CLAIMS

1. A system comprising:

a light source;

first and second gratings; and

a first reflective component that in a first position forms a first light path originating at the light source and extending to the first grating and thereafter to a subsequent component in the system, and that in a second position forms a second light path originating at the light source and extending to the second grating and thereafter to the subsequent component.

2. The system of claim 1, wherein the first reflective component includes a rotatable mirror that assumes the first or second positions.

3. The system of claim 2, wherein the rotatable mirror is double-sided and comprises an elongate member, and wherein an axle is coupled to the elongate member substantially at a center of the elongate member.

4. The system of claim 3, wherein the axle is offset from and substantially parallel to a plane defined by the first and second light paths.

5. The system of claim 3, wherein when the rotatable mirror assumes the first position, a first end of the elongate member interrupts a first path originating at the light source and extending to the second grating, and reflects first light originating at the light source toward the first grating.

6. The system of claim 5, wherein when the rotatable mirror assumes the first position, a second end of the elongate member does not interrupt a second path from the first grating to the subsequent component.

7. The system of claim 5, wherein when the rotatable mirror assumes the second position, a second end of the elongate member interrupts a second path from the second grating, and reflects second light from the second grating toward the subsequent component.

8. The system of claim 7, wherein when the rotatable mirror assumes the second position, the first end of the elongate member does not interrupt the first path originating at the light source and extending to the second grating.

9. The system of claim 3, wherein the first and second gratings are oriented so that respective normals thereof are substantially antiparallel to each other, and wherein the axle is substantially aligned with the normals.

10. The system of claim 2, wherein the rotatable mirror reciprocates between the first and second positions.

11. The system of claim 1, wherein the subsequent component is a phase selector.

12. The system of claim 1, further comprising a phase selector positioned between the light source and the first reflective component.

13. The system of claim 1, further comprising a second reflective component positioned before the first and second gratings in each of the first and second light paths.

14. The system of claim 13, wherein each of the first and second light paths has a first light path portion originating at the light source and extending to the second reflective component, wherein each of the first and second light paths has a second light path portion originating at the subsequent component, and wherein the first and second light path portions are substantially parallel to each other.

15. A system comprising:

a light source;

first and second gratings; and

at least one mirror having a first position that interrupts a first path originating at the light source and extending to the second grating, and directs first light toward the first grating, while not interrupting a second path from the first grating to a subsequent component in the system, and having a second position that interrupts a third path from the second grating and directs second light from the second grating toward the subsequent component, while not interrupting the first path.

16. The system of claim 15, wherein respective grating orientations of the first and second gratings are substantially perpendicular to each other.

17. The system of claim 15, wherein the first and second gratings face toward each other.

18. A method comprising:

positioning at least one reflective component to define a first light path originating at a light source and extending to a first grating and thereafter to a subsequent component;

directing first phase-selected light from the first light path onto a sample;

positioning the at least one reflective component to define a second light path originating at the light source and extending to a second grating and thereafter to the subsequent component; and

directing second phase-selected light from the second light path onto the sample.

19. The method of claim 18, wherein positioning the at least one reflective component to define the first light path comprises interrupting a first path originating at the light source and extending to the second grating and directing first light toward the first grating, while not interrupting a second path from the first grating to the subsequent component.

20. The method of claim 19, wherein positioning the at least one reflective component to define the second light path comprises interrupting a third path from the second grating and directing second light from the second grating toward the subsequent component, while not interrupting the first path.