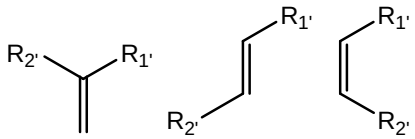
Claims

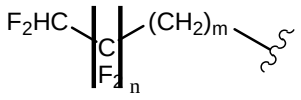
1. A cosmetic method of treating scalp hair comprising the step of:

applying to said hair a non-toxic composition comprising a fluorinated, non-polymeric compound of formula (I) with a cosmetically acceptable excipient,

wherein the compound is according to one of the formulae:



wherein R1' is-CO2RB'; and wherein RB' is



,

wherein n is an integer between 1 and 20, inclusive; and m is 1; and

R2' is selected from the group consisting of hydrogen; halogen; substituted or unsubstituted cyclic C3-C20 aliphatic; substituted or unsubstituted, branched or unbranched acyclic C1-C20 aliphatic; substituted or unsubstituted cyclic C3-C20 heteroaliphatic; substituted or unsubstituted, branched or unbranched acyclic C1-C20 heteroaliphatic; substituted or unsubstituted, branched or unbranched C1-C20 acyl; substituted or unsubstituted C6-C14 aryl; substituted or unsubstituted heteroaryl; -ORA'; -C(O)RA'; -CO2RA'; -C(O)N(RA')2; -SRA'; -SORA'; -SO2RA'; $-NR_{A'}$; $-N(R_{A'})_2$; $-NHC(O)R_{A'}$; and $-C(R_{A'})_3$;

wherein heteroaryl is selected from the group consisting of pyridyl, pyrazinyl, pyrimidinyl, pyrrolyl, pyrazolyl, imidazolyl, thiazolyl, oxazolyl, isooxazolyl, thiadiazolyl, oxadiazolyl, thiophenyl, furanyl, quinolinyl, and isoquinolinyl; and

wherein each occurrence of RA' is independently selected from a group consisting of hydrogen, cyclic or acyclic, substituted or unsubstituted, branched or unbranched aliphatic; cyclic or acyclic, substituted or unsubstituted, branched or unbranched heteroaliphatic; substituted or unsubstituted, branched or unbranched acyl; substituted or unsubstituted aryl; substituted or unsubstituted heteroaryl; alkoxy; aryloxy; alkylthio; arylthio; amino; alkylamino; dialkylamino; heteroaryloxy; heteroarylthio and a protecting group;

provided that the composition and method do not employ a free radical initiator, a polymerization initiator or a polymerization catalyst.

2. The method according to claim 1, wherein the compound is selected from the group consisting of:

1H,1H,11H-eicosafluoroundecyl acrylate;

1H,1H,11H-eicosafluoroundecyl methacrylate;

2,2,3,3,4,4,5,5-octafluoropentyl methacrylate;

2,2,3,3,4,4,5,5-octafluoropentyl acrylate;

1H,1H,7H-dodecafluoroheptyl acrylate; and

1H,1H,7H-dodecafluoroheptyl methacrylate.

3. A cosmetic method of treating scalp hair comprising the step of applying to said hair a non-toxic composition comprising a fluorinated, non-polymeric compound with a cosmetically acceptable excipient, wherein the compound is selected from the group consisting of:

2,2,3,3,4,4,5,5-octafluoro-1,6-hexyl dimethacrylate;

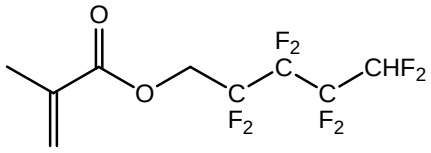
2,2,3,3,4,4,5,5-octafluoro-1,6-hexyl diacrylate;

2,2,3,3,4,4-hexafluoro-1,5-pentyl diacrylate;

2,2,3,3,4,4-hexafluoro-1,5-pentyl dimethacrylate;

provided that the composition and method do not employ a free radical initiator, a polymerization initiator or a polymerization catalyst.

4. The method according to claim 1, wherein the compound is:



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5. The method according to claim 1, wherein the compound does not substantially polymerize on the hair.

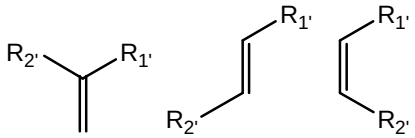
6. The method according to claim 1, wherein said method does not employ a step consisting of rinsing said hair after applying said composition.

7. The method according to claim 1, wherein said composition is a hair spray, conditioner, or shampoo.

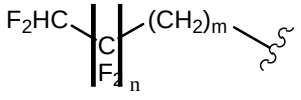
8. The method according to claim 1, wherein the method does not further employ a step of (i) applying a composition containing more than about 0.1% weight/weight of a uv-activated free radical initiator that is activated under ambient light, or (ii) applying a composition containing more than about 0.01% weight/weight of a free radical initiator selected from the group consisting of a heat-activated initiator that is activated at or above ambient temperature and an initiator that is active at ambient temperature.

9. A non-toxic hair care composition comprising a fluorinated, non-polymeric compound of formula (I) and a cosmetically acceptable excipient,

wherein the compound is according to one of the formulae:



wherein R1' is is-CO2RB'; and wherein RB' is



,

wherein n is an integer between 1 and 20, inclusive; and m is 1; and

$R_{2'}$ is selected from the group consisting of hydrogen; halogen; substituted or unsubstituted cyclic C_3-C_{20} aliphatic; substituted or unsubstituted, branched or unbranched acyclic C_1-C_{20} aliphatic; substituted or unsubstituted cyclic C_3-C_{20} heteroaliphatic; substituted or unsubstituted, branched or unbranched acyclic C_1-C_{20} heteroaliphatic; substituted or unsubstituted, branched or unbranched C_1-C_{20} acyl; substituted or unsubstituted C_6-C_{14} aryl; substituted or unsubstituted

heteroaryl; -$OR_{A'}$; -$C(O)R_{A'}$; -$CO_2R_{A'}$; -$C(O)N(R_{A'})_2$; -$SR_{A'}$; -$SOR_{A'}$; -$SO_2R_{A'}$; -$NR_{A'}$; -$N(R_{A'})_2$; -$NHC(O)R_{A'}$; and -$C(R_{A'})_3$;

wherein heteroaryl is selected from the group consisting of pyridyl, pyrazinyl, pyrimidinyl, pyrrolyl, pyrazolyl, imidazolyl, thiazolyl, oxazolyl, isooxazolyl, thiadiazolyl, oxadiazolyl, thiophenyl, furanyl, quinolinyl, and isoquinolinyl,

and wherein each occurrence of $R_{A'}$ is independently selected from a group consisting of hydrogen, cyclic or acyclic, substituted or unsubstituted, branched or unbranched aliphatic; cyclic or acyclic, substituted or unsubstituted, branched or unbranched heteroaliphatic; substituted or unsubstituted, branched or unbranched acyl; substituted or unsubstituted aryl; substituted or unsubstituted heteroaryl; alkoxy; aryloxy; alkylthio; arylthio; amino; alkylamino; dialkylamino; heteroaryloxy; heteroarylthio and a protecting group;

provided that the composition does not contain a free radical initiator, a polymerization initiator or a polymerization catalyst.

10. The hair care composition according to claim 9, wherein the cosmetically acceptable excipient comprises a rheology modifier and a non-ionic emulsifier, wherein the rheology modifier is selected from the group consisting of gyceryl polyacrylate, sodium polyacrylate, carbomer, acrylates copolymer, acrylic acid/vp crosspolymer, and xanthan gum; and the non-ionic emulsifier is selected from the group consisting of Laureth-23, Ocyldodeceth-20, Oleth-10, Peg-40 Hydrogenated Castor Oil, Polaxomer 127, Polysorbate 20, and Ceteareth-20.

11. The hair care composition according to claim 9, wherein the compound is selected from the group consisting of:

1H,1H,11H-eicosafluoroundecyl acrylate;

1H,1H,11H-eicosafluoroundecyl methacrylate;

2,2,3,3,4,4,5,5-octafluoropentyl methacrylate;

2,2,3,3,4,4,5,5-octafluoropentyl acrylate;

1H,1H,7H-dodecafluoroheptyl acrylate; and

1H,1H,7H-dodecafluoroheptyl methacrylate.

12. A non-toxic composition comprising a fluorinated, non-polymeric compound and a cosmetically acceptable excipient, wherein the compound is selected from the group consisting of:
2,2,3,3,4,4,5,5-octafluoro-1,6-hexyl dimethacrylate;

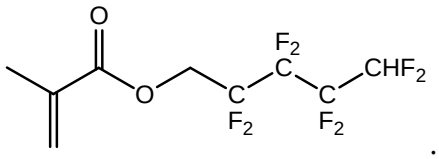
2,2,3,3,4,4,5,5-octafluoro-1,6-hexyl diacrylate;

2,2,3,3,4,4-hexafluoro-1,5-pentyl diacrylate;

2,2,3,3,4,4-hexafluoro-1,5-pentyl dimethacrylate;

provided that the composition does not contain a free radical initiator, a polymerization initiator or a polymerization catalyst.

13. The hair care composition according to claim 9, wherein the compound is:



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14. The hair care composition according to claim 9, wherein the composition is a hair spray, conditioner, or shampoo.