70. The molecular motor of claim 64, wherein the first annular substrate and the second annular substrate each comprise at least two concentric rings.

71. A molecular motor comprising:

a stationary substrate defining a first planar surface coated with a first motor protein;

a terminal annular substrate defining a first planar surface coated with a second motor protein; and

at least one intermediate annular substrate interposed between the stationary substrate and the terminal annular substrate, the intermediate annular substrate defining a first planar surface coated with the second motor protein and an obverse second surface coated with the first motor protein;

wherein the stationary substrate, terminal annular substrate, and intermediate annular substrate are arranged such that each substrate surface coated with the first motor protein is adjacent to a substrate surface coated with the second motor protein.

72. The molecular motor of claim 71, wherein the first motor protein comprises myosin and the second motor protein comprises actin, which can interact with the myosin to move the intermediate annular substrate and the terminal annular substrate.

73. The molecular motor of claim 71, wherein the intermediate annular substrate and the terminal annular substrate each comprise at least two concentric rings.

74. A molecular motor comprising:

at least one first disc defining at least one surface coated with a first motor protein;

at least one second disc defining at least one surface coated with a second motor protein;

a stationary member affixed to the first disc; and

a rotatable member affixed to the second disc;

wherein the first motor protein can interact with the second motor protein to move the second disc relative to the first disc and consequently rotate the rotatable member.

75. A molecular motor comprising:

a first layer of a plurality of concentric first rings, each first ring defining a planar surface coated with a first motor protein; and

a second layer of a plurality of concentric second rings, each second ring defining a planar surface coated with a second motor protein that interacts with the first motor protein to move the second rings relative to the first rings.

76. The molecular motor of claim 75, wherein the concentric first rings and the concentric second rings are rotatable about a longitudinal axis, and the first layer is axially adjacent to the second layer along the longitudinal axis.

77. The molecular motor according to claim 76, further comprising a first gap between each adjacent first ring of the first layer and a second gap between each adjacent second ring of the second layer, wherein the first layer and the second layer are arranged relative to each other such that each first gap is radially offset from each second gap.

78. The molecular motor according to claim 74, further comprising at least one additional layer of a plurality of concentric third rings, each third ring defining a first planar surface coated with the first motor protein and a second planar surface coated with the second motor protein, wherein the first layer, second layer, and additional layer are arranged such that each planar substrate surface coated with the first motor protein is adjacent to a planar substrate surface coated with the second motor protein.

79. A molecular motor comprising:

at least one continuous loop of a flexible substrate that defines at least a first turning radius and a second turning radius, and at least one surface coated with a first motor protein; and

at least a first rotation locus member disposed at the first turning radius of the continuous loop and a second rotation locus member disposed at the second turning radius of the continuous loop;

wherein at least one of the first rotation locus member and second rotation locus member defines a surface coated with a second motor protein that interacts with the first motor protein to move the flexible substrate relative to at least one of the first rotation locus member or second rotation locus member.

80. The molecular motor of claim 1, wherein at least one of the arrays is coated on a continuous loop of a flexible substrate.

81. The molecular motor of claim **80**, wherein the continuous loop moves along an elongated cylindrical, oblong, elliptical, or serpentine path.

82. A method of making a molecular motor, comprising:

providing a first annular substrate defining a planar surface;

providing a second annular substrate defining a planar surface;

adhering a first motor protein to the planar surface of the first annular substrate;

adhering a second motor protein to the planar surface of the second annular substrate; and

positioning the first annular substrate relative to the second annular substrate so that the first motor protein can interact with the second motor protein to move the first annular substrate relative to the second annular substrate.

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