# A Novel Technique for Fabricating Biomolecular Nano-Arrays Enabling High-DNA Amplification and Sequencing

Tech ID: 19180 / UC Case 2007-085-0

## TECHNOLOGY DESCRIPTION

This invention provides a new approach for fabricating high-density nano-arrays for bio-molecules. Researchers used glass slides derivatized with functional groups, then coated them with a thin layer of photo-resist. Conventional photolithography is then used to create high-density wells of sub-micron dimension into which nano-particles conjugated to a single DNA clone are allowed to self-assemble. The small size of the wells prevents more than one molecule from attaching in any given well. The nano-particles remain fixed in their wells through biotin-avidin with the remaining non-specifically bound nano-particles being washed away with the removal of the remaining photo-resist. This leaves a very clean array for high throughput sequencing.

## APPLICATIONS

This technology may be applied to high-throughput genome sequencing, protein array analysis, and bio-sensors.

## OTHER INFORMATION

This invention has a patent pending.

## PATENT STATUS

| Country | Type | Number | Dated | Case |
|---|---|---|---|---|
| United States Of America | Issued Patent | 9,063,133 | 06/23/2015 | 2007-085 |

## ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- Methods and Systems for Direct Sequencing of Single DNA Molecules
- Methods And Apparatuses For Duplicating Genomic Dna With Contiguity Barcodes For De Novo Genome And Epigenome Sequencing

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## OTHER INFORMATION

**CATEGORIZED AS**

- **Biotechnology**
  - Bioinformatics
  - Genomics

**RELATED CASES**

2007-085-0