Claims

1. An ophthalmic lens for controlling progression of myopia, the lens including a first surface, shaped to form a first surface power map, and a second surface, shaped to form a second surface power map, wherein:

the first power map comprises a spiral;

the second power map comprises a spiral; and

the spirals provided by the first and second surface power maps twist in opposing directions, such that the first and second power maps comprise counter-rotating spirals.

2. An ophthalmic lens according to claim 1, wherein the lens is a contact lens or a spectacle lens.

3. An ophthalmic lens according to claim 1 or 2, wherein the power varies smoothly across the first and second surface power maps.

4. An ophthalmic lens according to claim 3, wherein the power of the first and second surfaces varies both radially and angularly as a rounded square wave or a sinusoid.

5. An ophthalmic lens according to any preceding claim, wherein each of the first and second power maps has a power that varies substantially periodically both radially outwards from and angularly about an optical axis of the lens.

6. An ophthalmic lens according to claim 5, wherein the periods of the radial and angular variations are each substantially constant across the first and second surface power maps.

7. An ophthalmic lens according to claim 5, wherein a period of one or more of the radial and angular variations changes according to one or both of: a radial distance from the optical axis of the lens and an angular position about the optical axis of the lens.

8. An ophthalmic lens according to any of claims 5 to 7, wherein:

the radial variation has a period of greater than 100 microns; and

the angular variation has a period of greater than 6 degrees.

9. An ophthalmic lens according to any preceding claim wherein the spirals formed on the first and second surface power maps twist in opposing directions but are otherwise substantially identical.

10. An ophthalmic lens according to any preceding claim, wherein:

the lens comprises a central region and an outer region, the central region immediately surrounding the optical axis of the lens and the outer region surrounding the central region;

the spirals are formed in the outer region; and

the spirals do not extend into the central region.

11. An ophthalmic lens according to any of claims 1 to 9, wherein:

the lens comprises a central region and a outer region, the central region immediately surrounding the optical axis of the lens and the outer region surrounding the central region;

the spirals are formed within the central region; and

the spirals do not extend into the outer region.

12. An ophthalmic lens according to claim 10 or 11, wherein the central region has a diameter of less than 50% of that of the spirals.

13. An ophthalmic lens according to any of claims 10 to 12, wherein:

the lens comprises a transition region, the transition region surrounding the central region and the outer region surrounding the transition region; and

the power of the transition region varies to provide a smooth transition between the central and outer regions.

14. A method of manufacturing an ophthalmic lens, the method comprising:

operating a lathe to shape first and second surfaces of one of: a lens, a mould for a lens, or an insert for manufacturing a mould for a lens such that:

the first surface forms a first surface power map;

the second surface forms a second surface power map;

the first surface power map and the second surface power map each comprise a spiral; and

the spirals formed by the first surface map and the second surface power map twist in opposing directions, such that the first and second power maps comprise counter-rotating spirals.

15. A method of controlling myopia progression in a person, the method comprising:

providing a multifocal ophthalmic lens according to any of claims 1 to 13 to a person in need of control of myopia progression.