Claims

1. A system for eliminating microorganisms, the system comprising a plurality of light emitters, wherein each of the plurality of light emitters is configured to emit light comprising a peak wavelength of 380-430 nm, at least two or more of the plurality of light emitters emit light of a different peak wavelength, and wherein at least one of the plurality of light emitters is configured to emit light comprising a peak wavelength 380-405 nm.

2. The system according to claim 1, wherein each of the plurality of light emitters is configured to emit light of a different peak wavelength from one another.

3. The system according to any preceding claim, wherein the system comprises at least three light emitters.

4. The system according to any preceding claim, wherein the system comprises three light emitters, such that each of the three light emitters is configured to emit light of a peak wavelength of 385-395 nm, 395-405 nm and 405-425 nm, respectively.

5. The system according to any preceding claim, wherein the system comprises three light emitters, such that each of the three light emitters is configured to emit light of a peak wavelength of 390 nm, 405 nm and 425 nm, respectively.

6. The system according to any preceding claim, wherein the microorganism is bacteria, yeast, mold, algae, or a combination thereof.

7. The system according to any preceding claim, wherein the microorganisms are eliminated upon illumination with light emitted by the plurality of light emitters.

8. The system according to any preceding claim, wherein the plurality of light emitters comprises an light-emitting diode (LED), an organic light-emitting diode (OLED), a semiconductor die, laser, incandescent lamp, superluminescent diode (SLD), or a combination thereof.

9. A method of eliminating microorganisms, the method comprising emitting a light comprising a peak wavelength of 380-430 nm by each of a plurality of light emitters and wherein at least one of the plurality of light emitters emits light comprising a peak wavelength 380-405 nm.

10. The method according to claim 9, wherein each of the plurality of light emitters emits light of a different peak wavelength from one another.

11. The method according to claim 9 or 10, wherein the plurality of light emitters comprises at least three light emitters.

12. The method according to any of claims 9 to 11, wherein the plurality of light emitters comprises three light emitters, such that each of the three light emitters emits light of a peak wavelength of 385-395 nm, 395-405 nm and 405-425 nm, respectively.

13. The method according to any of claims 9 to 12, wherein the plurality of light emitters comprises three light emitters, such that each of the three light emitters emits light of a peak wavelength of 390 nm, 405 nm and 425 nm, respectively.

14. The method according to any of claims 9 to 13, wherein the microorganism is bacteria, yeast, mold, algae, or a combination thereof.

15. The method according to any of claims 9 to 14, wherein the microorganisms are eliminated by the emitting.

16. The method according to any of claims 9 to 15, wherein the plurality of light emitters comprises an light-emitting diode (LED), an organic light-emitting diode (OLED), a semiconductor die, laser, incandescent lamp, superluminescent diode (SLD), or a combination thereof.