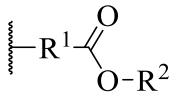
What is claimed is:

1. A tin compound of the formula $[(R^aSn)_6O_6(O_2C\text{-}R^b)_6]$, wherein

(A) R^a is selected from the group of an unsubstituted linear C_1-C_{10} alkyl group, a linear C_1-C_6 alkyl group substituted with a halogen, a linear C_1-C_6 alkyl group substituted with an amino group, a linear C_1-C_6 alkyl group substituted with a C_5–C_6 unsubstituted aromatic group, an unsubstituted branched C_3-C_{10} alkyl group, a branched C_3-C_{10} alkyl group substituted with a halogen, a C_1-C_{10} heteroalkylene, a branched C_3-C_{10} alkyl group substituted with an unsubstituted amine, a substituted amine, -$Si(CH_3)_3$, a benzyl group, a C_3-C_8 unsubstituted cyclic alkyl group, a C_3-C_8 cyclic alkyl group substituted with a halogen, a C_3-C_8 cyclic alkyl group substituted with an amino group, a C_4-C_8 unsubstituted aromatic group, a C_4-C_8 aromatic group substituted with a halogen, a C_4-C_8 aromatic group substituted with an amino group, a C_3-C_{10} heterocyclic group, a C_2-C_{10} alkenyl group and a C_3-C_{10} alkynyl group; and

(B) R^b is a carboxylic acid moiety group selected from the group of

(i) formula **(1)**:

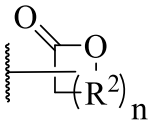


(1)

wherein R^1 is (i) a direct covalent bond or (ii) an unsubstituted linear C_1-C_6 alkylene group, an unsubstituted branched C_3-C_6 alkylene group, an unsubstituted linear C_2-C_6 alkenylene group, an unsubstituted branched C_3-C_6 alkenylene group, an unsubstituted linear C_2-C_6 alkynylene group, an unsubstituted branched C_4-C_6 alkynylene group, a C_3-C_8 unsubstituted cyclic alkylene group, or an unsubstituted C_5-C_6 arylene group; and

wherein R^2 is an unsubstituted linear C_1-C_6 alkyl group, an unsubstituted branched C_3-C_6 alkyl group, an unsubstituted linear C_2-C_6 alkenyl group, an unsubstituted branched C_3-C_6 alkenyl group, an unsubstituted linear C_2-C_6 alkynyl group, an unsubstituted branched C_4-C_6 alkynyl group, a C_3-C_8 unsubstituted cyclic alkyl group, or an unsubstituted C_6 aryl group;

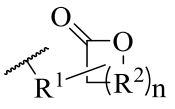
(ii) formula **(2)**:



(2)

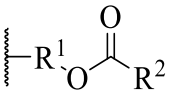
wherein (i) n = 1, 2, 3, 4 or 5, (ii) each R^2 is individually one of an oxygen, an unsubstituted methylene group or a methylene group substituted with one or two C_1-C_4 alkyl groups and (iii) formula (2) is free of peroxide groups;

(iii) formula **(3)**:

 **(3)**

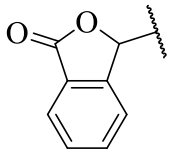
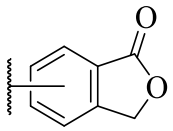
wherein (i) R^1 is an unsubstituted linear C_1-C_6 alkylene group, an unsubstituted branched C_3-C_6 alkylene group, an unsubstituted linear C_2-C_6 alkenylene group, an unsubstituted branched C_3-C_6 alkenylene group, an unsubstituted linear C_2-C_6 alkynylene group, an unsubstituted branched C_4-C_6 alkynylene group or a C_3-C_8 unsubstituted cyclic alkylene group, (ii) n = 1, 2, 3, 4 or 5, (iii) each R^2 is individually one of an oxygen, an unsubstituted methylene group or a methylene group substituted with one or two C_1-C_4 alkyl groups and (iv) formula (3) is free of peroxide groups;

(iv) formula **(4)**:

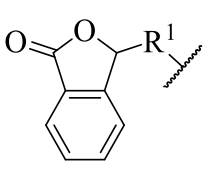
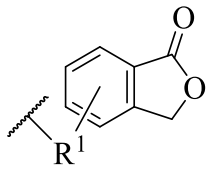
 **(4)**

wherein (i) each R^1 is independently an unsubstituted linear C_1-C_6 alkylene group, an unsubstituted branched C_3-C_6 alkylene group, an unsubstituted linear C_2-C_6 alkenylene group, an unsubstituted branched C_3-C_6 alkenylene group, an unsubstituted linear C_2-C_6 alkynylene group, an unsubstituted branched C_4-C_6 alkynylene group or a C_3-C_8 unsubstituted cyclic alkylene group and (ii) each R^2 is independently an unsubstituted linear C_1-C_6 alkyl group, an unsubstituted branched C_3-C_6 alkyl group, an unsubstituted linear C_2-C_6 alkenyl group, an unsubstituted branched C_3-C_6 alkenyl group, an unsubstituted linear C_2-C_6 alkynyl group, an unsubstituted branched C_4-C_6 alkynyl group or a C_3-C_8 unsubstituted cyclic alkyl group or a C_5-C_6 unsubstituted aromatic group;

(v) formulae **(5)**:

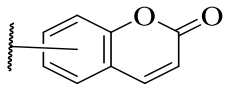
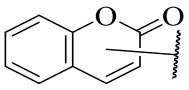
 **(5a)** or  **(5b)**;

(vi) formulae **(6)**:

 **(6a)** or  **(6b)**

wherein R^1 is an unsubstituted linear C_1-C_6 alkylene group, an unsubstituted branched C_3-C_6 alkylene group, an unsubstituted linear C_2-C_6 alkenylene group, an unsubstituted branched C_3-C_6 alkenylene group, an unsubstituted linear C_2-C_6 alkynylene group, an unsubstituted branched C_4-C_6 alkynylene group; or

(vii) formulae **(7)**:

 **(7a)** or  **(7b)**.

2. The compound of claim 1, wherein R^a is selected from the group consisting of an unsubstituted linear C_1-C_4 alkyl group, an unsubstituted branched C_3-C_4 alkyl group, a C_2-C_6 alkenyl group and a C_5-C_6 unsubstituted aromatic group.

3. The compound of any of the preceding claims, wherein R^a is selected from the group consisting of a $-CH_3$ group, a $-CH_2CH_3$ group, a $-CH(CH_3)_2$ group, a $-C(CH_3)_3$ group, a $-CH=CH_2$ group, a $-CH_2CH=CH_2$ group, a $-CH_2CH_2CH=CH_2$ group, a $-CH_2CH_2CH_2CH_3$ group, a $-C_6H_5$ group and a $-CH_2-C_6H_5$ group.

4. The compound of any of the preceding claims, wherein R^b is a carboxylic acid moiety of formula (1) wherein R^1 is an unsubstituted linear C_1-C_6 alkylene group and R^2 is an unsubstituted linear C_1-C_6 alkyl group, or wherein R^1 is an unsubstituted branched C_3-C_6 alkylene group and R^2 is an unsubstituted branched C_3-C_6 alkyl group, or wherein R^1 is an unsubstituted linear C_2-C_6 alkenylene group and R^2 is an unsubstituted linear C_2-C_6 alkenyl group, or wherein R^1 is an unsubstituted branched C_3-C_6 alkenylene group and R^2 is an unsubstituted branched C_3-C_6 alkenyl group, or wherein R^1 is an unsubstituted linear C_2-C_6 alkynylene group and R^2 is an unsubstituted linear C_2-C_6 alkynyl group, or wherein R^1 is an unsubstituted branched C_4-C_6 alkynylene group and R^2 is an unsubstituted branched C_4-C_6 alkynyl group, or wherein R^1 is a C_3-C_8 unsubstituted cyclic alkylene group and R^2 is a C_3-C_8 unsubstituted cyclic alkyl group, or wherein R^1 is a C_6 arylene group and R^2 is a C_6 aryl group, or wherein R^1 is a phenylene group and R^2 is a phenyl group.

5. The compound of any of the preceding claims, wherein R^b is a carboxylic acid moiety of formula (1) wherein R^1 is selected from a direct covalent bond, a methylene group, an ethylene group, a n-propylene group, an isopropylene group, a s-butylene group, a n-butylene group, an isobutylene group, a t-butylene group, an ethenylene group, a propenylene group a butenylene group a C_6 unsubstituted arylene group or a phenylene group.

6. The compound of any of the preceding claims, wherein R^b is a carboxylic acid moiety of formula (1) wherein R^2 is selected from a phenyl group, a methyl group, an ethyl group, a n-propyl group, an isopropyl group, a s-butyl group, a n-butyl group, an isobutyl group, a t-butyl group or an allyl group.

7. The compound of any of the preceding claims, wherein R^b is a carboxylic acid moiety of formula (3) wherein R^1 is selected from a methylene group, an ethylene group, a n-propylene group, an isopropylene group, a s-butylene group, a n-butylene group, an isobutylene group or a

t-butylene group.

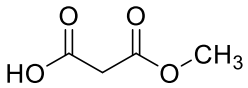
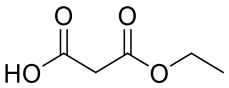
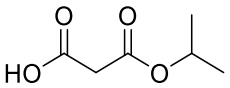
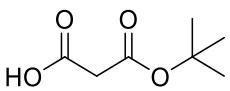
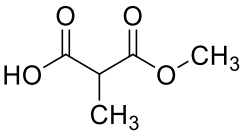
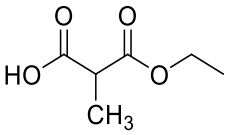
8. The compound of any of the preceding claims, wherein R^b is a carboxylic acid moiety of formula (4) wherein R^1 is an unsubstituted linear C_1-C_6 alkylene group and R^2 is an unsubstituted linear C_1-C_6 alkyl group, or wherein R^1 is an unsubstituted branched C_3-C_6 alkylene group and R^2 is an unsubstituted branched C_3-C_6 alkyl group, or wherein R^1 is an unsubstituted linear C_2-C_6 alkenylene group and R^2 is an unsubstituted linear C_2-C_6 alkenyl group, or wherein R^1 is an unsubstituted branched C_3-C_6 alkenylene group and R^2 is an unsubstituted branched C_3-C_6 alkenyl group, or wherein R^1 is an unsubstituted linear C_2-C_6 alkynylene group and R^2 is an unsubstituted linear C_2-C_6 alkynyl group, or wherein R^1 is an unsubstituted branched C_4-C_6 alkynylene group and R^2 is an unsubstituted branched C_4-C_6 alkynyl group, or wherein R^1 is a C_3-C_8 unsubstituted cyclic alkylene group and R^2 is a C_3-C_8 unsubstituted cyclic alkyl group.

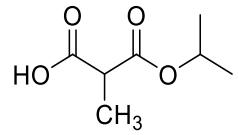
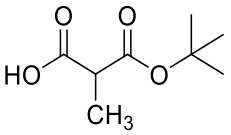
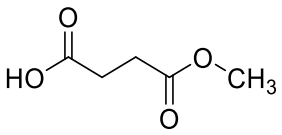
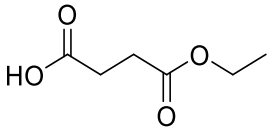
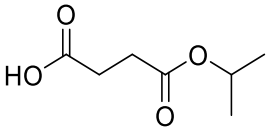
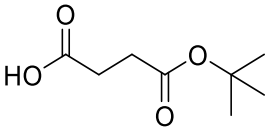
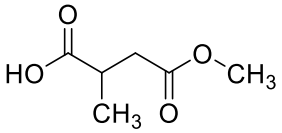
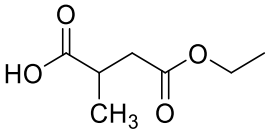
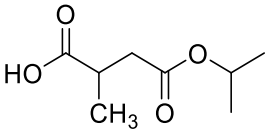
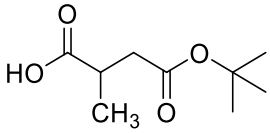
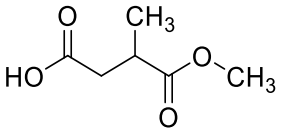
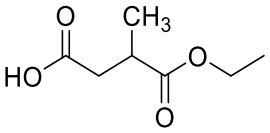
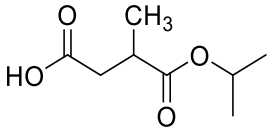
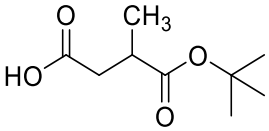
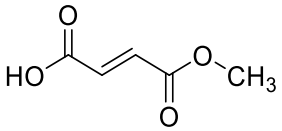
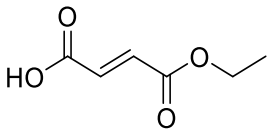
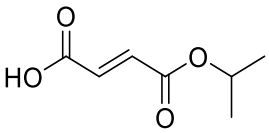
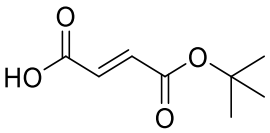
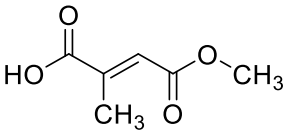
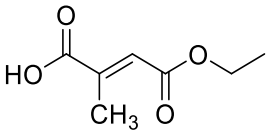
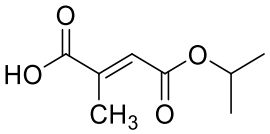
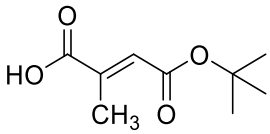
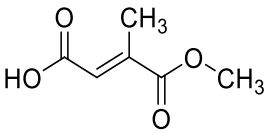
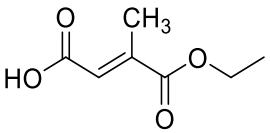
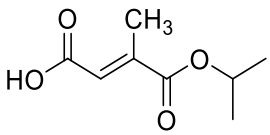
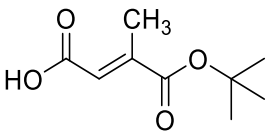
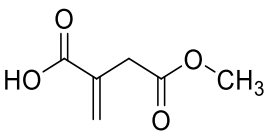
9. The compound of any of the preceding claims, wherein R^b is a carboxylic acid moiety of formula (4) wherein R^1 is selected from a methylene group, an ethylene group, a n-propylene group, an isopropylene group, a s-butylene group, a n-butylene group, an isobutylene group or a t-butylene group.

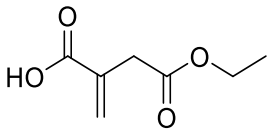
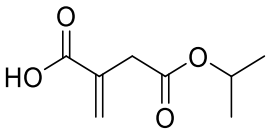
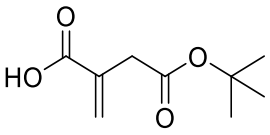
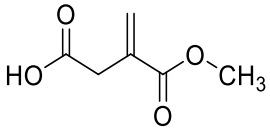
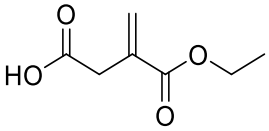
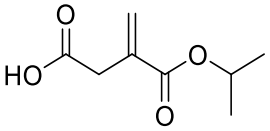
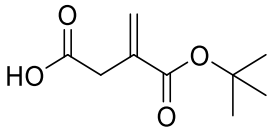
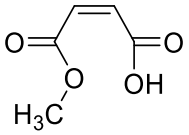
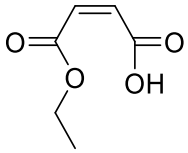
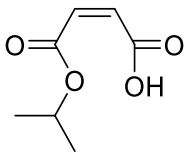
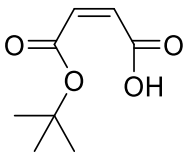
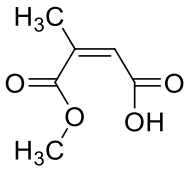
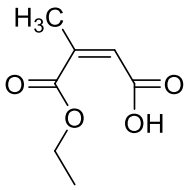
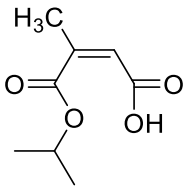
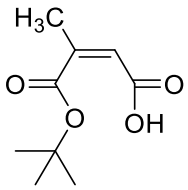
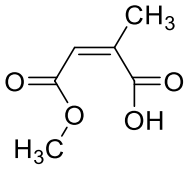
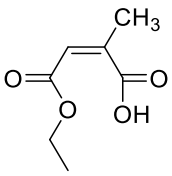
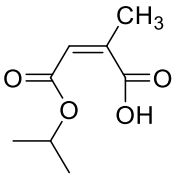
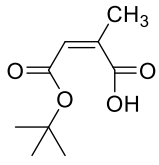
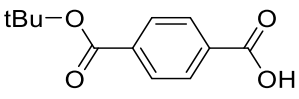
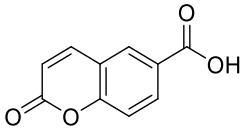
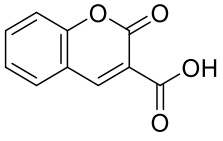
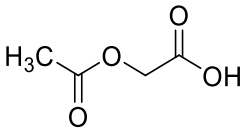
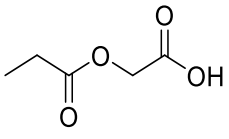
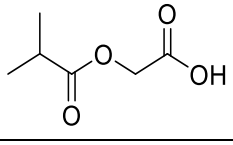
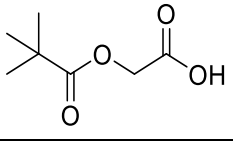
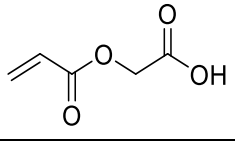
10. The compound of any of the preceding claims, wherein R^b is a carboxylic acid moiety of formula (4) wherein R^2 is selected from a methyl group, an ethyl group, a n-propyl group, an isopropyl group, a s-butyl group, an isobutyl group, a t-butyl group, an ethenyl group, a propenyl group or an allyl group.

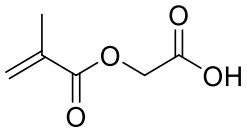
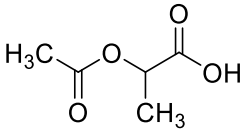
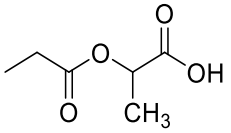
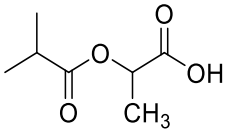
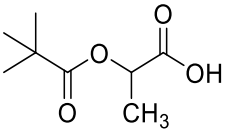
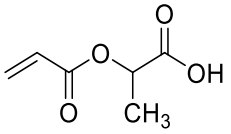
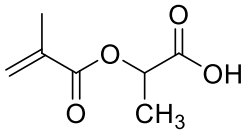
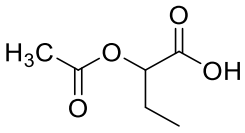
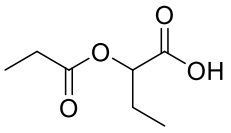
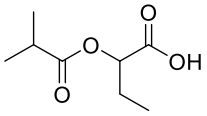
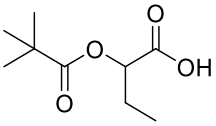
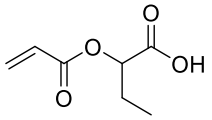
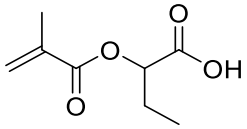
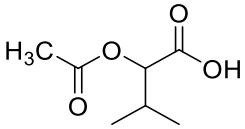
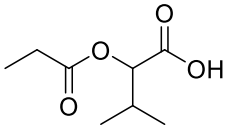
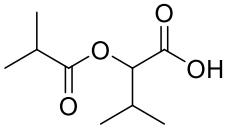
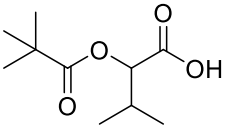
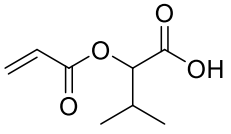
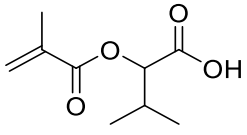
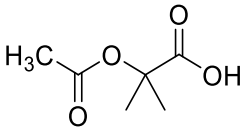
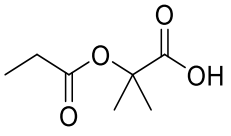
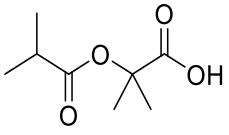
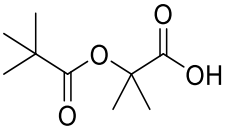
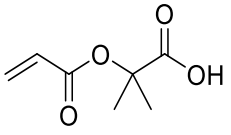
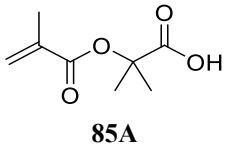
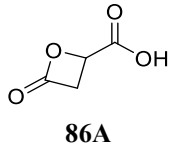
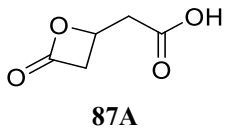
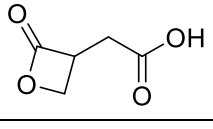
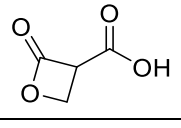
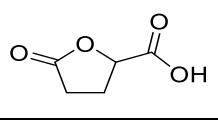
11. The compound of any of the preceding claims, wherein R^b is a carboxylic acid moiety of formula (6) wherein R^1 is selected from a methylene group, an ethylene group, a n-propylene group, an isopropylene group, a s-butylene group, a n-butylene group, an isobutylene group or a t-butylene group.

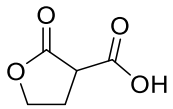
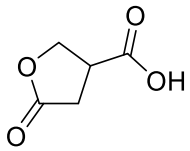
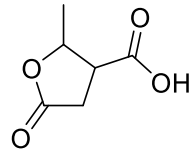
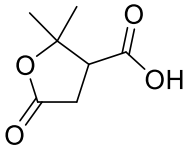
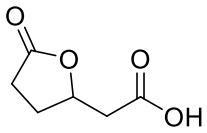
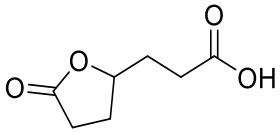
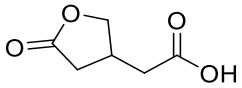
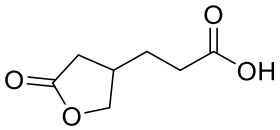
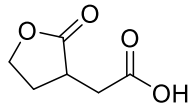
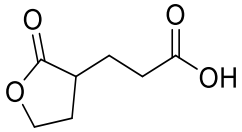
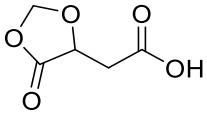
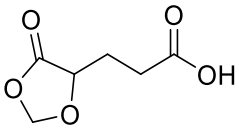
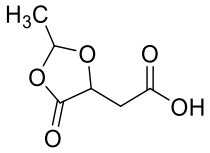
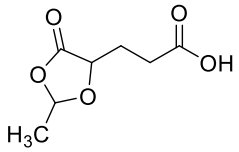
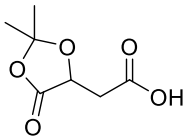
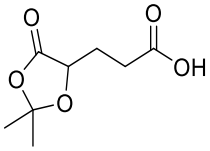
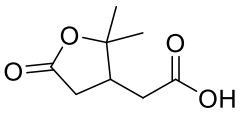
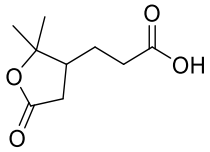
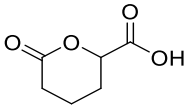
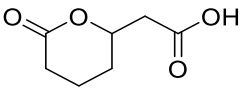
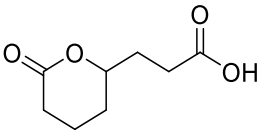
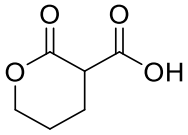
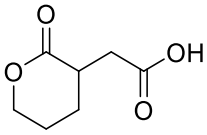
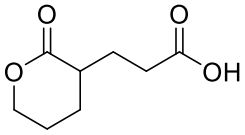
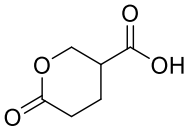
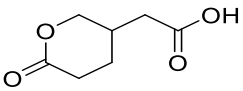
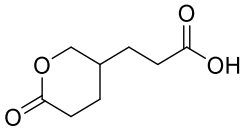
12. The compound of any of the preceding claims, wherein R^b is a carboxylic acid moiety group derived from one or more of the following carboxylic acids:

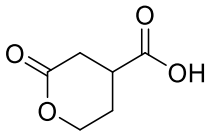
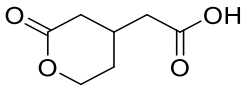
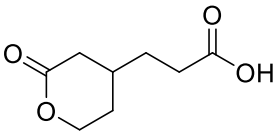
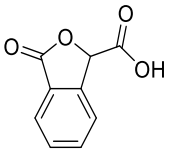
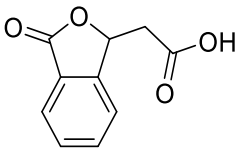
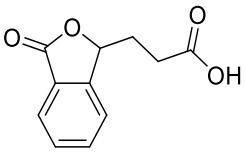
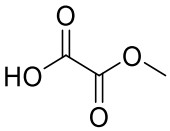
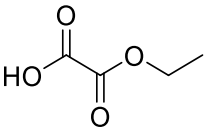
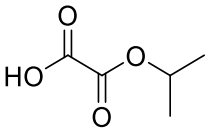
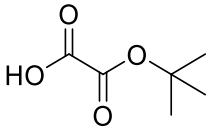
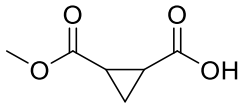
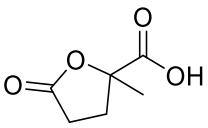
 **1A**	 **2A**	 **3A**
 **4A**	 **5A**	 **6A**

 **7A**	 **8A**	 **9A**
 **10A**	 **11A**	 **12A**
 **13A**	 **14A**	 **15A**
 **16A**	 **17A**	 **18A**
 **19A**	 **20A**	 **21A**
 **22A**	 **23A**	 **24A**
 **25A**	 **26A**	 **27A**
 **28A**	 **29A**	 **30A**
 **31A**	 **32A**	 **33A**

 **34A**	 **35A**	 **36A**
 **37A**	 **38A**	 **39A**
 **40A**	 **41A**	 **42A**
 **43A**	 **44A**	 **45A**
 **46A**	 **47A**	 **48A**
 **49A**	 **50A**	 **51A**
 **52A**	 **53A**	 **54A**
 **55A**	 **56A**	 **57A**
		

58A	59A	60A
		
61A	**62A**	**63A**
		
64A	**65A**	**66A**
		
67A	**68A**	**69A**
		
70A	**71A**	**72A**
		
73A	**74A**	**75A**
		
76A	**77A**	**78A**
		
79A	**80A**	**81A**
		
82A	**83A**	**84A**
		
85A	**86A**	**87A**
		

88A	89A	90A
 **91A**	 **92A**	 **93A**
 **94A**	 **95A**	 **96A**
 **97A**	 **98A**	 **99A**
 **100A**	 **101A**	 **102A**
 **103A**	 **104A**	 **105A**
 **106A**	 **107A**	 **108A**
 **109A**	 **110A**	 **111A**
 **112A**	 **113A**	 **114A**
 **115A**	 **116A**	 **117A**

 **118A**	 **119A**	 **120A**
 **121A**	 **122A**	 **123A**
 **124A**	 **125A**	 **126A**
 **127A**	 **128A**	 **129A**

13. A formulation comprising (i) a compound of any of claims 1-12 and (ii) one or more solvents suitable for use in a spin-coating process, wherein the one or more solvents suitable for use in a spin-coating process preferably comprises one or more of an alcohol, an ester, a ketone, a lactone, a diketone, a solvent with aromatic moieties, a solvent with a carboxylic acid, an amide and mixtures thereof, and wherein the one or more solvents suitable for use in a spin-coating process particularly preferably comprises one or more of 1-methoxy-2-propanyl acetate (PGMEA), 1-methoxy-2-propanol (PGME), butyl acetate, amyl acetate, cyclohexyl acetate, 3-methoxybutyl acetate, methyl ethyl ketone, methyl amyl ketone, cyclohexanone, cyclopentanone, ethyl-3-ethoxy propanoate, methyl-3-ethoxy propanoate, methyl-3-methoxy propanoate, methyl acetoacetate, ethyl acetoacetate, diacetone alcohol, methyl pivalate, ethyl pivalate, propylene glycol monomethyl ether, propylene glycol monoethyl ether, propylene glycol monomethyl ether propanoate, propylene glycol monoethyl ether propanoate, ethylene glycol monomethyl ether, ethylene glycol monoethyl ether, diethylene glycol monomethyl ether, diethylene glycol monoethyl ether, 3-methyl-3-methoxybutanol, N-methylpyrrolidone, dimethyl sulfoxide, gamma-butyrolactone, gamma valerolactone, cyclopentyl methyl ether, propylene glycol methyl ether acetate, propylene glycol ethyl ether acetate, propylene glycol propyl ether acetate, methyl lactate, ethyl lactate, propyl lactate, tetramethylene sulfone, propylene glycol dimethyl ether, dipropylene glycol dimethyl ether, ethylene glycol dimethyl ether, diethylene glycol dimethyl ether, toluene, 2-heptanone, 1-hexanol, 4-methyl-2-pentanol and anisole.

14. A process for patterning a radiation sensitive coating comprising:

(i) forming a coating on a substrate surface with a formulation comprising one or more compounds of any of claims 1-12;

(ii) drying the coating to produce a dried layer; and

(iii) irradiating at least a portion of the dried layer to form a latent image,

wherein the irradiating of step (iii) preferably includes exposing at least a portion of the dried coating to ionizing radiation wherein the ionizing radiation preferably has a wavelength of about 10 nm to about 365 nm or is generated via electron beams.

15. Use of one or more compounds of any of claims 1-12 in a process for patterning a radiation sensitive coating.