

14. The method of claim 3 wherein the energy source of (e) is any source other than electro-magnetic radiation which is capable of activating the particular fluorescer selected.

15. The method of claim 3 wherein the energy source of (e) is the reaction product of a peroxide and an oxalate/oxamide selected from the group consisting of bis(2,4,6-trichlorophenyl)oxalate, bis(3-trifluoro methyl-4-nitrophenyl)oxalate, bis(2-formyl-4-nitrophenyl)oxalate, bis(2,6-dichloro-4-nitrophenyl)oxalate, N,N'-bis(2,4,5-trichlorophenyl)-N,N'-bis(trifluoromethyl sulfonyl)oxamide, N,N'-bis(2,4-dichlorophenyl)-N,N'-bis(trifluoromethyl sulfonyl)oxamide, N,N'-bis(2-methoxy ethyl)-N,N'-bis(trifluoromethyl sulfonyl)oxamide, and N,N'-bis(4-nitro phenyl)-N,N'-bis(trifluoro methyl sulfonyl)oxamide.

16. A method according to claim 14 wherein the energy source is a chemical reaction selected from the group consisting of 2-naphthol-3,6,8-trisulfonic acid, 2-carboxyphenyl, 2-carboxy-6-hydroxyphenol, 1,4-dihydroxy-9, 10-diphenylanthracene, 2-naphthol, luminol, lophine, pyrogallol, luciferin, dioxetanes, dioxetaneones, and other peroxide reactions.

17. A method according to claim 14 wherein the energy source is derived from a chemical reaction, ozone, an electrical current, an electro-chemical reaction, or a mechanically generated species.

18. The method according to claim 3 which is carried out utilizing an assay technique.

19. The method according to claim 3 which is carried out utilizing a heterogeneous sandwich assay technique.

20. The method according to claim 3 which is carried out utilizing a heterogeneous competitive assay technique.

21. A system for the detection of a biological analyte of interest which comprises a microencapsulated quenching/poisoning material which has been conjugated to an immunological specie specific to the biological analyte of interest, a chemiluminescent reaction which generates an energy signal, and a means of disrupting the capsule containing the quencher/poison thereby liberating the quencher/poison to free solution and vitiating or diminishing the chemiluminescent reaction generated energy signal.

22. The method of claim 4 wherein the microencapsulated fluorescer material of (a) is chemically conjugated to the immunological specie specific to the biological of interest.

23. The method of claim 22 wherein the chemical conjugation of the microencapsulated fluorescer material to the immunological specie specific to the biological of interest is carried out in such a way as to prevent substantial biological damage to the attached specie.

24. The method of claim 4 wherein the microencapsulated material utilized has a spectral emission of from about 350 millimicrons to about 1000 millimicrons.

25. The method of claim 4 wherein the microencapsulated fluorescer material utilized has a spectral emission above the emission wavelength of the immunological specie specific to the biological of interest, the energy source, or any solvent system utilized.

26. The method of claim 4 wherein the microencapsulated fluorescer material utilized has been formed in such a manner as to produce a microcapsule having a high concentration of fluorescer material.

27. The method of claim 4 wherein the microencapsulated fluorescer material utilized has a microcapsule structure having one or more reactive groups to enable the microcapsule's conjugation with an immunological specie specific to the analyte of interest.

28. The method of claim 4 wherein the microencapsulated fluorescer material utilized possesses a microcapsule of uniform colloidal size whose structure has a membrane which is easily disrupted to free the fluorescer material.

29. The method of claim 4 wherein the microencapsulated fluorescer material utilized is selected from the group consisting of 5,12 -dihydro quinoxalo (2,3,6) phenazine, magnesium and zinc metalo porphyrins, neutral red, magdalla red, acridine red, acridine orange, dianisyl ethynyl tetracene, phenazine, rhodamine, 3,4,9,10 perylene tetracarboxylic dianhydride, and derivatives thereof.

30. The method of claim 4 wherein the energy source of (e) which is contacted with the freed fluorescer material is present in excess of the amount required to activate all of the freed fluorescer material.

31. The method of claim 4 wherein the energy source of (e) is any source other than electro-magnetic radiation which is capable of activating the particular fluorescer selected.

32. The method of claim 4 wherein the energy source of (e) is the reaction product of a peroxide and an oxalate/oxamide selected from the group consisting of

bis(2,4,6 -trichlorophenyl)oxalate, bis(3-trifluoro methyl-4-nitrophenyl)oxalate, bis(2-formyl-4-nitrophenyl)oxalate, bis(2,6-dichloro-4-nitrophenyl)oxalate, N,N'-bis(2,4,5 -trichlorophenyl)-N,N'-bis(trifluoromethyl sulfonyl)oxamide, N,N'-bis(2,4 -dichlorophenyl)-N,N'-bis(trifluoromethyl sulfonyl)oxamide, N,N'-bis(2-methoxy ethyl)-N,N'-bis(trifluoromethyl sulfonyl)oxamide, and N,N'-bis(4-nitro phenyl)-N,N'-bis(trifluoro methyl sulfonyl)oxamide.

33. A method according to claim 31 wherein the energy source is a chemical reaction selected from the group consisting of 2-naphthol- 3,6,8-trisulfonic acid, 2-carboxyphenyl, 2-carboxy- 6 hydroxyphenol, 1,4-dihydroxy-9, 10-diphenylanthracene, 2-naphthol, luminol, lophine, pyrogallol, luciferin, dioxetanes, dioxetaneones, and other peroxide reactions.

34. A method according to claim 31 wherein the energy source is derived from a chemical reaction, ozone, an electrical current, an electro-chemical reaction, or a mechanically generated species.

35. The method according to claim 4 which is carried out utilizing an assay technique.

36. The method according to claim 4 which is carried out utilizing a heterogeneous sandwich assay technique.

37. The method according to claim 4 which is carried out utilizing a heterogeneous competitive assay technique.

38. a microencapsulated fluorescer composition possessing a microcapsule structure having one or more reactive groups to enable the microcapsule's conjugation with an immunological specie specific to the analyte of interest.

39. A microencapsulated fluorescer composition useful in the labeling of an immunological specie specific to and for the detection of a biological of interest, wherein the fluorescer is selected from the group consisting of