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PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: OA0301

Daniel L. Flamm

Appln. No.: 10/439,245

Group Art Unit: 1765

Filed: 5/14/2003

Examiner: A. Alanko

AMENDMENT UNDER 37 C.F.R. § 1.111

MAIL STOP AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated, June 1, 2006, please amend the above-identified application as follows on the accompanying pages.

TABLE OF CONTENTS

AMENDMENTS TO THE CLAIMS	2
REMARKS	21

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1.-55 (*canceled*)

56. (*currently amended*) A method of etching a substrate in the manufacture of a device, the method comprising:

placing a substrate having a film thereon on a substrate holder in a chamber, the substrate holder having a selected thermal mass;

setting the substrate holder to a selected first substrate holder temperature with a heat transfer device;

etching a first portion of the film while the substrate holder is at the selected first substrate holder temperature;

with the heat transfer device, changing the substrate holder temperature from the selected first substrate holder temperature to a selected second substrate holder temperature; and

etching a second portion of the film while the substrate holder is at the selected second substrate holder temperature;

~~wherein the thermal mass of the substrate holder is selected to allow changing the first substrate holder temperature to the second substrate holder temperature within a selected time period.~~

wherein the thermal mass of the substrate holder is selected for a predetermined temperature change within a specified interval of time during processing; the predetermined temperature change comprises the change from the selected first substrate holder temperature to the selected second substrate holder temperature, and the specified time interval comprises the time for changing from the selected first substrate holder temperature to the selected second substrate holder temperature.

57. (*currently amended*) The method of claim 56 wherein the ~~first substrate holder temperature is changed to the second substrate holder temperature by heat transfer means coupled to the substrate holder~~ portion of the film comprises a material composition that is different from the material composition of the first portion of the film.

58. (*currently amended*) The method of claim 56 wherein the change from the first substrate holder temperature to the second substrate holder temperature is an in-situ process during the first portion etching ~~step~~ and the second portion etching ~~step~~.

59. (*previously presented*) The method of claim 56 wherein the etching of the first portion of the film and the etching of the second portion of the film are conducted in a substantially constant plasma environment.

60. *(previously presented)* The method of claim 56 wherein etching at least one of the portions of the film comprises radiation.

61. *(previously presented)* The method of claim 56 wherein etching at least one of the portions of the film is an ion bombardment aided process.

62. *(previously presented)* The method of claim 56 wherein:
a first substrate etching temperature corresponds to the first substrate holder temperature;
a second substrate etching temperature corresponds to the second substrate holder temperature; and
the first and the second substrate etching temperatures are in a known relationship to the first and the second substrate holder temperatures.

63. *(previously presented)* The method of claim 62 wherein the first etching temperature is substantially the first substrate holder temperature and the second etching temperature is substantially the second substrate holder temperature.

64. *(previously presented)* The method of claim 56 wherein:
a first substrate etching temperature corresponds to the first substrate holder temperature;
a second substrate etching temperature corresponds to the second substrate holder temperature;

the first substrate etching temperature is higher than the second substrate etching temperature; and

the first portion of the film is etched before the second portion of the film.

65. *(previously presented)* The method of claim 56 wherein:

a first substrate etching temperature corresponds to the first substrate holder temperature;

a second substrate etching temperature corresponds to the second substrate holder temperature;

the first substrate etching temperature is lower than the second substrate etching temperature; and

the first portion of the film is etched before the second portion of the film.

66. *(previously presented)* The method of claim 56 wherein the substrate holder comprises an electrostatic support chuck having a surface for supporting a substrate in a reaction chamber, the electrostatic support chuck overlays a heat exchange region, and the heat exchange region includes at least one fluid passage through which a fluid can be circulated to heat and/or cool the substrate holder.

67. *(previously presented)* The method of claim 66 wherein the heat exchange region includes at least two separate fluid passages, each fluid passage being configured to have an independent inlet and an independent outlet.



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