CLAIMS:

1. A method of purifying an organic solvent, comprising:

passing the organic solvent through a first filter unit, a second filter unit downstream of the first filter unit, and a fourth filter unit downstream of the second filter unit to obtain a purified organic solvent,

wherein the first filter unit comprises a first housing and at least one first filter in the first housing, and the first filter comprises a filtration medium having a first average pore size;

wherein the second filter unit comprises a second housing and at least two second filters in the second housing, the at least two second filters are arranged in the second housing in parallel, and each of the second filters independently comprises a filtration medium having a second average pore size;

wherein the fourth filter unit comprises a fourth housing and at least two fourth filters in the fourth housing, the at least two fourth filters are arranged in the fourth housing in parallel, and each of the fourth filters independently comprises a filtration medium having a fourth average pore size; and

wherein the number of the first filter in the first filter unit is smaller than the number of the second filters in the second filter unit, the first average pore size is larger than the second average pore size, the number of the second filters in the second filter unit is smaller than the number of the fourth filters in the fourth filter unit, and the fourth average pore size is smaller than the second average pore size.

2. The method of claim 1, wherein the first filter unit comprises one first filter.

3. The method of claim 1, wherein the filtration medium in the first filter comprises polypropylene, high density polyethylene, ultra high molecular weight polyethylene, nylon, polytetrafluoroethylene, or a perfluoroalkoxy alkane polymer.

4. The method of claim 1, wherein the first average pore size is from 50 nm to 200 nm.

5. The method of claim 1, wherein the second filter unit comprises two or three second filters.

6. The method of claim 1, wherein the filtration medium in the second filter comprises polypropylene, high density polyethylene, ultra high molecular weight polyethylene, nylon, polytetrafluoroethylene, or a perfluoroalkoxy alkane polymer.

7. The method of claim 1, wherein the second average pore size is from 10 nm to 50 nm.

8. The method of claim 1, further comprising passing the organic solvent through a third filter unit disposed between the first and second filter units, wherein the third filter unit comprises a third housing and at least one third filter in the third housing, the third filter comprises a filtration medium having a third average pore size, and the filtration medium in the third filter comprises an ion exchange membrane.

9. The method of claim 8, wherein the third filter unit comprises one to three third filters.

10. The method of claim 8, wherein the ion exchange membrane in the third filter comprises polypropylene, high density polyethylene, ultra high molecular weight polyethylene, nylon, polytetrafluoroethylene, or a perfluoroalkoxy alkane polymer.

11. The method of claim 1, further comprising passing the organic solvent exiting the second filer unit to a storage tank.

12. The method of claim 11, further comprising recirculating the organic solvent by moving the organic solvent from the storage tank to the first filter unit and passing the organic solvent through the first and second filter units.

13. The method of claim 1, wherein the fourth filter unit comprises 4 to 14 fourth filters.

14. The method of claim 1, wherein the fourth average pore size is at most 10 nm.

15. The method of claim 1, wherein the filtration medium in the fourth filter comprises polypropylene, high density polyethylene, ultra high molecular weight polyethylene, nylon, polytetrafluoroethylene, or a perfluoroalkoxy alkane polymer.

16. The method of claim 1, further comprising recirculating the organic solvent by moving the organic solvent exiting the fourth filter unit to the storage tank and subsequently passing the organic solvent through the fourth filter unit.

17. The method of claim 1, further comprising moving the purified solvent to a packaging station disposed downstream of the fourth filter unit.

18. The method of claim 1, wherein the organic solvent comprises cyclohexanone, ethyl lactate, n-butyl acetate, propylene glycol monomethyl ether, propylene glycol monomethyl ether acetate, 4-methyl-2-pentanol, or propylene carbonate.

19. The method of claim 1, wherein passing an organic solvent is performed at a flow rate of from 25 to 170 L/min.

20. A system, comprising:

a first filter unit, wherein the first filter unit comprises a first housing and at least one first filter in the first housing, and the first filter comprises a filtration medium having a first average pore size;

a second filter unit downstream of and in fluid communication with the first filter unit, wherein the second filter unit comprises a second housing and at least two second filters in the second housing, the at least two second filters are arranged in the second housing in parallel, and each of the second filters independently comprises a filtration medium having a second average pore size; and

a fourth filter unit downstream of the second filter unit, wherein the fourth filter unit comprises a fourth housing and at least two fourth filters in the fourth housing, the at least two fourth filters are arranged in the fourth housing in parallel, and each of the fourth filters independently comprises a filtration medium having a fourth average pore size;

wherein the number of the first filter in the first filter unit is smaller than the number of the second filters in the second filter unit, the first average pore size is larger than the second average pore size, the second filter unit is downstream of the first filter unit and the fourth filter unit is downstream of the second filter unit, the number of the second filters in the second filter unit is smaller than the number of the fourth filters in the fourth filter unit, and the fourth average pore size is smaller than the second average pore size.

21. The system of claim 20, wherein the first filter unit comprises one first filter.

22. The system of claim 20, wherein the filtration medium in the first filter comprises polypropylene, high density polyethylene, ultra high molecular weight polyethylene, nylon, polytetrafluoroethylene, or a perfluoroalkoxy alkane polymer.

23. The system of claim 20, wherein the first average pore size is from 50 nm to 200 nm.

24. The system of claim 20, wherein the second filter unit comprises two or three second filters.

25. The system of claim 20, wherein the filtration medium in the second filter comprises polypropylene, high density polyethylene, ultra high molecular weight polyethylene, nylon, polytetrafluoroethylene, or a perfluoroalkoxy alkane polymer.

26. The system of claim 20, wherein the second average pore size is from 10 nm to 50 nm.

27. The system of claim 20, further comprising a third filter unit disposed between the first and second filter units, wherein the third filter unit comprises a third housing and at least one third filter in the third housing, the third filter comprises a filtration medium having a third average pore size, and the filtration medium in the third filter comprises an ion exchange membrane.

28. The system of claim 27, wherein the third filter unit comprises one to three third filters.

29. The system of claim 27, wherein the ion exchange membrane in the third filter comprises polypropylene, high density polyethylene, ultra high molecular weight polyethylene, nylon, polytetrafluoroethylene, or a perfluoroalkoxy alkane polymer.

30. The system of claim 20, further comprising a storage tank between the second filter unit and the fourth filter unit.

31. The system of claim 20, wherein the fourth filter unit comprises 4 to 14 fourth filters.

32. The system of claim 20, wherein the fourth average pore size is at most 10 nm.

33. The system of claim 20, wherein the filtration medium in the fourth filter comprises polypropylene, high density polyethylene, ultra high molecular weight polyethylene, nylon, polytetrafluoroethylene, or a perfluoroalkoxy alkane polymer.