

**41.** The molecular motor of claim 40, wherein the supply of the fuel source is a regulated supply of the fuel source.

**42.** The molecular motor of claim 41, wherein the regulated supply of the fuel source is regulated by a switch or a valve.

**43.** The molecular motor of claim 40, wherein the fuel source is ATP.

**44.** A molecular motor comprising:

a first two dimensional array of a first motor protein; and  
a second two dimensional array of a second motor protein that interacts with the first motor protein to move directionally relatively to the first array;

wherein the first and second arrays of motor proteins are in sufficiently close contact to interact and move the second array relative to the first array; and

at least one of the first or second array of motor protein is applied directionally on a surface on which the array is disposed.

**45.** The molecular motor of claim 44, wherein the first motor protein is myosin and the second motor protein is actin and the actin is applied directionally to the surface.

**46.** The molecular motor of claim 20, wherein the curved continuous first surface has a longitudinal axis and the complementary continuous curved second surface rotates around the longitudinal axis.

**47.** The molecular motor of claim 46, further comprising a driver rotated around the longitudinal axis by movement of the second surface.

**48.** A molecular motor comprising:

first two dimensional arrays of a first motor protein; and  
second two dimensional arrays of a second motor protein that interact with the first motor protein to move directionally relatively to the first array;

wherein the first and second arrays of motor proteins are in sufficiently close contact to interact and move the second array relative to the first array and there are multiple nested first and second arrays that interact with one another to directionally move the first and second arrays relative to one another.

**49.** The molecular motor of claim 48, wherein each two dimensional array is a curved surface.

**50.** The molecular motor of claim 49, wherein each curved surface is a continuous curved surface.

**51.** The molecular motor of claim 50, wherein each curved surface is a complementary shaped cylindrical or conical surface.

**52.** The molecular motor of claim 48, comprising a plurality of nested cylindrical or conical members that are coated with the first two dimensional array of the first motor protein or the second two dimensional array of the second motor protein.

**53.** The molecular motor of claim 48, wherein the first motor protein is myosin and the second motor protein is actin and the actin is applied directionally to the surface.

**54.** A molecular motor comprising:

a first two dimensional array of a first motor protein;  
a second two dimensional array of a second motor protein that interacts with the first motor protein to move directionally relatively to the first array; and

at least one perforation in at least one surface on which at least one of the arrays are disposed, to allow permeation of an ATP containing liquid through the surface to the motor proteins;

wherein the first and second arrays of motor proteins are in sufficiently close contact to interact and move the second array relative to the first array.

**55.** The molecular motor of claim 54, wherein the first motor protein is myosin and the second motor protein is actin and the actin is applied directionally to the surface.

**56.** The molecular motor of claim 1, wherein the first motor protein is myosin and the second motor protein is actin and the actin is applied directionally to the surface.

**57.** The molecular motor of claim 20, wherein the first motor protein is myosin and the second motor protein is actin and the actin is applied directionally to the surface.

**58.** A molecular motor comprising:

an inner cylinder or tube, having a coating of myosin adhered to an outer surface of the cylinder;

a tubular member around the inner cylinder, the tubular member having a coating of actin directionally adhered to an inner surface of the tubular member, with the actin and myosin interacting to move the inner surface relative to the outer surface.

**59.** The molecular motor of claim 1, wherein the first array is coated on a planar surface of a first annular substrate and the second array is coated on a planar surface of a second annular substrate.

**60.** The molecular motor of claim 59, wherein the coated planar surface of the first annular substrate is adjacent to the coated planar surface of the second annular substrate.

**61.** The molecular motor of claim 59, further comprising a driver coupled to the second annular substrate and wherein directional movement of the second array moves the driver.

**62.** The molecular motor of claim 44, wherein the surface comprises at least one planar surface of an annular substrate.

**63.** The molecular motor of claim 54, wherein the surface comprises at least one planar surface of an annular substrate.

**64.** A molecular motor comprising:

at least one first annular substrate defining at least one planar surface coated with a first motor protein; and

at least one second annular substrate defining at least one planar surface coated with a second motor protein that interacts with the first motor protein to move the second annular substrate relative to the first annular substrate.

**65.** The molecular motor of claim 64, wherein the coated planar surface of the first annular substrate is adjacent to the coated planar surface of the second annular substrate.

**66.** The molecular motor of claim 64, further comprising a driver coupled to the second annular substrate and wherein directional movement of the second annular substrate moves the driver.

**67.** The molecular motor of claim 64, wherein the first motor protein comprises myosin and the second motor protein comprises actin.

**68.** The molecular motor of claim 67, wherein the actin is applied directionally around the surface of the second annular substrate.

**69.** The molecular motor of claim 64, wherein the first annular substrate and the second annular substrate each comprise a disc.