CLAIMS:

1. A method for removing metal impurities from an organic solvent, comprising:

passing the organic solvent through first and second filter units 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, the first filter comprises a filtration medium comprising a positively charged ion exchange resin, and the positively charged ion exchange resin comprises a polyamide; and

wherein the second filter unit comprises a second housing and at least one second filter in the second housing, the second filter comprises a filtration medium comprising a negatively charged ion exchange resin and the negatively charged ion exchange resin comprises a polyolefin.

2. The method of claim 1, wherein the polyamide is a nylon.

3. The method of claim 1 or claim 2, wherein the polyamide comprises quaternary ammonium groups.

4. The method of any one of claims 1 to 3, wherein the polyolefin is high density polyethylene.

5. The method of any one of claims 1 to 4, wherein the polyolefin comprises sulfonate groups.

6. The method of any one of claims 1 to 5, wherein the first filter unit comprises 1 to 20 first filters, and the second filter unit comprises 1 to 20 second filters.

7. The method of any one of claims 1 to 6, wherein passing the organic solvent through the first or second filter unit is performed at a temperature of at most about 80°F (26.7°C).

8. The method of any one of claims 1 to 7, further comprising passing the organic solvent through at least one heat exchanger to maintain the temperature of the organic solvent at most about 80°F (26.7°C).

9. The method of any one of claims 1 to 8, further comprising passing the organic solvent through at least one particle removal filter unit, wherein the at least one particle removal filter unit is disposed upstream of the first and second filter units, between the first and second filter units, or downstream of the first and second filter units.

10. The method of any one of claims 1 to 9, further comprising moving the purified solvent to a packaging station.

11. The method of any one of claims 1 to 10, 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.

12. The method of any one of claims 1 to 11, wherein the organic solvent comprises metal impurities comprising a metal selected from the group consisting of alkali metals, alkaline earth metals, main group metals, transition metals, and lanthanide metals.

13. The method of claim 12, wherein the metal impurities comprises a metal selected from the group consisting of Cu, Fe, Cr, K, Ni, and Zn.

14. The method of claim 12 or claim 13, wherein the purified organic solvent comprises a metal impurity at an amount of at most about 15 ppt of the purified organic solvent.

15. A system, comprising:

first and second filter units in fluid communication with each other,

wherein the first filter unit comprises a first housing and at least one first filter in the first housing, the first filter comprises a filtration medium comprising a positively charged ion exchange resin, and the positively charged ion exchange resin comprises a polyamide; and

wherein the second filter unit comprises a second housing and at least one second filter in the second housing, the second filter comprises a filtration medium comprising a negatively charged ion exchange resin, and the negatively charged ion exchange resin comprises a polyolefin.

16. The system of claim 15, wherein the polyamide is a nylon.

17. The system of claim 15 or claim 16, wherein the polyamide comprises quaternary ammonium groups.

18. The system of any one of claims 15 to 17, wherein the polyolefin is high density polyethylene.

19. The system of any one of claims 15 to 18, wherein the polyolefin comprises sulfonate groups.

20. The system of any one of claims 15 to 19, wherein the first filter unit comprises 1 to 20 first filters, and the second filter unit comprises 1 to 20 second filters.

21. The system of any one of claims 15 to 20, further comprising at least one heat exchanger upstream of the first and second filter units, between the first and second filter units, or downstream of the first and second filter units.

22. The system of any one of claims 15 to 21, further comprising at least one particle removal filter unit upstream of the first and second filter units, between the first and second filter units, or downstream of the first and second filter units.