CLAIMS

1. A lens system comprising:

a microsphere; and

a holder comprising:

a first body portion and

a second body portion coupled to the first body portion, the first body portion and the second body portion being spaced apart to define respective sides of a slot, the slot substantially extending along a first axis providing a plurality of selectable positions therebetween distributed along the first axis, such that when the microsphere is received at a receiving position selected from any of the plurality of selectable positions, the microsphere is coupled to the first body portion and the second body portion, wherein the slot is configured to simultaneously hold a plurality of the microsphere of different sizes at respective plurality of selectable positions.

2. The lens system as recited in claim 1, wherein the microsphere is coupled to the first body portion at a first coupling portion and the microsphere is coupled to the second body portion at a second coupling portion, and wherein the first coupling portion is distinct from the second coupling portion.

3. The lens system as recited in claim 2, wherein the first body portion and the second body portion are configured to at least clasp the microsphere at the receiving position.

4. The lens system as recited in claim 1, wherein the slot is configured to secure each of the plurality of the microsphere of different sizes at the same receiving position responsive to varying an angle between the first body portion and the second body portion.

5. The lens system as recited in claim 1, wherein the first body portion and the second body potion are spaced apart by a spacing, the spacing having at least two different widths along the first axis.

6. The lens system as recited in claim 1, wherein the first body portion and the second body portion are non-parallel relative to one another.

7. The lens system as recited in claim 1, wherein the first body portion defines a first distal surface substantially in a first plane, and the second body portion defines a second distal surface substantially in a second plane, and wherein the first plane and the second plane are non-coplanar.

8. The lens system as recited in claim 7, wherein the first distal surface and the second distal surface define a reflex angle therebetween.

9. A lens system for near-field optics, the lens system comprising:

an objective lens;

a holder coupled to the objective lens, the holder having a first body portion and a second body portion, the first body portion and the second body portion being spaced apart to define respective sides of a slot, the slot substantially extending along a first axis and providing a plurality of selectable positions therebetween distributed along the first axis; and

a microsphere received at a receiving position, the receiving position being selected from any of the plurality of selectable positions, the microsphere being coupled to the first body portion and the second body portion, wherein the slot is configured to simultaneously hold a plurality of the microsphere of different sizes at respective plurality of selectable positions.

10. The lens system as recited in claim 9, wherein the microsphere is coupled to the first body portion at a first coupling portion and the microsphere is coupled to the second body portion at a second coupling portion, and wherein the first coupling portion is distinct from the second coupling portion.

11. The lens system as recited in claim 10, wherein the first body portion and the second body portion are configured to at least clasp the microsphere.

12. The lens system as recited in claim 10, wherein the first body portion defines a first distal surface substantially in a first plane, and the second body portion defines a second distal surface substantially in a second plane, and wherein the first plane and the second plane are non-coplanar.

13. The lens system as recited in claim 12, wherein the first distal surface and the second distal surface define a reflex angle therebetween.

14. The lens system as recited in claim 12, wherein the holder has reflection symmetry about a center plane, the center plane being defined by a center of the microsphere and an intersection line, the intersection line being an intersect of the first plane and the second plane.

15. An optical microscope comprising the lens system as recited in any of claims 1 to 14.