What is claimed is:

1. A method of purifying a biomolecule in a sample, comprising contacting said sample with a bed of porous entangled nanofibers, each of said porous entangled nanofibers made by a melt extrusion of a blend of polymer and porogen and drawing to a target diameter and extracting porogen therefrom, within said bed having a diameter less than or equal to 1 micron, said porous entangled nanofibers arranged in discrete porous bundles, said porous entangled nanofibers having imparted thereon functionality enabling chromatography.

2. The method of claim 1, wherein said biomolecule comprises a virus.

3. The method of claim 1, wherein said functionality is grafted to said nanofibers.

4. The method of claim 1, wherein said functionality enables purification in a bind/elute mode.

5. The method of claim 1, wherein said polymer is composed of a melt-processable thermoplastic polymer.

6. The method of claim 5, wherein said melt-processable thermoplastic polymer is selected from the group consisting of polyamides, polyolefins, polyvinyl chloride, polystyrene, poly methylmethacrylate, polylactic acid, polyester, polyethylene terephthalate, polybutylene terephthalate, polyetherurethanes, polyvinyl alcohol, poylimide, polycarbonate, polyetheretherketone, polysulfone, and polytrimethylene terephthalate.

7. The method of claim 1, wherein said polymer is nylon.

8. The method of claim 1, wherein said porogen is a polymeric porogen.

9. The method of claim 8, wherein said polymeric porogen is poly(lactic acid).

10. The method of claim 1, wherein said porogen is a mineral porogen.

11. The method of claim 1, wherein said porogen is a combination of polymeric porogen and a mineral porogen.