What is claimed is:

1. A nanopore sequencer, comprising:

a cis well;

a trans well;

a nanopore fluidically connecting the cis well and the trans well; and

a modified electrolyte in the trans well,

wherein the modified electrolyte includes a cation and a cation complexing agent for complexing with the cation, the cation complexing agent is selected from the group consisting of a crown ether, a derivative of a crown ether, a calixarene, and valinomycin, and

wherein the cation complexing agent is not in the cis well.

2. The nanopore sequencer as defined in claim 1, further comprising a plurality of the trans wells defined in a substrate, each of which is fluidically connected to the cis well by a respective nanopore, wherein a density of the plurality of trans wells ranges from about 10 trans wells per mm^2 of the substrate to about 1,000,000 trans wells per mm^2 of the substrate.

3. The nanopore sequencer as defined in claim 1, wherein:

the electrolyte includes a potassium cation and an associated anion, a sodium cation and the associated anion, or combinations thereof~~; and~~

~~the cation complexing agent is selected from the group consisting of a crown ether, a calixarene, valinomycin, and derivatives thereof~~.

4. The nanopore sequencer as defined in claim 1, wherein the modified electrolyte includes greater than 0 mM to about 500 mM of the cation complexing agent.

5. A method of using the nanopore sequencer of claim 1, the method comprising:

controlling depletion of a redox reagent of the electrolyte in the nanopore sequencer by applying a voltage bias ranging from about -1 V to about 1 V between the

cis well of the nanopore sequencer and the trans well of the nanopore sequencer, the cation complexing agent is selected from the group consisting of a crown ether, a derivative of a crown ether, a calixarene and valinomycin.

~~6. The method as defined in claim 5, further comprising:~~

~~incorporating the cation complexing agent into the electrolyte to form the modified electrolyte; and~~

~~introducing the modified electrolyte to the trans well.~~

~~7~~6. The method as defined in claim 5, wherein:

the electrolyte includes a potassium cation and an associated anion, a sodium cation and the associated anion, or combinations thereof~~; and~~

~~the cation complexing agent is selected from the group consisting of a crown ether, a calixarene, valinomycin, and derivatives thereof~~.