Claims

1. An electric device, comprising an electrolyte comprising:
a solvent;
a methyltriethylammonium salt; and
a dimethyldipropyl ammonium salt,
wherein each salt comprises an anion.

2. The electric device of claim 1 wherein the anion comprises one or a combination of two or more of BF_4^-, PF_6^-, AsF_6^-, SbF_6^-, BARF, BOB, FOB, BSB, tetrakis(pentafluorophenyl)borate ($B(C_6F_5)_4^-$), $Al(OC(CF_3)_3)_4^-$, maleate, phthalate, ClO_4^-, trifluoromethanesulfonate and alkyl trifluoromethanesulfonate.

3. The electric device of claim 1 or claim 2 wherein the anion is BF4, whereby the methyltriethylammonium salt is methyltriethyl ammonium BF4 (MTEABF4) and the dimethyldipropyl ammonium salt is dimethyldipropyl ammonium BF4 (DMDPABF4).

4. The electric device of claim 3 wherein the DMDPABF4 is at a concentration in the range from about 0.5 M to about 1.0 M, and the MTEABF4 is at a concentration in the range from about 1 M to about 2 M, or the DMDPABF4 is at a concentration in the range from about 0.65 M to about 0.85 M, and the MTEABF4 is at a concentration in the range from about 1.25 M to about 1.75 M, or the DMDPABF4 is at a concentration of about 0.75 M, and the MTEABF4 is at a concentration of about 1.5 M.

5. The electric device of any preceding claim wherein the solvent is selected from propylene carbonate, dimethylsulfoxide, N, N dimethylformamide, ethylene carbonate, dimethyl carbonate, diethyl carbonate, acetonitrile, sulfolane and γ-butyrolactone.

6. The electric device of any preceding claim wherein the electric device is a capacitor, supercapacitor, electrochemical capacitor, electrolytic capacitor, battery, fuel cell, sensor, electrochromic device, photoelectrochemical solar cell, light-emitting electrochemical cell, polymer light emitting diode (PLED), electrophoretic display, polymer light-emitting electrochemical cell (PLEC), a magnesium-ion battery, a lithium-ion battery, an electrolytic capacitor, or an electric double-layer capacitor (ELDC).

7. The electric device of any preceding claim wherein the electric device is an electric double layer capacitor (ELDC).

8. An electrolyte comprising:
a solvent;
a methyltriethylammonium salt; and
a dimethyldipropyl ammonium salt,
wherein each salt comprises an anion.

9. The electrolyte of claim 8 wherein the anion comprises one or a combination of two or more of BF_4^-, PF_6^-, AsF_6^-, SbF_6^-, BARF, BOB, FOB, BSB, tetrakis(pentafluorophenyl)borate ($B(C_6F_5)_4^-$), $Al(OC(CF_3)_3)_4^-$, maleate, phthalate, ClO_4^-, trifluoromethanesulfonate and alkyl trifluoromethanesulfonate.

10. The electrolyte of either one of claims 8 or 9 wherein the anion is BF4, whereby the methyltriethylammonium salt is methyltriethyl ammonium BF4 (MTEABF4) and the dimethyldipropyl ammonium salt is dimethyldipropyl ammonium BF4 (DMDPABF4).

11. The electrolyte of claim 10 wherein the DMDPABF4 is at a concentration in the range from about 0.5 M to about 1.0 M, and the MTEABF4 is at a concentration

in the range from about 1 M to about 2 M, or the DMDPABF4 is at a concentration in the range from about 0.65 M to about 0.85 M, and the MTEABF4 is at a concentration in the range from about 1.25 M to about 1.75 M, or the DMDPABF4 is at a concentration of about 0.75 M, and the MTEABF4 is at a concentration of about 1.5 M.

12. The electrolyte of any one of claims 8-11 wherein the solvent is selected from propylene carbonate, dimethylsulfoxide, N, N dimethylformamide, ethylene carbonate, dimethyl carbonate, diethyl carbonate, acetonitrile, sulfolane and γ-butyrolactone.