

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
5 comprising a wavelength of 380-500 nm, and wherein at least two or more of the plurality of light emitters emit light of a different wavelength.
2. The system according to claim 1, wherein each of the plurality of light emitters is configured to emit light comprising a wavelength of 380-430 nm.
- 10 3. The system according to claim 1 or 2, wherein each of the plurality of light emitters is configured to emit light of a different wavelength from one another.
4. The system according to any preceding claim, wherein the system comprises at
15 least two light emitters.
5. The system according to any preceding claim, wherein the system comprises at least three light emitters.
- 20 6. 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 wavelength of 385-395 nm, 395-405 nm and 405-425 nm, respectively.
7. The system according to any preceding claim, wherein the system comprises
25 three light emitters, such that each of the three light emitters is configured to emit light of a wavelength of 390 nm, 405 nm and 425 nm, respectively.
8. The system according to any preceding claim, wherein the microorganism is bacteria, yeast, mold, algae, or a combination thereof.
- 30 9. The system according to any preceding claim, wherein the microorganisms are eliminated upon illumination with light emitted by the plurality of light emitters.

10. 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.

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11. A method of eliminating microorganisms, the method comprising emitting a light comprising a wavelength of 380-500 nm by each of a plurality of light emitters.

12. The method according to claim 11, wherein the emitting comprises emitting a
10 light comprising a wavelength of 380-430 nm by each of the plurality of light emitters.

13. The method according to claim 11 or 12, wherein each of the plurality of light emitters emits light of a different wavelength from one another.

14. The method according to any of claims 11 to 13, wherein the plurality of light
15 emitters comprises at least two light emitters.

15. The method according to any of claims 11 to 14, wherein the plurality of light emitters comprises at least three light emitters.

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16. The method according to any of claims 11 to 15, wherein the plurality of light emitters comprises three light emitters, such that each of the three light emitters emits light of a wavelength of 385-395 nm, 395-405 nm and 405-425 nm, respectively.

17. The method according to any of claims 11 to 16, wherein the plurality of light
25 emitters comprises three light emitters, such that each of the three light emitters emits light of a wavelength of 390 nm, 405 nm and 425 nm, respectively.

18. The method according to any of claims 11 to 17, wherein the microorganism is
30 bacteria, yeast, mold, algae, or a combination thereof.

19. The method according to any of claims 11 to 18, wherein the microorganisms are eliminated by the emitting.

20. The method according to any of claims 11 to 19, 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.