



[54] PLASMA REACTOR HAVING AN INDUCTIVE ANTENNA COUPLING POWER THROUGH A PARALLEL PLATE ELECTRODE

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[\*] Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

[21] Appl. No.: 08/597,577

[22] Filed: Feb. 2, 1996

Related U.S. Application Data

[63] Continuation-in-part of application No. 08/521,668, Aug. 31, 1995, abandoned, which is a continuation-in-part of application No. 08/289,336, Aug. 11, 1994, abandoned.

[51] Int. Cl.<sup>7</sup> ..... H05H 1/00
[52] U.S. Cl. .... 156/345; 118/723 I
[58] Field of Search ..... 156/345; 118/723 I, 118/723 IR; 216/68

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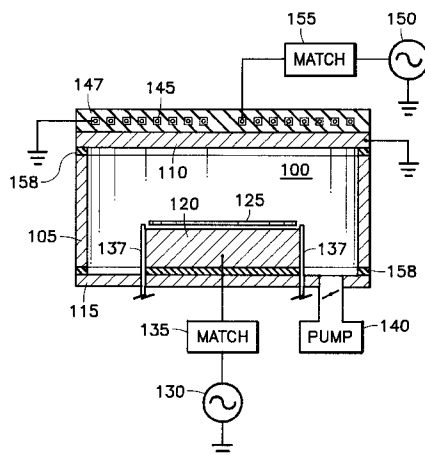
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[57] ABSTRACT

The invention is embodied by a plasma reactor for processing a workpiece, including a reactor enclosure defining a processing chamber, a semiconductor window, a base within the chamber for supporting the workpiece during processing thereof, a gas inlet system for admitting a plasma precursor gas into the chamber, and an inductive antenna adjacent a side of the semiconductor window opposite the base for coupling power into the interior of the chamber through the semiconductor window electrode.

67 Claims, 55 Drawing Sheets



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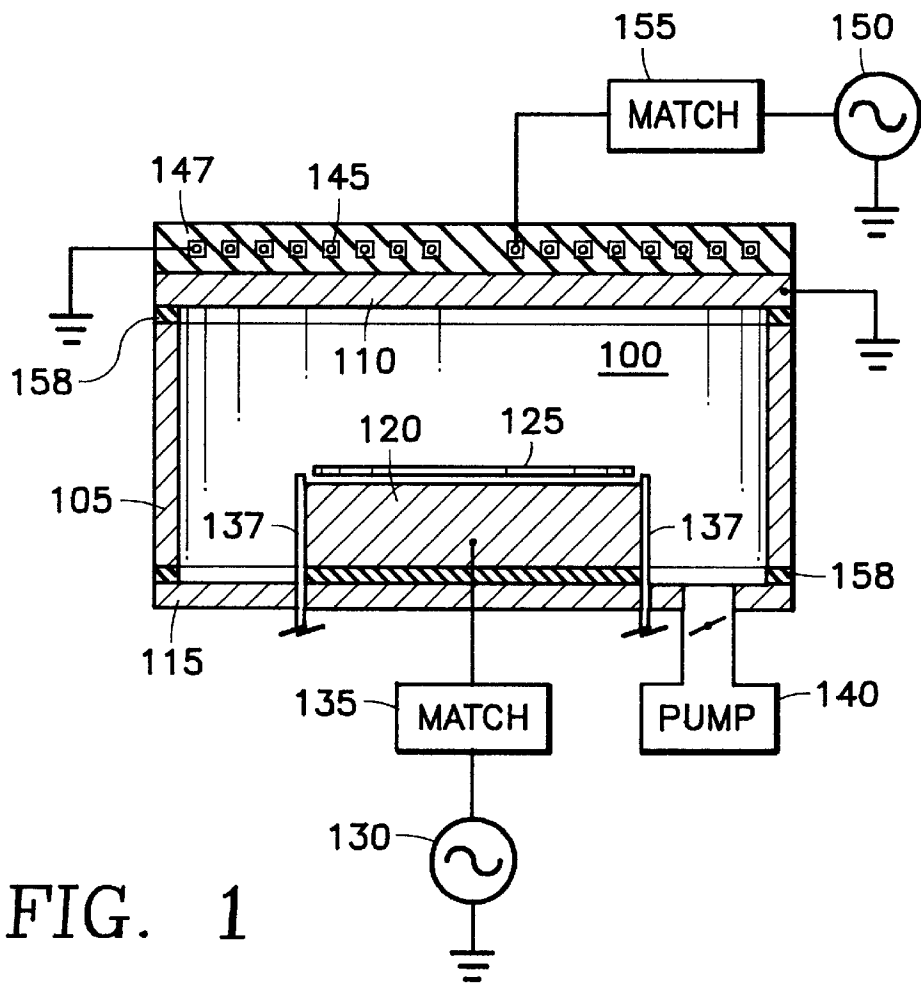


FIG. 1

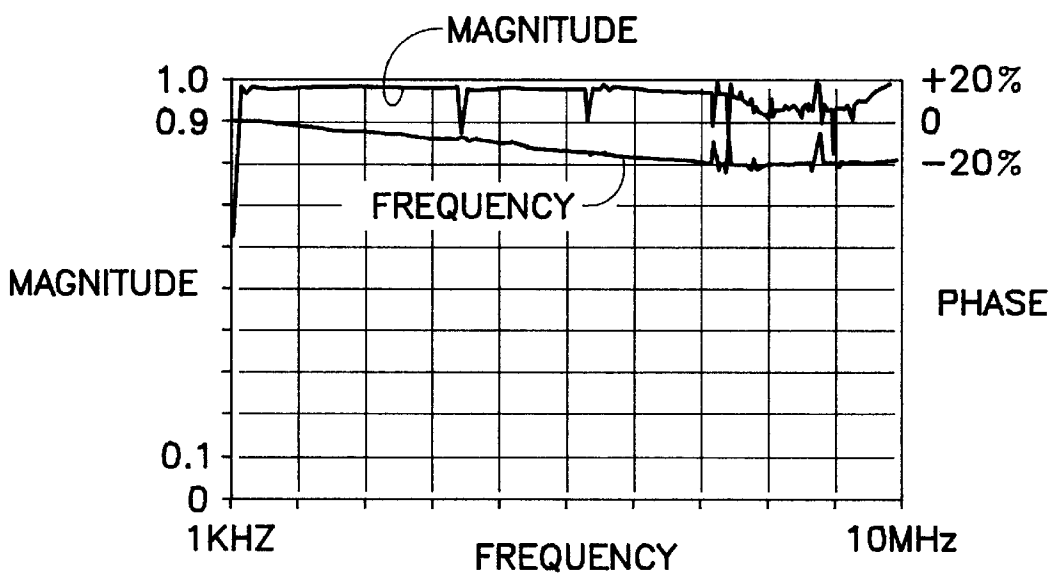


FIG. 2

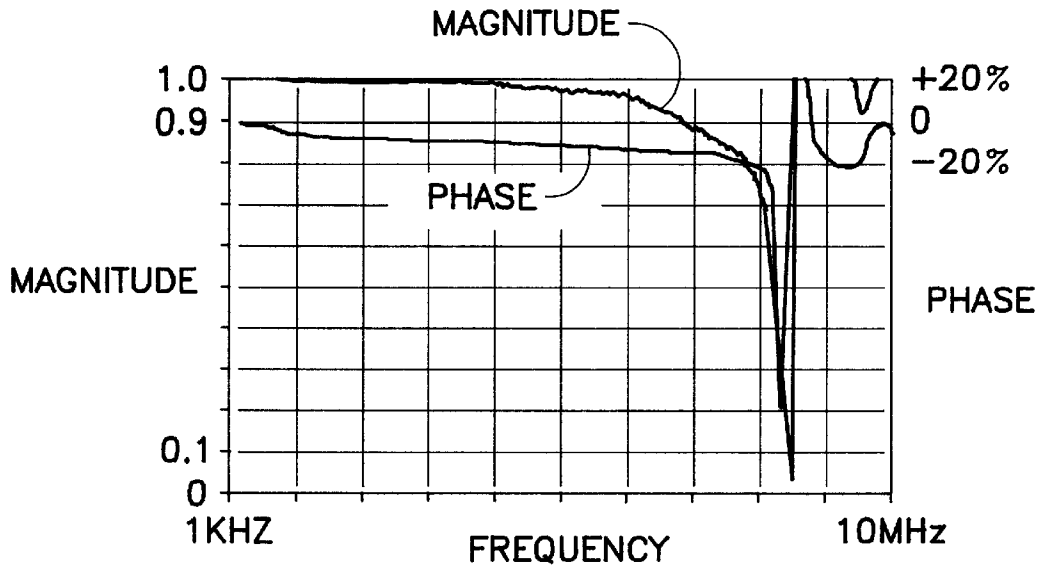


FIG. 3

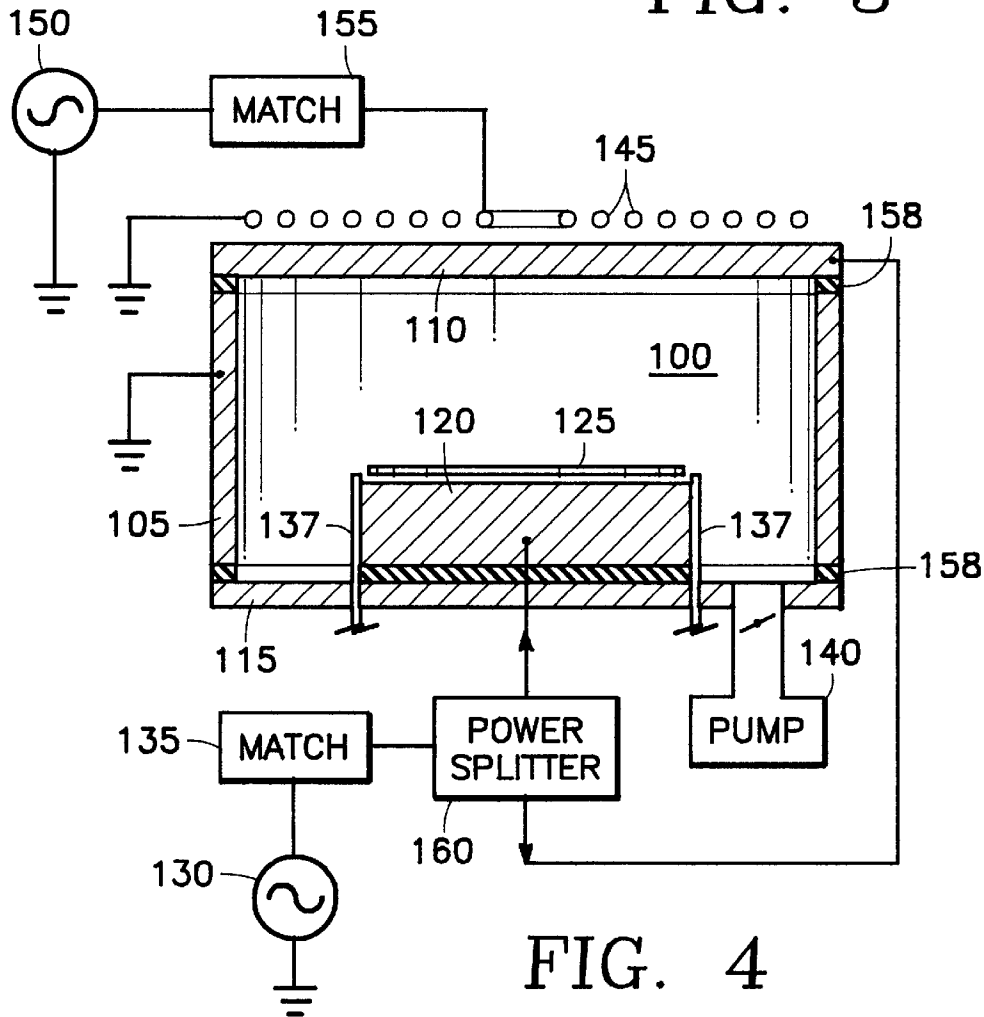


FIG. 4

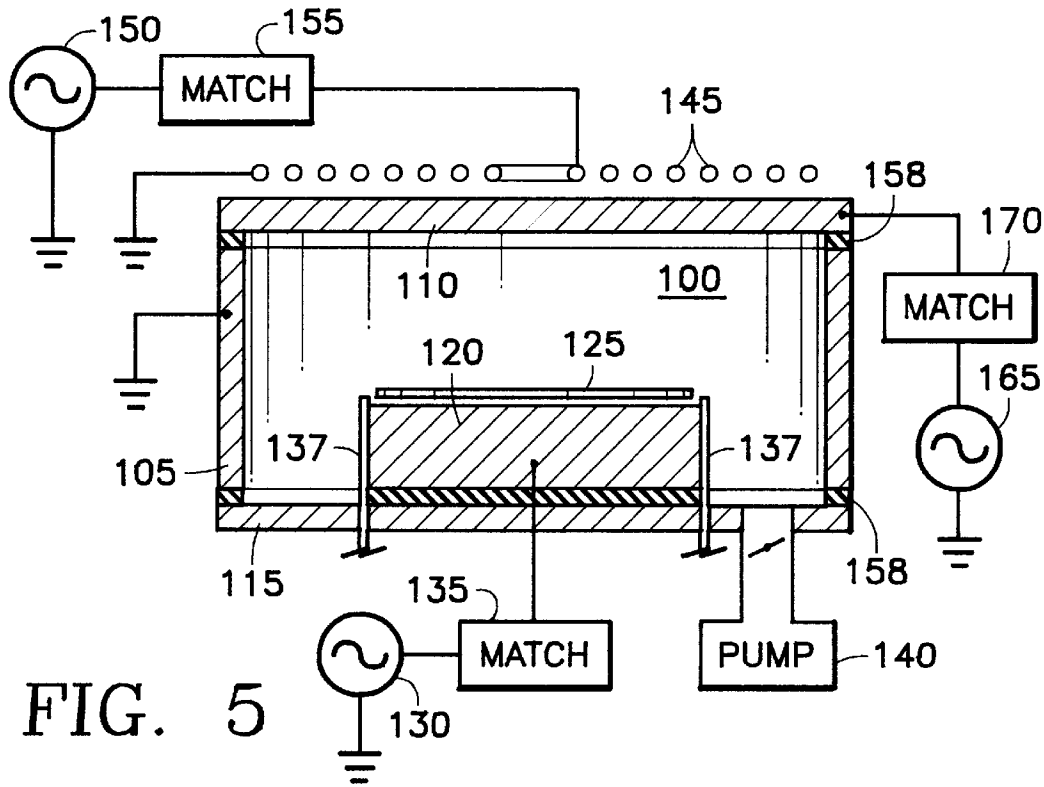


FIG. 5

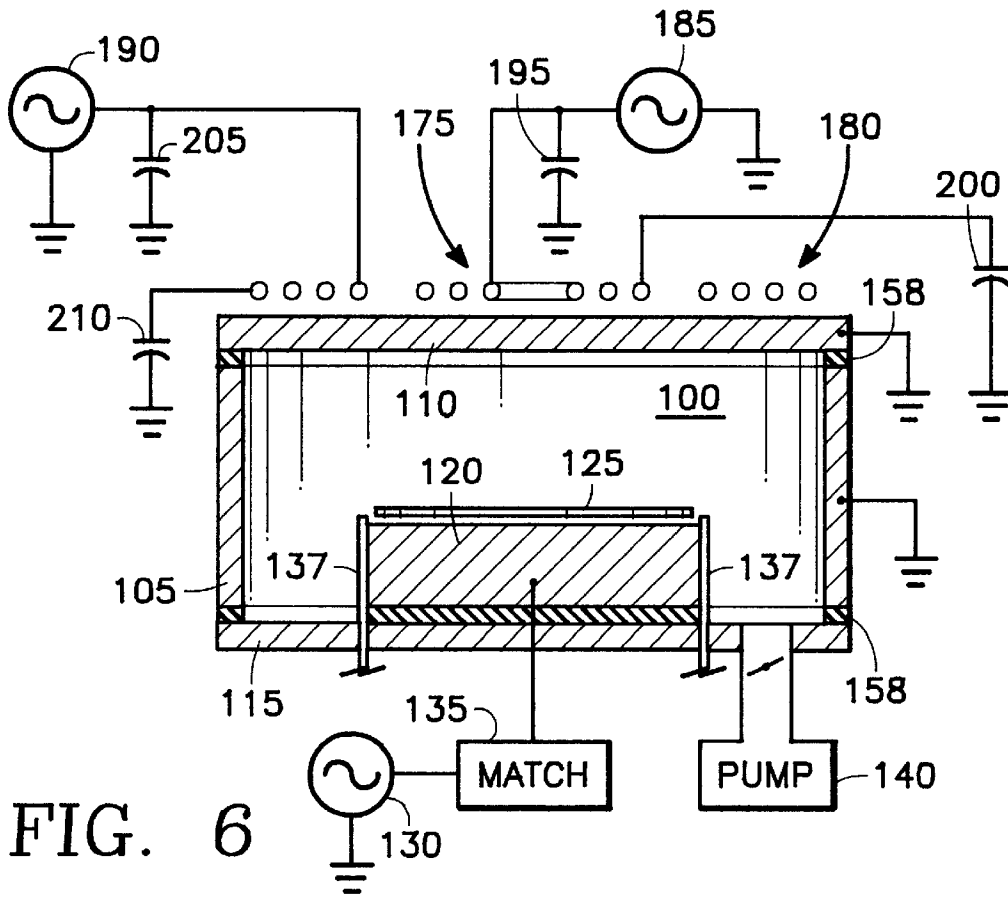


FIG. 6

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