprise unique labels attached to the nucleotide analog through a cleavable linker, and a cleavable chemical group to cap the —OH group at the 3'-position of the deoxyribose.

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