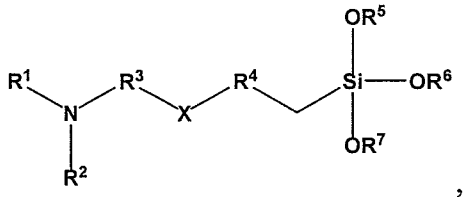
CLAIMS

WHAT IS CLAIMED IS

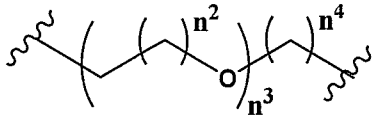
1. A molecule or salt thereof, having the structure:



,

wherein R^1 and R^2 are the same or different and are independently hydrogen, alkyl, alkenyl, aryl, heteroaryl, alkynyl, arylalkyl, arylalkenyl, haloalkyl, cycloalkyl, sulfonamidyl, acyl, or $-CO_2R^8$, wherein R^8 is alkyl, alkenyl, aryl, arylalkyl, arylalkenyl, haloalkyl, cycloalkyl, cycloalkylalkyl, or arylcycloalkylalkyl; or wherein R^1 and R^2 and the N to which they are bound form a ring; or wherein at least one of R^1 or R^2 comprise a nucleoside, nucleotide, polynucleotide, peptide, peptoid, saccharide, polysaccharide, aptamer, or antibody or fragment thereof;

R^3, oriented from N to X, is alkyl, heteroalkyl, amino-substituted alkyl, amino-substituted heteroalkyl, amidoalkyl, amidoheteroalkyl, amino-substituted amidoheteroalkyl, each optionally substituted with an alkyl, heteroalkyl, amino-substituted alkyl, amino-substituted heteroalkyl, amidoalkyl, amidoheteroalkyl, or amino-substituted amidoheteroalkyl; or wherein R^3 is $-(CR^9R^{10}CR^{11}R^{12})_n-$, wherein n is 1 to 100, and R^9, R^{10}, R^{11}, and R^{12} are the same or different and are independently hydrogen, halo, alkyl, heteroalkyl, amino-substituted alkyl, amino-substituted heteroalkyl, amidoalkyl, amidoheteroalkyl, amino-substituted amidoheteroalkyl; or wherein R^3 is



,

wherein n^2 and n^4 are the same or different and are independently 1, 2, or 3, and n^3 is 1 to 20; or wherein R^3 is a polymer comprising alkyl, heteroalkyl, amino-substituted alkyl, aminoheteroalkyl, and amidoalkyl;

X is O, NR^{13}, or S, wherein R^{13} is hydrogen or alkyl;

R^4, oriented from X to C, is alkyl, alkylether, and alkylthioether, wherein each of alkyl, alkylether, and alkylthioether is optionally substituted with hydroxyl, thiol, amino, or halo;

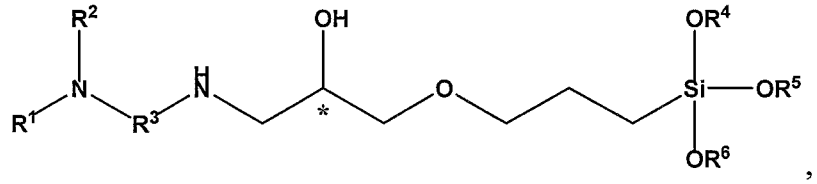
R^5, R^6, and R^7 are the same or different and are independently hydrogen, alkyl, silyl, or siloxy; and

wherein at least one of R^5, R^6, or R^7 optionally further comprises a solid phase.

2. The molecule or salt of claim 1, comprising a solid phase.

3. The molecule or salt of claim 2, wherein said solid phase comprises a silicon atom.

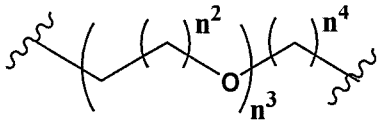
4. A molecule or salt thereof having the structure:



,

wherein R^1 and R^2 are the same or different and are independently hydrogen, alkyl, alkenyl, aryl, heteroaryl, alkynyl, arylalkyl, arylalkenyl, haloalkyl, cycloalkyl, sulfonamidyl, acyl, or $-CO_2R^8$, wherein R^8 is alkyl, alkenyl, aryl, arylalkyl, arylalkenyl, haloalkyl, cycloalkyl, cycloalkylalkyl, or arylcycloalkylalkyl; or wherein R^1 and R^2 and the N to which they are bound form a ring; or wherein at least one of R^1 or R^2 comprise a nucleoside, nucleotide, polynucleotide, peptide, peptoid, saccharide, polysaccharide, aptamer, or antibody or fragment thereof;

R^3, oriented from NR^1R^2 to NH is alkyl, heteroalkyl, amino-substituted alkyl, amino-substituted heteroalkyl, amidoalkyl, amidoheteroalkyl, amino-substituted amidoheteroalkyl, each optionally substituted with an alkyl, heteroalkyl, amino-substituted alkyl, amino-substituted heteroalkyl, amidoalkyl, amidoheteroalkyl, or amino-substituted amidoheteroalkyl; or wherein R^3 is $-(CR^7R^8CR^9R^{10})_n-$,wherein n is 1 to 100, and R^7, R^8, R^9, and R^{10} are the same or different and are hydrogen, halo, alkyl, heteroalkyl, amino-substituted alkyl, amino-substituted heteroalkyl, amidoalkyl, amidoheteroalkyl, amino-substituted amidoheteroalkyl; or wherein R^3 is



,

wherein n^2 and n^4 are the same or different and are independently 1, 2, or 3, and n^3 is 1 to 20; or wherein R^3 is a polymer or dendrimer comprising alkyl, heteroalkyl, amino-substituted alkyl, amino-substituted heteroalkyl, amidoalkyl, and amino-substituted amidoalkyl, amidoheteroalkyl, or amino-substituted amidoheteroalkyl;

R^4, R^5, and R^6 are the same or different and are independently hydrogen, alkyl, silyl, or siloxy;

(*) is a carbon center, wherein said carbon center is in an *R*-configuration or *S*-configuration; and

wherein at least one of R^4, R^5, or R^6 optionally further comprises a solid phase.

5. The molecule or salt of claim 4, wherein said carbon center is in an *R*-configuration.

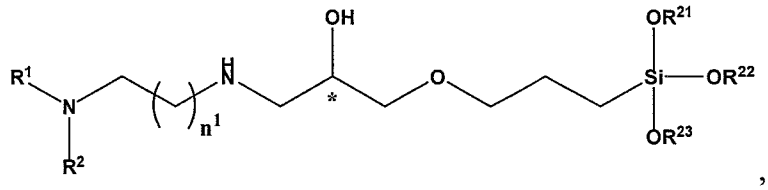
6. The molecule or salt of claim 4, wherein said carbon center is in an *S*-configuration.

7. The molecule or salt of claim 4, comprising said solid phase.

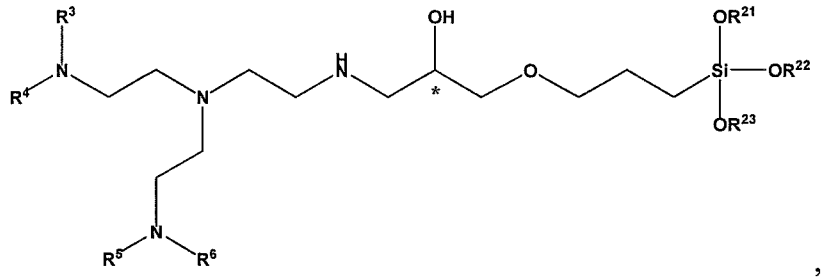
8. The molecule or salt of claim 7, wherein said solid phase comprises a silicon atom.

9. The molecule or salt of claim 4, wherein R^3 is alkyl, aminoheteroalkyl, polyamidoaminoalkyl, or polyaminoalkyl.

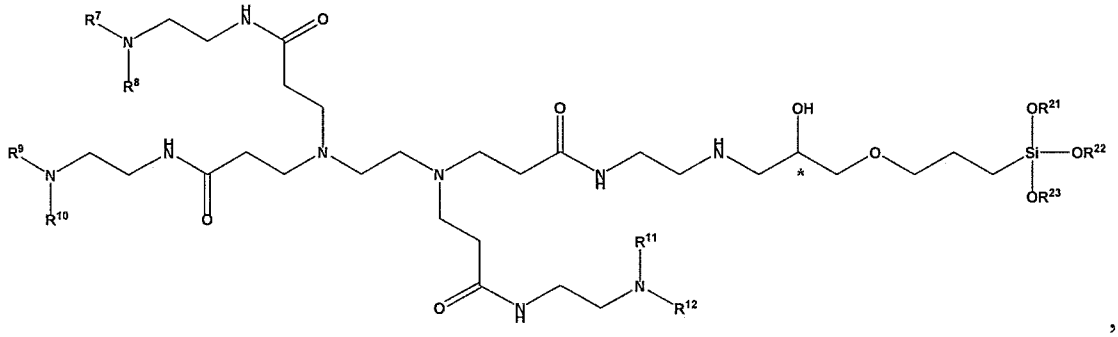
10. A molecule or salt thereof having the structure:



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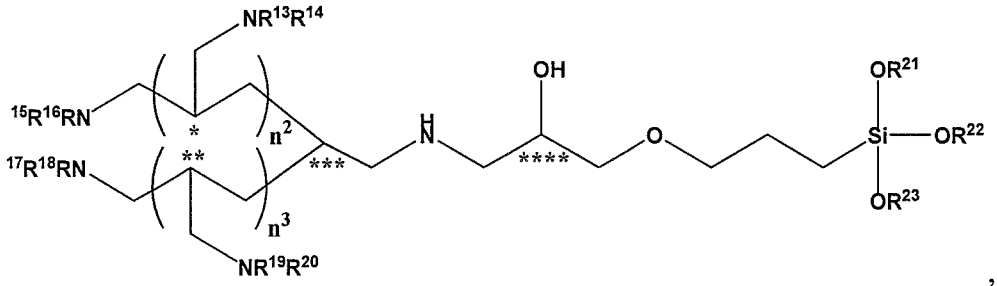


,



,

or



,

wherein:

n^1=1, 2, 3, 4, 5, 6, or 7;

n^2 and n^3 are the same or different and are independently about 1 to about 1000;

R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^9, R^{10}, R^{11}, R^{12}, R^{13}, R^{14}, R^{15}, R^{16}, R^{17}, R^{18}, R^{19}, and R^{20} are the same or different and are hydrogen, alkyl, alkenyl, aryl, heteroaryl, alkynyl, arylalkyl, arylalkenyl, haloalkyl, cycloalkyl, sulfonamidyl, acyl, or $-CO_2R^{24}$, wherein R^{24} is alkyl, alkenyl, aryl, arylalkyl, arylalkenyl, haloalkyl, cycloalkyl, cycloalkylalkyl, or arylcycloalkylalkyl; or wherein R^1 and R^2 and the N to which they are bound, R^3 and R^4 and the N to which they are bound, R^5 and R^6 and the N to which they are bound, R^7 and R^8 and the N to which they are bound, R^9 and R^{10} and the N to which they are bound, R^{11} and R^{12} and the N to which they are bound, R^{13} and R^{14} and the N to which they are bound, R^{15} and R^{16} and the N to which they are bound, R^{17} and R^{18} and the N to which they are bound, and R^{19} and R^{20} and the N to which they are bound independently optionally form a ring;

R^3, R^4, and R^5 are the same or different and are independently hydrogen, alkyl, silyl, or siloxy;

(*), (**), and (***) are carbon centers, wherein said carbon centers are independently in an *R*-configuration or *S*-configuration, or can be achiral centers;

(****) is a second carbon center, wherein said second carbon center is in an *R*-configuration or *S*-configuration; and

wherein at least one of R^{21}, R^{22}, or R^{23} optionally further comprises a solid phase.

11. The molecule of claim 10, wherein said carbon center is in an *R*-configuration.

12. The molecule of claim 10, wherein said carbon center is in an *S*-configuration.

13. A molecule or salt of claim 10, comprising a solid phase.

14. A molecule or salt of claim 13, wherein said solid phase comprises a silicon atom.

15. An array comprising at least 2 molecules or salts of claim 1.

16. The array of claim 15, wherein said array comprises a density of said amino groups from about $1x10^{10}$ groups per cm^2 to about $1x10^{14}$ groups per cm^2.

17. The array of claim 14, wherein said molecules or salts are stereoenriched or a racemate.

18. The array of claim 15, wherein said molecules or salts have an enantiomeric excess of at least about 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 85%, 90%, 95%, 96%, 97%, 98%, 99%, or 100%.

19. The array of claim 15, wherein at least some of said molecules or their salts form a coating, wherein said coating has a thickness of from about 1 angstom to about 25 angstroms.

20. The array of claim 15, wherein said molecules or their salts are cross-linked.