CLAIMS

1. A method of treating water in a water treatment system, the method comprising:

directing water to be treated from a source of water into an inlet of a concentric tube electrode electrochemical cell;

applying power across electrodes of the electrochemical cell to convert sodium chloride (NaCl) in the water to be treated to sodium hypochlorite (NaOCl) in the electrochemical cell and form a chlorinated effluent including the NaOCl;

directing the chlorinated effluent from an outlet of the electrochemical cell into an inlet of an actinic radiation reactor;

exposing the chlorinated effluent to sufficient actinic radiation in the actinic radiation reactor to generate free radicals in the chlorinated effluent which react with contaminants in the chlorinated effluent to form a treated effluent; and

directing the treated effluent from an outlet of the actinic radiation reactor to a point of use, wherein directing the treated effluent to the point of use includes directing the treated effluent to the source of water.