MULTIPLE-ELECTRODE PLASMA PROCESSING SYSTEMS WITH CONFINED PROCESS CHAMBERS AND INTERIOR-BUSSED ELECTRICAL CONNECTIONS WITH THE ELECTRODES

Abstract of the Disclosure

Apparatus for treating products with plasma generated from a source gas. The apparatus includes a vacuum chamber, a plurality of juxtaposed electrodes arranged in adjacent pairs inside the vacuum chamber, and a plasma excitation source electrically coupled with the electrodes. The apparatus may include conductive members extending into the interior of each electrode to establish a respective electrical connection with the plasma excitation source. The apparatus may include a gas distribution manifold and multiple gas delivery tubes coupled with the gas distribution manifold. Each gas delivery tube has an injection port configured to inject the source gas between each adjacent pair of electrodes. The apparatus may further include flow restricting members that operate to partially obstruct a peripheral gap between each adjacent pair of electrodes, which restricts the escape of the source gas from the process chamber between each adjacent pair of electrodes.

FIG. 1

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