CLAIMS

1. A poly(non-conjugated diene) based sunscreen comprising of a plurality of at least one repeating unit comprising at least one UV absorbing chromophore situated between two mono-ene units, said mono-ene units and a chromophore unit comprising said UV absorbing chromophore wherein said mono-ene units and said chromophore unit being connected by chains.

2. The sunscreens of claim 1, wherein said UV absorbing chromophore absorbs light in the UVA or UVB region of the electromagnetic spectrum.

3. The sunscreen of claim 1, wherein said UV absorbing chromophore comprises an equivalent conjugated group derived from Aminobenzoic acid, Avobenzone, Cinoxate, Dioxybenzone, Homosalate, Menthyl anthranilate, Octocrylene, Octyl methoxycinnamate, Octyl salicylate, Oxybenzone, Padimate O, Phenylbenzimidazole sulfonic acid, Sulisobenzone, Trolamine salicylate, Ecamsule, Phenylbenzimidazole sulfonic acid, 4-Methylbenzylidene camphor, Bisoctrizole, Bemotrizinol, Bisdisulizole disodium, Drometrizole trisiloxane, Benzophenone-9, Ethylhexyl triazone, Diethylamino hydroxybenzoyl hexyl benzoate, Iscotrizinol, or Isoamyl p-Methoxycinnamate.

4. The sunscreen of claim 1, wherein said chains comprise a plurality of methylene units.

5. The sunscreen of claim 1, wherein said chromophore unit comprises said UV absorbing chromophore and a bridging group.

6. The sunscreen of claim 5, wherein said bridging group comprises an alkylene group and a linking functionality, wherein said linking functionality comprises a residue of an addition or a condensation reaction between functionality on said alkylene group and said UV absorbing chromophore.

7. The sunscreen of claim 1, wherein said UV absorbing chromophores are periodically placed along the chain of said poly(non-conjugated diene) based sunscreen.

8. The sunscreen of claim 1, wherein said UV absorbing chromophores are quasi-periodically placed along the chain of said poly(non-conjugated diene) based sunscreen.

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9. The sunscreen of claim 1, wherein said UV absorbing chromophores are pseudo-randomly placed along the chain of said poly(non-conjugated diene) based sunscreen.

10. The sunscreen of claim 1, further comprising functionality to impart substantive properties, dispersivity, and/or an ability to specifically interact with particles or chemicals in at least one of said plurality of repeating units or as a group attached to at least one terminal ene unit of said plurality of repeating units.

11. A monomer for preparation of a poly(non-conjugated diene) based sunscreens comprising two terminal ene units and a chromophore unit comprising at least one UV absorbing chromophore being connected by chains to said terminal ene units, wherein said UV absorbing chromophore absorbs light in the UVA and/or UVB region of the electromagnetic spectrum.

12. The monomer of claim 11, wherein said UV absorbing chromophore comprises an equivalent conjugated group as Aminobenzoic acid, Avobenzone, Cinoxate, Dioxybenzone, Homosalate, Menthyl anthranilate, Octocrylene, Octyl methoxycinnamate, Octyl salicylate, Oxybenzone, Padimate O, Phenylbenzimidazole sulfonic acid, Sulisobenzone, Trolamine salicylate, Ecamsule, Phenylbenzimidazole sulfonic acid, 4-Methylbenzylidene camphor, Bisoctrizole, Bemotrizinol, Bisdisulizole disodium, Drometrizole trisiloxane, Benzophenone-9, Ethylhexyl triazone, Diethylamino hydroxybenzoyl hexyl benzoate, Iscotrizinol, or Isoamyl p-Methoxycinnamate.

13. The monomer of claim 11, wherein said chains comprise a plurality of methylene units.

14. The monomer of claim 11, wherein said chromophore unit comprising said UV absorbing chromophore comprises said UV absorbing unit and a bridging group.

15. The monomer of claim 14, wherein said bridging group comprises an alkylene group and a linking functionality, wherein said linking functionality comprises a residue of an addition or a condensation reaction between functional groups of said alkylene group and said UV absorbing chromophore.

16. The monomer of claim 11, wherein said chains are of equal length and composition.

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17. The monomer of claim 11, wherein said chains are of different lengths and composition.

18. The monomer of claim 11, further comprising functionality to impart substantive properties, dispersivity, and/or an ability to specifically interact with particles or chemicals.

19. A method of preparing a poly(non-conjugated diene) based sunscreens comprising the steps of:

providing a plurality of at least one monomer comprising two terminal ene units and a chromophore unit comprising at least one UV absorbing chromophore wherein said chromophore unit and said terminal ene units are connected by chains and wherein said at least one UV absorbing chromophore independently absorbs light in the UVA and/or UVB region of the electromagnetic spectrum;

providing a catalyst to promote acyclic olefin metathesis;

combining said catalyst with said monomers; and

removing ethylene until a desired molecular weight is achieved.

20. The method of claim 19, wherein said catalyst comprises Schrock's catalyst or Grub's catalyst.

21. A sunscreen drug product comprising a poly(non-conjugated diene) comprising a plurality of at least one repeating unit comprising at least one UV absorbing chromophore situated between two mono-ene units, said mono-ene units and a unit comprising said UV absorbing chromophore being connected by chains, wherein said at least one UV absorbing chromophore independently absorbs light in the UVA and/or UVB region of the electromagnetic spectrum and a vehicle.

22. The sunscreen drug product of claim 21, wherein said vehicle comprises a solvent for said poly(non-conjugated diene).

23. The sunscreen drug product of claim 21, wherein said vehicle comprises non-solvent for said poly(non-conjugated diene) and a dispersing agent.

24. A method to prevent sunburn comprising the steps of:

providing a poly(non-conjugated diene) based sunscreen; and

applying said poly(non-conjugated diene) based sunscreen to skin.

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25. The method of claim 24, wherein said poly(non-conjugated diene) based sunscreen is provided as a component of a fluid comprising a solution or a dispersion.

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