CLAIMS

1. A monocopter comprising:

a body chassis;

a wing structure extending from the body chassis, the body chassis being at a root of the wing structure, wherein the wing structure comprises:

a plurality of rigid wing segments distributed along a spanwise direction extending between the root and a tip of the wing structure, and

a plurality of flexible wing segments, each flexible wing segment adjoining a pair of adjacent rigid wing segments of the plurality of rigid wing segments; and

a propulsion unit coupled to a rigid wing segment of the plurality of rigid wing segments between a midspan of the wing structure and the tip of the wing structure,

wherein the body chassis comprises a first member, a second member, and a hinge interconnecting the first member and the second member.

2. The monocopter of claim 1,

wherein each flexible wing segment serves as a hinge interconnecting the pair of adjacent rigid wing segments of the plurality of rigid wing segments in a manner such that the wing structure is foldable at the plurality of flexible wing segments.

3. The monocopter of claim 1,

wherein the plurality of rigid wing segments of the wing structure comprises a plurality of discrete rigid panels spaced apart from each other with a plurality of discontinuities among the plurality of discrete rigid panels, and

wherein a single flexible sheet is attached across the plurality of discrete rigid panels in a manner so as to expose a plurality of portions of the single flexible sheet at the

plurality of discontinuities among the plurality of discrete rigid panels to form the plurality of flexible segments of the wing structure.

4. The monocopter of claim 3,

wherein each of the plurality of discrete panels is made of wood,

wherein the single flexible sheet is made of flexible plastic.

5. The monocopter of claim 3,

wherein one or more of the plurality of discrete rigid panels comprises a closed-loop frame structure, each closed-loop frame structure defining a through-hole therewithin.

6. The monocopter of claim 5,

wherein the single flexible sheet covers across the through-hole of each of the closed-loop frame structure of the one or more of the plurality of discrete rigid panels.

7. The monocopter of claim 1, further comprising:

a reinforcing plate attached to the rigid wing segment of the plurality of rigid wing segments that the propulsion unit is being coupled.

8. The monocopter of claim 7,

wherein the reinforcing plate comprises a carbon fibre plate.

9. The monocopter of claim 1,

wherein a spanwise dimension of each of the plurality of rigid wing segments is larger than a spanwise dimension of each of the plurality of flexible wing segments.

10. The monocopter of claim 1,

wherein the propulsion unit comprises a propeller type propulsion unit.

11. The monocopter of claim 1,

wherein the hinge of the body chassis comprises a flexible hinge.

12. The monocopter of claim 1, further comprising:

a power source attached to the first member; and

an electrical element that electrically connects the power source to the propulsion unit.

13. The monocopter of claim 12, further comprising:

a controller attached to the second member; and

wherein the electrical element further electrically connects the controller to the propulsion unit.

14. The monocopter of claim 1, further comprising:

a coupling element for coupling the propulsion unit to the wing structure.

15. The monocopter of claim 14,

wherein the coupling element is attached to a leading edge of the rigid wing segment of the wing structure.