DNA Walking Biped

Bill Sherman

Schematic of the Device and Sidewalk

The Steps in a Walk


Animation of the Biped Walker

Courtesy of Ann Marie Cunningham and Donna Vaughn of ScientCentral News
Autonomous DNA Walking Biped

Tosan Omabegho

Autonomous Walker Design

Autonomous Walker Movement

1. L-E leads. T2 is activated and ready for F1.
2. T2 invades F1.
3. F1 is activated by T2.
4. F1 invades T1.
5. L-O is freed by F1.
6. L-O diffuses to T3.
7. L-O invades T3.
8. L-O leads. T3 is activated and ready for F2.


Autonomous Walker Uses Up the Track

Summary of Results

• Polyhedral Catenanes, Knots and Borromean Rings can be Assembled from Branched DNA by Ligation.

• 2D Lattices with Tunable Features have been Made from Branched DNA Components.

• 3D Crystals have been Self-Assembled and their Structures have been Determined.

• Heterologous Species have been Included in DNA Nanoconstructs.

• Nanomechanical Devices have been Assembled from Branched DNA, including a Translation Device a Clocked Walker, and an Autonomous Walker. A Machine has been Incorporated into a 2D Lattice and Used to Capture Pattern Components.