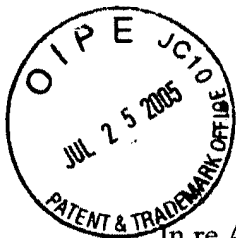


EXHIBIT C

07-27-05

1 fwd / \$



PATENT
Customer No. 22,852
Attorney Docket No. 9140.0016-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)	
)	
ZHANG, Hongmei et al.)	Group Art Unit: 2823
)	
Application No.: 10/954,182)	Examiner: ESTRADA, Michelle
)	
Filed: October 1, 2004)	
)	
For: BIASED PULSE DC REACTIVE)	Confirmation No.: 9873
SPUTTERING OF OXIDE FILMS)	

MAIL STOP AMENDMENT

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

Sir:

AMENDMENT AND RESPONSE TO OFFICE ACTION

In reply to the Office Action mailed March 25, 2005, the period of response extended to July 25, 2005, by a one month extension of time and authorization for the Commissioner to charge the fee of \$120.00 to Deposit Account No. 06-0916, please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims that begins on page 2 of this paper.

Remarks/Arguments follow the amendment sections on page 9 of this paper.

AMENDMENTS TO THE CLAIMS:

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

Claims 1-39 (Canceled).

Claim 40 (Canceled).

Claim 41 (Currently amended): The method of ~~claim~~ claims 40 59, 60, or 85, wherein the target is a metallic target and the process gas includes oxygen.

Claim 42 (Currently amended): The method of ~~claim~~ claims 40 59, 60, or 85, wherein the target is a metallic target and the process gas includes one or more of a set consisting of N₂, NH₃, CO, NO, CO₂, halide containing gasses.

Claim 43 (Currently amended): The method of ~~claim~~ claims 40 59, 60, or 85, wherein the target is a ceramic target.

Claim 44 (Canceled):

Claim 45 (Currently amended): The method of ~~claim~~ claims 40 59, 60, or 85, wherein the magnetic field is provided by a moving magnetron.

Claim 46 (Currently amended) The method of ~~Claim~~ claims 40 59, 60, or 85, further including holding the temperature of the substrate substantially constant.

Claim 47 (Currently amended): The method of ~~Claim~~ claims 40 59, 60, or 85, wherein the process gas includes a mixture of Oxygen and Argon.

Claim 48 (Currently amended): The method of ~~Claim~~ claims 40 59, 60, or 85, wherein the Oxygen flow is adjusted to adjust the index of refraction of the film.

Claim 49 (Currently amended): The method of ~~Claim~~ claims 40 59, 60, or 85, wherein the process gas further includes nitrogen.

Claim 50 (Currently amended): The method of ~~Claim~~ claims 40 59, 60, or 85, wherein providing pulsed DC power to a target includes providing pulsed DC power to a target which has an area larger than that of the substrate.

Claim 51 (Currently amended): The method of ~~Claim~~ claims 40 59, 60, or 85, further including uniformly sweeping the target with a magnetic field.

Claim 52 (Currently amended): The method of ~~Claim~~ claim 51 wherein uniformly sweeping the target with a magnetic field includes sweeping a magnet in one direction across the target where the magnet extends beyond the target in the opposite direction.

Claim 53 (Currently amended): The method of ~~Claim~~ claims 40 59, 60, or 85, wherein the target is an alloyed target.

Claim 54 (Currently amended): The method of ~~Claim~~ claim 53 wherein the alloyed target includes one or more rare-earth ions.

Claim 55 (Currently amended): The method of ~~Claim~~ claim 53 wherein the alloyed target includes Si and Al.

Claim 56 (Currently amended): The method of ~~Claim~~ claim 53 wherein the alloyed target includes one or more elements taken from a set consisting of Si, Al, Er, Yb, Zn, Ga, Ge, P, As, Sn, Sb, Pb, Ag, Au, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy Ho, Tm, and Lu.

Claim 57 (Previously presented): The method of claim 53 wherein the alloyed target is a tiled target.

Claim 58 (Previously presented): The method of claim 57 wherein each tile of the tiled target is formed by prealloy atomization and hot isostatic pressing of a powder.

Claim 59 (Currently Amended): A method of depositing a film on a substrate, comprising:

providing a process gas between a target and a substrate;

providing pulsed DC power to the target;

providing a magnetic field to the target; and

wherein a material is deposited on the substrate, and ~~The method of claim 40,~~ wherein ~~the~~an oxide film is formed by reactive sputtering in metallic mode.

Claim 60 (Currently Amended): A method of depositing a film on a substrate, comprising:

providing a process gas between a target and a substrate;

providing pulsed DC power to the target;

providing a magnetic field to the target; and

wherein a material is deposited on the substrate, and ~~The method of claim 40,~~ wherein ~~the~~an oxide film is formed by reactive sputtering in poison mode.

Claim 61 (Currently Amended): A method of depositing a film on a substrate, comprising:

providing a process gas between a metallic target and a substrate;

providing pulsed DC power to the target;

providing a magnetic field to the target; and

~~The method of claim 40, further including reconditioning the~~ a metallic target; wherein a material is deposited on the substrate.

Claim 62 (Previously presented): The method of claim 61, wherein reconditioning the metallic target includes:

reactive sputtering in the metallic mode and then reactive sputtering in the poison mode.

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