What is claimed is:

1. An anion-conducting membrane comprising a polymer comprising a reaction product of vinylbenzyl-R_s, vinylbenzyl-R_x and styrene, wherein:

said vinylbenzyl-R_s comprises a reaction product of tetramethylimidazolium and benzylchloride;

said vinylbenzyl-R_x comprises a reaction product of benzylchloride and at least one of the following compounds: sodium-ethoxide, tripropylamine, triethylamine, 1-benzylimidazole, 1-piperidineethanol, 4-dimethylaminopyridine, N methyl pyrrolidine, 1-methylpiperidine, N-methyl-D-glucamine;

the total weight of said vinylbenzyl-R_s is at least 20% of the weight of said polymer;

the total weight of said vinylbenzyl-R_x is at least 10% of the weight of said polymer; and

the total weight of said styrene is at least 20% of the weight of said polymer.

2. The anion-conducting membrane of claim 1, wherein the total weight of vinylbenzyl-R_x is at least 20% of the weight of said polymer.

3. The anion-conducting membrane of claim 1 where said vinylbenzyl-R_x comprises vinylbenzyl-R_{x1} and vinylbenzyl-R_{X2} wherein:

said vinylbenzyl-R_{x1} comprises a reaction product of benzylchloride and at least one of the following compounds:
tripropylamine, triethylamine, 1-benzylimidazole, 1- piperidineethanol, 4-dimethylaminopyridine, N methyl pyrrolidine, 1-methylpiperidine, N-Methyl-D-glucamine;

said vinylbenzyl-R_{x2} comprises a reaction product of benzylchloride and sodium ethoxide;

the polymer comprises at least 1% of said vinylbenzyl-R_{x1}; and

the polymer comprises at least 10% of said vinylbenzyl-R_{x2}.

4. The anion-conducting membrane in claim 1, wherein the polymer has a molecular weight between 1000 and 10,000,000 atomic units (A.U.).

5. The anion-conducting membrane of claim 1, wherein the thickness of said anion-conducting membrane is between 10 - 300 micrometers.

6. The anion-conducting membrane of claim 1, wherein the anion- conducting membrane has an area specific resistance of 0.1 ohm-cm^2 or less in 1 M KOH at 60 °C.

7. A battery, a fuel cell, an electrolyzer, a water purification system or a CO_2 capture system comprising the anion-conducting membrane of claim 1.

8. A method of manufacturing anion-conducting membranes, comprising:

(a) washing styrene with aqueous sodium hydroxide, washing the washed styrene with water, and drying the double washed styrene over anhydrous magnesium sulfate;

(b) heating a solution of the dried styrene from (a) and vinylbenzyl chloride in chlorobenzene under nitrogen gas with AIBN as initiator to synthesize copolymer including vinylbenzyl chloride-co-styrene;

(c) dissolving the copolymer from (b) in 1-methoxy-2-propanol to form a first solution;

(d) heating the first solution and adding tetramethyl imidazole into the first solution to achieve a second solution;

(e) adding at least one compound into the second solution to form a third solution comprising vinylbenzyl-R_x, wherein said vinylbenzyl-R_x comprise a reaction product of benzylchloride and the at least one compound; wherein the at least one compound is selected from the following: sodium ethoxide, tripropylamine, triethylamine, 1-benzylimidazole, 1- piperidineethanol, 4-dimethylaminopyridine, N methyl pyrrolidine, 1-methylpiperidine, N -methyl-D-glucamine.

9. The method of manufacturing anion-conducting membranes of claim 8, wherein the vinylbenzyl-R_x comprises vinylbenzyl-R_{x1} and vinylbenzyl-R_{X2} wherein:

said vinylbenzyl-R_{x1} comprises a reaction product of benzylchloride and at least one of the following compounds: tripropylamine, triethylamine, 1-benzylimidazole, 1-piperidineethanol, 4-dimethylaminopyridine, N methyl pyrrolidine, 1-methylpiperidine, N-Methyl-D-glucamine;

said vinylbenzyl-R_{x2} comprises a reaction product of benzylchloride and sodium ethoxide;

the polymer comprises at least 1 % of said vinylbenzyl-R_{x1}; and

the polymer comprises at least 10% of said vinylbenzyl-R_{x2}.

10. The method of manufacturing an anion-conducting membrane of claim 9, further comprises

(f) casting the third solution onto a polyethylene terephthalate liner to achieve membranes, drying the membranes and then soaking them in KOH, and washing them with deionized water.

11. The method of manufacturing an anion-conducting membrane of claim 10,

wherein the drying in (f) comprises drying the membranes in an oven at 60^{o}C for 120-150 minutes and wherein the soaking in (f) comprises soaking the membranes in 1 molar KOH; and

wherein (e) further comprises heating the second solution after adding the at least one compound to 45^{o}C for 48 hours.