~~AMENDED~~ CLAIMS

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1. A horticultural light device, ~~**characterised in that,**~~ wherein said light device is arranged to emit at least one spectral peak ~~(401, 402, and 403)~~ at a wavelength that coincides with increased reflectivity of flowers of pollinating plants ~~(710, 711)~~, said light device is arranged to emit at least one spectral peak ~~(401, 402, and 403)~~ at a wavelength that coincides with increased photoreception sensitivity of insect ~~(840)~~ vision, and.

~~2. A light device as claimed in claim 1 or 2, **characterised in that,**~~ the said increased reflectivity and/or sensitivity is understood to exceed the 90%-, 80%-, 70%-, 60%-, 50%-, 40%- or 30%- level of maximum of said reflectivity and/or sensitivity in the UV (300-400 nm) to far red (700-800 nm) band.

~~3.~~2. A light device as claimed in claim 1, ~~**characterised in that,**~~ wherein said light device is arranged into a greenhouse ~~(700, 701, and 802)~~ that is arranged to cultivate insect pollinated plants ~~(710, 711)~~.

~~4.~~3. A light device as claimed in claim 1, ~~**characterised in that,**~~ wherein said light device is arranged with at least one LED ~~(101, 102, 103 and 104)~~ and/or quantum dot ~~(110, 120, 130, 140, 150 and 160)~~.

~~5.~~4. A light device as claimed in claim 1, ~~**characterised in that,**~~ wherein at least one spectral peak is arranged to occur at any of the following wavelengths: 348 nm, 424 nm, 435 nm, 533 nm, 538 nm with an error range of ± 10 nm and/or the lighting device is arranged to emit a broad and flat spectral peak resulting in a broad UV continuum component.

~~6.~~5. A light device as claimed in claim 1, ~~**characterised in that,**~~ wherein the light device is a horticultural lighting fixture comprising at least one Light Emitting Diode (LED) ~~(101, 102, 103 and 104)~~ having

a) first spectral characteristics including a peak in the wavelength range from 600 to 700 nm and arranged to exhibit a full width at half maximum of at least 50 nm or more,

b) second spectral characteristics with a maximum of 50 nm full width at half maximum and arranged to exhibit a peak wavelength in the range from 440 to 500 nm (410, 510 and 610).

7.6. A light device as claimed in claim 1, **characterised in that,** wherein at least a part or the whole of the emission at wavelengths of 500–600 nm is arranged to be minimized and/or omitted and/or to be reduced below the intensity in 400-500 nm band and below the intensity in 600-700 nm band.

8.7. A light device as claimed in claim 1, **characterised in that,** wherein the emission spectrum (40, 50 and 60) is arranged to comprise far red radiation (700-800 nm).

9.8. A light device as claimed in claim 43, **characterised in that,** wherein all or part of the emission at the wavelength band of 600–800 nm is arranged to be generated using a whole or partial wavelength up-conversion of the LED (101, 102, 103 and 104) chip radiation power.

10.9. A light device as claimed in claim 1, **characterised in that,** wherein at least one said spectral peak is arranged to be turned on or off without influencing the emission of other spectral components in said lighting device.

11.10. A plant cultivation method, **characterised in that,** wherein plants (710, 711) are illuminated with a light device emitting at least one spectral peak (401, 402 and 403) at a wavelength that coincides with increased reflectivity of flowers of said pollinating plants, said light device is arranged to emitting at least one spectral peak (401, 402 and 403) at a wavelength that coincides with increased photoreception sensitivity of insect vision, and.

12. A plant cultivation method as claimed in claim 11, **characterised in that,** the said increased reflectivity and/or sensitivity is understood to exceed the 90%-, 80%-,

70%-, 60%-, 50%-, 40%- or 30%- level of maximum of said reflectivity and/or sensitivity in the UV (300-400 nm) to far red (700-800 nm) band.

~~13.~~11. A plant cultivation method as claimed in claim ~~11~~10, ~~characterised in that,~~ wherein said light device is used in a greenhouse ~~(700, 701 and 802)~~ where insect pollinated plants ~~(710, 711)~~ are cultivated.

~~14.~~12. A plant cultivation method as claimed in claim ~~11~~10, ~~characterised in that,~~ wherein said light device comprises at least one LED ~~(101, 102, 103 and 104)~~ and/or quantum dot ~~(110, 120, 130, 140, 150 and 160)~~.

~~15.~~13. A plant cultivation method as claimed in claim ~~11~~10, ~~characterised in that,~~ wherein at least one spectral peak occurs at any of the following wavelengths: 348 nm, 424 nm, 435 nm, 533 nm, 538 nm with an error range of ± 10 nm and/or and/or the lighting device emits a broad and flat spectral peak resulting in a broad UV continuum component.

~~16.~~14. A plant cultivation method as claimed in claim ~~11~~10, ~~characterised in that,~~ wherein the light device is a horticultural lighting fixture comprising at least one Light Emitting Diode (LED) ~~(101, 102, 103 and 104)~~ having

c) first spectral characteristics including a peak in the wavelength range from 600 to 700 nm and exhibiting a full width at half maximum of at least 50 nm or more,

d) second spectral characteristics with a maximum of 50 nm full width at half maximum and exhibiting a peak wavelength in the range from 440 to 500 nm ~~(410, 510 and 610)~~.

~~17.~~15. A plant cultivation method as claimed in claim ~~11~~10, ~~characterised in that,~~ wherein at least a part or the whole of the emission at wavelengths of 500-600 nm is minimized and/or omitted and/or reduced below the intensity in 400-500 nm band and below the intensity in 600-700 nm band.

~~18.~~16. A plant cultivation method as claimed in claim ~~11~~10, ~~**characterised in that,**~~ wherein the emission spectrum ~~(40, 50 and 60)~~ comprises far red radiation (700-800 nm).

~~19.~~17. A plant cultivation method as claimed in claim ~~14~~12, ~~**characterised in that,**~~ wherein all or a part of the emission at the wavelength band of 600-800 nm is generated using a whole or partial wavelength up-conversion of the LED ~~(101, 102, 103 and 104)~~ chip radiation power.

~~20.~~18. A plant cultivation method as claimed in claim ~~11~~10, ~~**characterised in that,**~~ wherein at least one said spectral peak is arranged to be turned on or off without influencing the emission of other spectral components in said lighting device.