CLAIMS

What is claimed is:

1. An apparatus for electrotherapeutic treatment of a region of interest, comprising:

a first transducer array and a second transducer array, wherein the first transducer array comprises a first plurality of electrodes and the second transducer array comprises a second plurality of electrodes; and

an electric field generator configured to cause cyclical application of a first electric field via the first transducer array in a first direction and a second electric field via the second transducer array in a second direction, different from the first direction, to the region of interest, and during the cyclical application,

selectively deactivating, based on a temperature associated with one or more electrodes of the first plurality of electrodes or one or more electrodes of the second plurality of electrodes satisfying a threshold, the one or more electrodes of the first plurality of electrodes or the one or more electrodes of the second plurality of electrodes, and

selectively activating, based on a temperature associated with the deactivated one or more electrodes of the first plurality of electrodes or the deactivated one or more electrodes of the second plurality of electrodes no longer satisfying the threshold, the deactivated one or more electrodes of the first plurality of electrodes or the deactivated one or more electrodes of the second plurality of electrodes, so as to adjust an angle at which the first electric field or the second electric field is applied to the region of interest.

2. The apparatus of claim 1, wherein selectively deactivating is based on a random selection of angles at an optimal duty cycle.

3. The apparatus of claim 1, wherein selectively deactivating is based on a random selection of angles at a temperature-limited duty cycle.

4. The apparatus of claim 1, wherein selectively deactivating is based on selection of angles that are one or more of: most distant from previous angles used within a current duty cycle, and orthogonal relative to a geometric center of the region of interest.

5. The apparatus of claim 1, wherein selectively deactivating is based on selection of angles that are one or more of: most distant from previous angles used within a current duty cycle, and orthogonal relative to pairs of cathode electrodes and anode electrodes that are orthogonal to each other.

6. The apparatus of claim 1, wherein selectively deactivating is based on a weighted product of temperature multiplied by a function of an angle between a difference in temperature between two transducers and an angle between lines drawn from their centers to the geometric center of the estimated target location.