ABSTRACT

METHODS AND APPARATUS FOR TUNING A SET OF PLASMA PROCESSING STEPS

In a plasma processing system, a method of tuning of a set of plasma processing steps is disclosed. The method includes striking a first plasma comprising neutrals (320a) and ions (320b) in a plasma reactor of the plasma processing system. The method also includes etching in a first etching step a set of layers on a substrate (303); positioning a movable uniformity ring (302) around the substrate, including an opening (308) that is configured for directing species of plasma towards chuck (314), wherein, a bottom surface of the uniformity ring is about the same height as a top surface of the substrate; and striking a second plasma consisting essentially of neutrals in the plasma reactor of the plasma processing system. The method further includes etching in a second etching step the set of layers on the substrate; and wherein the etching in the first step and the etching in the second step are substantially uniform.

Fig. 3A