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SONNENSCHEIN

NO. 3527 P. 2

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I hereby certify that this correspondence is being sent via facsimile 571-273-1724 to Examiner Chris C. Chu at the

Paul E. Rauch, Ph.D.

Name of Applicant, assignee or
Registered Representative

Registered Representative

Reg. April 23, 83

Our File No. 09799940-0011

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

James E. Nulty, et al.

Serial No. 09/540,610

Filing Date: March 31, 2000

or Method for Eliminating Lateral

Spacer Erosion on Enclosed Contact Topographies During RF

Sputter Cleaning

Examiner Chris C, Chu

Group Art Unit No. 2815

CORRECTED AMENDMENT

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

Dear Sir:

This Amendment is identical to the last amendment filed but it corrects the format of the presented claim set. Applicants thank Examiner Chu for pointing out this omission.



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IN THE SPECIFICATION

Please add the following paragraph to the specification, page 15, after line 16:

The phrase "substantially rectangular" means that a side of the spacer has an angle relative to the substrate surface of more than 85°.



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IN THE CLAIMS

- 1-24. (Cancelled)
- 25. (Previously presented) The semiconductor apparatus of claim 27 wherein said etch stop material comprises silicon nitride.
- 26. (Previously presented) The semiconductor apparatus of claim 27 wherein said etch stop material comprises silicon dioxide.
 - 27. (Currently Amended) A structure, comprising:
 - (a) a conductive layer disposed over a substrate;
 - (b) a first insulating layer on the conductive layer;
 - (c) a contact region in said first insulating layer;
- (d) at least one insulating spacer in the contact region adjacent to the first insulating layer; and
- (e) an etch stop material over said first insulating layer and adjacent to the insulating spacer, the etch stop material being a different material from the insulating spacer,

wherein <u>a side of</u> the insulating spacer has <u>an angle relative to the substrate surface of more than 85° a substantially rectangular profile in the contact region.</u>

- 28. (Cancelled).
- 29. (Previously presented) The structure of Claim 27, wherein the insulating spacer has a surface portion in the contact region without overlying etch stop material.
- 30. (Previously presented) The structure of Claim 29, wherein the insulating spacer surface portion without overlying etch stop material comprises an insulating spacer surface portion most distant from said substrate.
 - 31. (Cancelled).



- 32. (Previously presented) The structure of Claim 27, further comprising a second insulating layer on the etch stop layer and over the conductive layer.
- 33. (Previously presented) The structure of Claim 32, further comprising a second conductive material in the contact region.
 - 34. (Currently amended) A structure, comprising:
- (a) a first electrically conductive material formed in and/or on a surface of a substrate;
- (b) a contact opening in a region adjacent to a second electrically conductive material formed on the substrate;
- (c) an electrically insulative spacer in the contact opening adjacent to the second electrically conductive material;
- (d) an etch stop material over the electrically insulative spacer and the first and second electrically conductive materials, the etch stop material being a different material from the insulative spacer;
 - (e) a blanket layer over the etch stop material; and
- (f) an opening through a first part of the etch stop material to the first electrically conductive material,

wherein <u>a side of</u> the electrically insulative spacer has <u>a substantially rectangular</u> eross-sectional shape in a plane that is substantially perpendicular <u>an angle relative</u> to the substrate surface <u>of more than 85°</u>.

- 35. (Cancelled).
- 36. (Previously presented) The structure of Claim 34, wherein the electrically insulative spacer has a surface portion without overlying etch stop material.
- 37. (Previously presented) The structure of Claim 36, wherein the electrically insulative spacer surface portion without overlying etch stop material comprises a surface portion most distant from the substrate.



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- 38. (Previously presented) The structure of Claim 34, further comprising a second insulating layer on the etch stop layer and over the conductive layer.
- 39. (Previously presented) The structure of Claim 38, further comprising a second conductive material in the contact region.



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