

ABSTRACT

DE NOVO SYNTHESIZED GENE LIBRARIES

De novo synthesized large libraries of nucleic acids are provided herein with low error rates. Further, devices for the manufacturing of high-quality building blocks, such as oligonucleotides, are described herein. Longer nucleic acids can be synthesized in parallel using microfluidic assemblies. Further, methods herein allow for the fast construction of large libraries of long, high-quality genes. Devices for the manufacturing of large libraries of long and high-quality nucleic acids are further described herein. The methods and devices described herein use a patterned surface comprising a plurality of predetermined regions comprising a silane such as N-(3-triethoxysilylpropyl)-4-hydroxybutyramide or comprising a fluorosilane such as (tridecafluorotetrahydrooctyl)-triethoxysilane.

Fig. no. 3