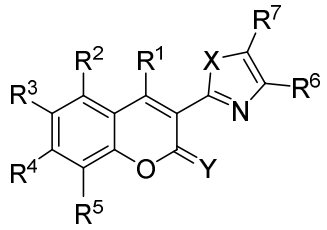
WHAT IS CLAIMED IS:

1. A nucleotide or oligonucleotide labeled with a compound of Formula (II), or a salt or mesomeric form thereof:



(II),

wherein X is S;

Y is O;

each R^1, R^2, R^3 and R^5 is independently H;

R^4 is $-NR^bR^c$;

each of R^6 and R^7 is independently H, carboxyl, $-C(O)NR^bR^c$, $-C(O)OR^d$, C_1-C_6 alkyl, substituted C_1-C_6 alkyl, R^b is H;

R^c is H, C_1-C_6 alkyl, or substituted C_1-C_6 alkyl; or R^b; and

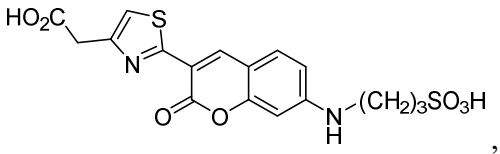
each R^d is independently optionally substituted C_1-C_6 alkyl or optionally substituted phenyl; provided that

at least one of R^6 and R^7 comprises a carboxyl, or

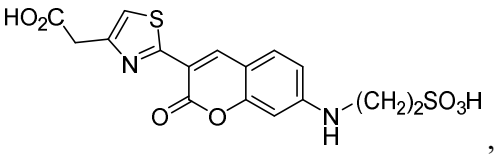
R^c comprises a carboxyl or $-C(O)OR^d$.

2. The nucleotide or oligonucleotide of claim **Error! Reference source not found.**, wherein the substituted C_1-C_6 alkyl is independently substituted with carboxyl, $-C(O)OR^d$, sulfo ($-SO_3H$), sulfonate ($-SO_3^-$), $-O-SO_3^-$ or $-SO_2NR^eR^f$, and wherein each of R^e and R^f is independently H or C_1-C_6 alkyl.

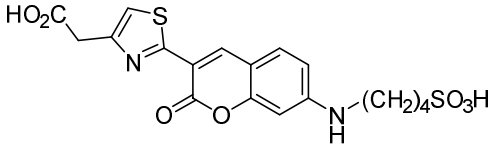
3. The compound of claim 1 or claim 2, selected from the group consisting of



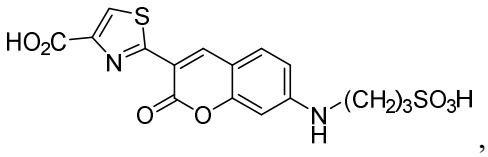
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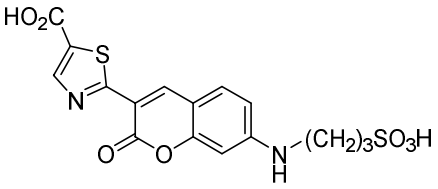
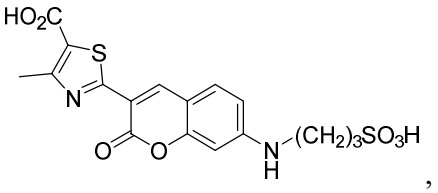
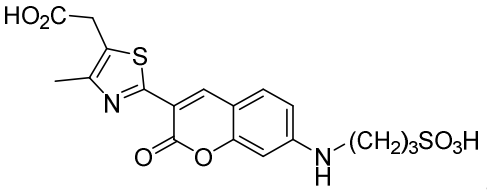
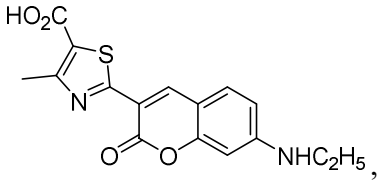
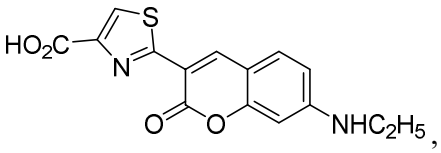
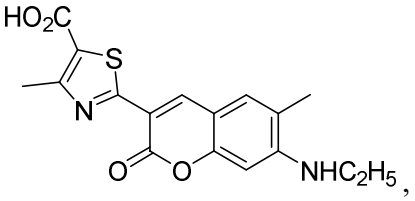
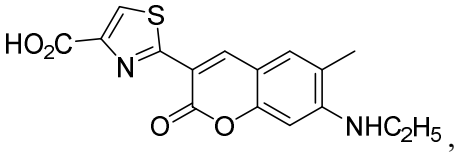
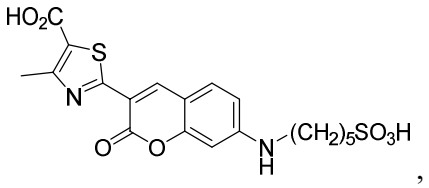
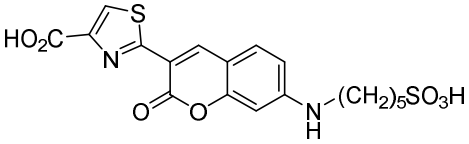
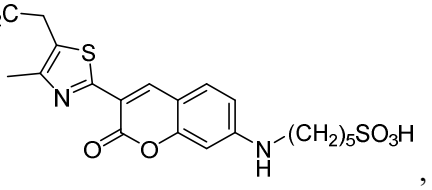
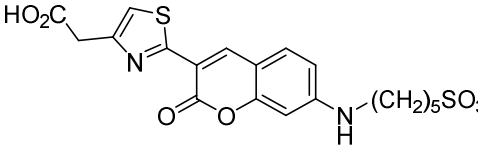
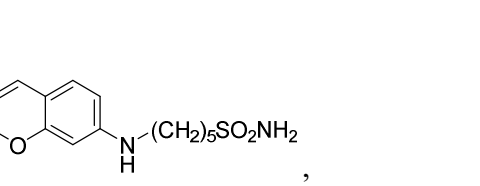
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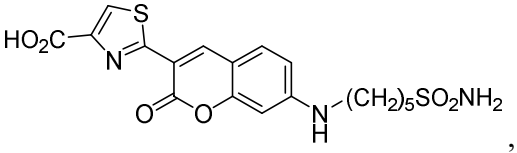
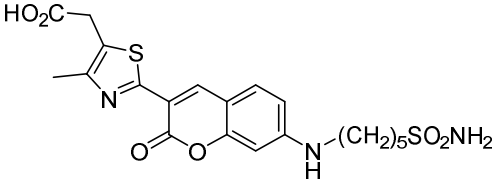
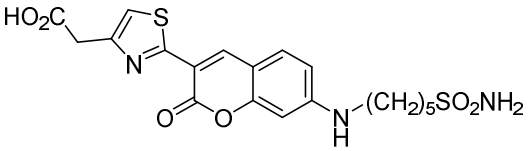
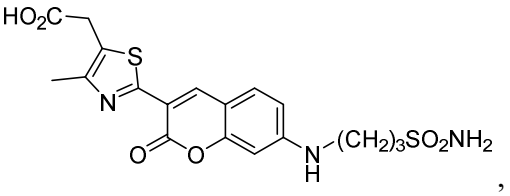
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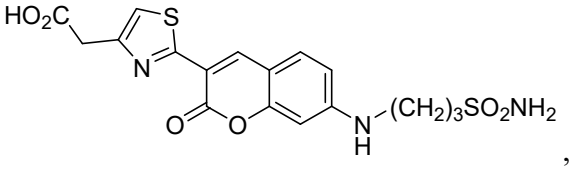
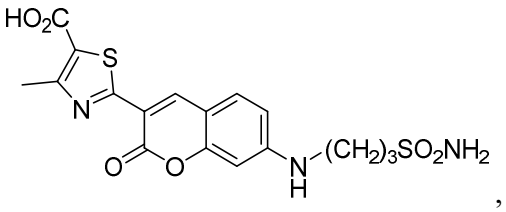
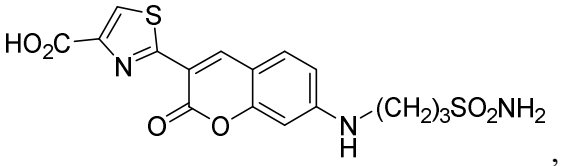
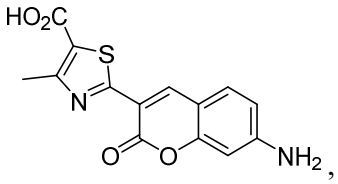
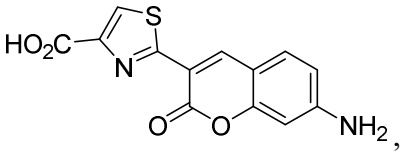
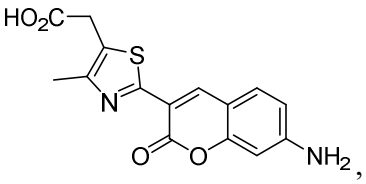
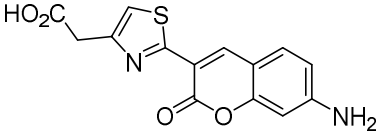
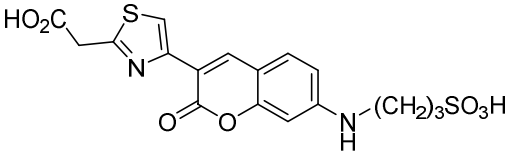


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and

, and C_1-C_6 alkyl carboxylic esters, salts and mesomeric forms thereof.

4. The nucleotide or oligonucleotide of claim **Error! Reference source not found.**, wherein the compound is attached the nucleotide or oligonucleotide via a carboxyl group of R^6 or R^7 of Formula (II) or (II').

5. The nucleotide or oligonucleotide of any one of claims **Error! Reference source not found.** to 4, wherein the compound is attached to the C5 position of a pyrimidine base or the C7 position of a 7-deaza purine base through a linker moiety.

6. The nucleotide or oligonucleotide of any one of claims **Error! Reference source not found.** to 5, further comprising a 3' OH blocking group covalently attached to the ribose or deoxyribose sugar of the nucleotide.

7. The nucleotide or oligonucleotide of claim **Error! Reference source not found.**, wherein the nucleotide or oligonucleotide is an oligonucleotide hybridized to at least a portion of a target polynucleotide.

8. The oligonucleotide of claim 7, wherein the target polynucleotide is immobilized on a solid support.

9. The oligonucleotide according to claim 8, wherein the solid support comprises an array of a plurality of immobilized target polynucleotides.

10. A kit comprising a first type of labeled nucleotide according to any one of claims **Error! Reference source not found.** to 6.

11. The kit of claim 10, further comprising a second type of labeled nucleotide, wherein the second type of labeled nucleotide is labeled with a different compound than the first type of labeled nucleotide.

12. The kit of claim 11, wherein the first and second types of labeled nucleotides are excitable using a single laser wavelength.

13. The kit of claim 11 or 12, further comprising a third type of nucleotide and a fourth type of nucleotide, wherein each of the second, third, and fourth type of nucleotides is labeled with a different compound, wherein each label has a distinct absorbance maximum that is distinguishable from the other labels.

14. The kit of claim 10, wherein the kit comprises four types of nucleotides, wherein a first type of nucleotide is a labeled nucleotide according to any one of claims **Error! Reference source not found.** to 6, a second type of nucleotide is labeled with a second label, a third type of nucleotide is labeled with a third label, and a fourth type of nucleotide is unlabeled (dark).

15. The kit of claim 10, wherein the kit comprises four types of nucleotides, wherein a first type of nucleotide is a labeled nucleotide according to any one of claims **Error! Reference source not found.** to 6, a second type of nucleotide is labeled with a second label, a third type of nucleotide is labeled with a mixture of two labels, and a fourth type of nucleotide is unlabeled (dark).

16. The kit according to any one of claims 10 to 15, further comprising a DNA polymerase and one or more buffer compositions.

17. Use of a nucleotide or oligonucleotide of claims **Error! Reference source not found.** to 6, or a kit of any one of claims 10 to 16 in sequencing, expression analysis, hybridization analysis, genetic analysis, RNA analysis, or a protein binding assay.

18. The use according to claim 17 on an automated sequencing instrument, wherein said automated sequencing instrument comprises two lasers operating at different wavelengths.

19. A method of determining the sequence of a single-stranded target polynucleotide, comprising:

(a) contacting a primer polynucleotide/target polynucleotide complex with one or more labeled nucleotides, wherein at least one of said labeled nucleotide is a nucleotide of any one of claims **Error! Reference source not found.** to 6, and wherein the primer polynucleotide is complementary to at least a portion of the target polynucleotide;

(b) incorporating a labeled nucleotide into the primer polynucleotide; and

(c) performing one or more fluorescent measurements to determine the identity of the incorporated nucleotide.

20. The method of claim 19, wherein the primer polynucleotide/target polynucleotide complex is formed by contacting the target polynucleotide with a single-stranded primer polynucleotide complementary to at least a portion of the target polynucleotide.

21. The method of claim 19 or 20, further comprising (d) removing the label and the 3′ blocking group from the nucleotide incorporated into the primer polynucleotide.

22. The method of claim 20, further comprising (e) washing the removed label and the 3′ blocking group away from the primer polynucleotide.

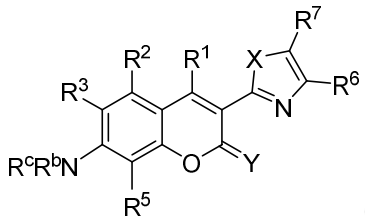
23. The method of claim 22, further comprising repeating steps (a) to (e) until a sequence of at least a portion of the template polynucleotide strand is determined.

24. The method of claim 23, wherein the steps (a) to (e) is repeated at least 50 times.

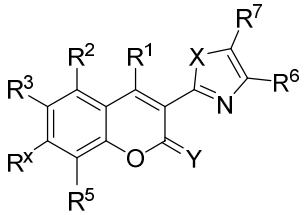
25. The method of any one of claims 19 to 24, wherein the label and the 3′ blocking group from the nucleotide incorporated into the primer polynucleotide are removed in a single chemical reaction.

26. The method of any one of claims 19 to 25, wherein the method is performed on an automated sequencing instrument, and wherein the automated sequencing instrument comprises two light sources operating at different wavelengths.

27. A process of preparing a compound of Formula (IIa), comprising reacting a compound of Formula (III) with an amine of formula NHR^bR^c respectively;



(IIa)



(III)

wherein X is S;

Y is O;

each R^1, R^2, R^3 and R^5 is independently H;

each of R^6 and R^7 is independently H, carboxyl, $-C(O)NR^bR^c$, $-C(O)OR^d$, C_1-C_6 alkyl, substituted C_1-C_6 alkyl;

R^x is halo, $-OR^d$ or $-OS(O)_2R^d$;

R^a is H or C_1-C_6 alkyl;

R^b is H;

R^c is H, C_1-C_6 alkyl, or substituted C_1-C_6 alkyl; and

each R^d is independently optionally substituted C_1-C_6 alkyl or optionally substituted phenyl.