We claim:

1. A method of producing polymer-coated microparticles comprising:

combining micronized protein powder and a polymer into a hydrocarbon solvent to form a non-aqueous first solution;

agitating the first non-aqueous solution to form a suspension;

feeding the suspension to a dispersion cell, wherein the suspension is infused through a porous membrane into a continuous phase comprising a fluorocarbon liquid and a fluorosurfactant under a tangent flow of the continuous phase to form a hydrocarbon-in-fluorocarbon emulsion;

adding a hydrofluoroether to the hydrocarbon-in-fluorocarbon emulsion; removing the hydrocarbon solvent to provide hardened microparticles; and

removing the fluorocarbon liquid to isolate the microparticles, wherein the microparticles comprise protein encapsulated within a matrix of polymer.

2. The method of claim 1, further comprising the steps of removing residual fluorosurfactant from the microparticles by washing the microparticles in the fluorocarbon liquid and removing the fluorocarbon by vacuum and collecting the microparticles using a polyethersulfone membrane filter.

3. The method of any one of claims 1-2, wherein the fluorocarbon liquid comprises a perfluoro C5-C18 compound.

4. The method of any one of claims 1-3, wherein the hydrocarbon solvent is selected from the group consisting of dichloromethane, chloroform, toluene, ethyl acetate, tetrahydrofuran, or a combination thereof.

5. The method of any one of claim 1-4, wherein the fluorocarbon solution comprises 1,1,2,2,3,3,4,4,4-nonafluoro-N,N-bis(,2,2,3,3,4,4,4-nonafluorobutyl)butan-1-amine.

6. The method of any one of claims 1-5, wherein the fluorosurfactant comprises Perfluoropolyether-b-Polyethylene glycol-b-Perfluoropolyether.

7. The method of any one of claims 1-6, wherein the polymer comprises polyorthoester (POE).

8. The method of any one of claims 1-6, wherein the polymer is selected from the group consisting of polylactic acid and poly(lactic-co-glycolic acid).

9. The method of any one of claims 1-8, wherein the hydro fluoroether is 2-(trifluoromethyl)-3-ethoxydodecafluorohexane.

10. The method of any one of claim 1-9, wherein the membrane is a fluorophilic-coated stainless steel membrane.

11. The method of claim 10, wherein the pores of the membrane are 3 to 300 μm in diameter.

12. The method of any one of claim 1-11, wherein the fluorosurfactant is present in fluorocarbon liquid at about 0.1 to 5% w/v.

13. The method of any one of claims 1-12, wherein the protein powder to polymer ratio is 0.1%-30%.

14. The method of any one of claims 1-12, wherein the micronized powder is produced from an antibody or antigen binding fragment thereof, a fusion protein, a recombinant protein, or a fragment or truncated version thereof.

15. The method of claim 14, wherein the fusion protein is VEGF Trap fusion protein or at truncated version thereof.

16. The method of claim 14 or 15, wherein the VEGF-trap fusion protein is aflibercept.

17. The method of any one of claims 1-16, wherein feeding of the suspension is at a rate of 0.1 to 1.0 ml/min.

18. The method of any one of claims 1-17, wherein the suspension is a homogeneous suspension.

19. The method of any one of claims 1-18, wherein the microparticles comprise a single core-shell structure.

20. The method of any one of claim 1-19, wherein at least one microparticle comprises multiple cores dispersed within the polymer.

21. The method of any one of claims 1-20, wherein the microparticles comprise microparticles comprising a combination of a single core-structures encapsulated by a polymer and microparticles comprising multi-core structures encapsulated by a polymer.

22. The method of any one of claims 1-21, wherein the microparticles have a diameter of 1 to 200 μm.

23. The method of any one of claims 1-22, wherein the microparticles have a median diameter of 30 to 60 μm.

24. The method of any one of claims 1-23, wherein protein powder is micronized by spray-drying, electrospray drying, reversible precipitation, spray freezing, microtemplating, or a combination thereof.

25. The method of any one of claims 1-24, wherein the suspension is formed using homogenization, vortexing, sonication, cavitation, agitation, stirring, churning, whisking, shaking, emulsifying or a combination thereof.

26. The method of any one of claims 1-25, wherein the hydrocarbon solvent is removed by evaporation.

27. The method of any one of claims 1-25, wherein the fluorocarbon liquid is removed by vacuum filtration.

28. A method of producing a polymer or polymer-coated microparticles comprising: combining 1 to 30% w/w of total solid spray dried-protein suspended in a hydrocarbon solution to form a non-aqueous first solution; agitating the first non-aqueous solution to form a suspension; feeding the suspension to a dispersion pump, wherein the suspension is infused through a porous membrane into a continuous phase comprising a fluorocarbon liquid and 0.1 to 5.0% w/v fluorosurfactant under a tangent flow of the continuous phase to form a hydrocarbon-in-fluorocarbon emulsion; removing the hydrocarbon solvent to provide hardened polymer or polymer- coated microspheres; and removing the fluorocarbon liquid to isolate the microparticles, wherein the microparticles comprise protein encapsulated within a matrix of polymer.

29. The method of claim 28, further comprising the step of adding a hydrofluoroether into the fluorocarbon liquid of the hydrocarbon-in-fluorocarbon emulsion prior to removing the hydrocarbon solvent.

30. The method of claim 29, wherein the hydrocarbon solution is removed by evaporation under ambient atmospheric pressure or under vacuum.

31. The method of claim 30, wherein the hardened polymer or polymer-coated microspheres are harvested by vacuum filtration.

32. The method of any one of claims 28-29, wherein the spray-dried protein is an antibody, recombinant protein, fusion protein, or a fragment thereof.

33. The method of claim 32 wherein the protein is a VEGF Trap protein or a truncated VEGF Trap protein.

34. The method of claim 28, wherein the hydrocarbon solution is selected from the group consisting of dichloromethane, chloroform, toluene, ethyl acetate, tetrahydrofuran, or a combination thereof.

35. The method of any one of claims 28-34, wherein the fluorocarbon liquid comprises trifluoromethyl)bis(1,1,2,2,3,3,4,4,4-nonafluorobutyl)amine.

36. The method of claim 35, further comprises harvesting the hardened microparticles.

37. The method of claim 29, wherein the hydrofluoroether comprises 4-Ethoxy-1,1,1 ,2,2,3 ,3 ,4,5,6, 6,6-didecafluoro-5-(trifluoromethyl)hexane.