



Image Locking System for DNA Microarray Synthesis

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The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing an optical system that will lock images to further refine the process of manufacturing DNA microarrays and synthetic DNA strands.

Overview

DNA microarrays, or “chips,” are fabricated by high speed robotics on glass or sometimes nylon substrates. During the process of manufacturing DNA microarrays and synthetic DNA strands, an image is projected on the substrate repeatedly. While the substrate is not moved during processing, the images need to be kept stable across different phases of exposure that may last four to eight hours. During this time, the optical system may drift from its reference state because, for example, of changes in the environment.

The Invention

UW–Madison researchers have developed an image locking system for DNA microarray synthesis that will stabilize or “lock” the image with respect to an image capture device such as a camera or microscope. The system includes the use of detection or reference marks. When a shift in image position is detected, a correction signal is sent to one of two mirrors, moving the image to correct for the change in image position.

Applications

- DNA microarray synthesis

Key Benefits

- Minimizes image drift during microarray synthesis

Tech Fields

- [Research Tools : Arrays](#)

For current licensing status, please contact Jennifer Gottwald at jennifer@warf.org or 608-960-9854