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(54) Title: ION SOURCE GAS INJECTION BEAM SHAPING

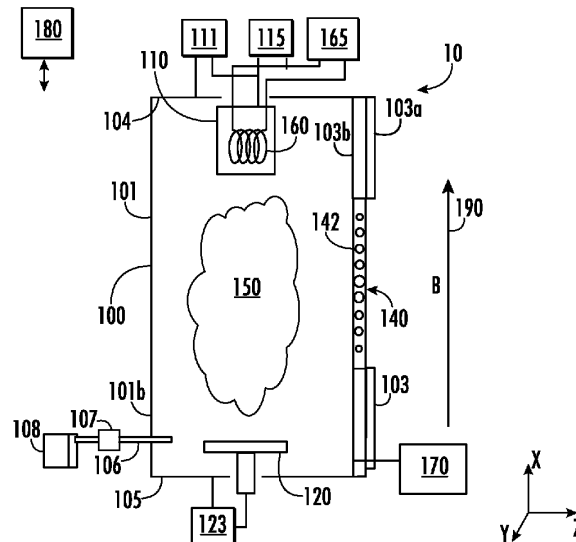


FIG. 1

(57) Abstract: An ion source for extracting a ribbon ion beam with improved height uniformity is disclosed. Gas nozzles are disposed in the chamber proximate the extraction aperture. The gas that is introduced near the extraction aperture serves to shape the ribbon ion beam as it is being extracted. For example, the height of the ribbon ion beam may be reduced by injecting gas above and below the ion beam so as to compress the extracted ion beam in the height direction. In some embodiments, the feedgas is introduced near the extraction aperture. In other embodiments, a shield gas, such as an inert gas, is introduced near the extraction aperture.

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