

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 30

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* ANTHONY J. TOPRAC  
and MICHAEL L. MILLER

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Appeal No. 2003-1323  
Application No. 09/421,803

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ON BRIEF

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Before OWENS, LIEBERMAN, and JEFFREY T. SMITH, *Administrative Patent Judges*.  
JEFFREY T. SMITH, *Administrative Patent Judge*.

***DECISION ON APPEAL***

Applicants appeal the decision of the Primary Examiner finally rejecting claims 26 to 45, all of the pending claims in the application.<sup>1</sup> We have jurisdiction under 35 U.S.C. § 134.

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<sup>1</sup> In rendering our decision we have considered Appellants' position present in the Brief, filed September 30, 2002 and the Reply Brief, filed February 13, 2003.

### **CITED REFERENCES**

As evidence of unpatentability, the Examiner relies on the following references:

Hieber et al. (Hieber)	4,331,702	May 25, 1982
Gevelber et al. (Gevelber) (filed May 14, 1997)	6,162,488	Dec. 19, 2000

### ***BACKGROUND***

Appellants' invention relates to semiconductor manufacture. Specifically the invention relates to a method of controlling semiconductor wafer uniformity using spatially resolved sensors. Claim 36, which is representative of the claimed invention, appears below:

36. A method for controlling wafer uniformity, comprising;

processing a process layer on a wafer;

measuring a thickness of the process layer in a plurality of sensing locations during the processing of the process layer to determine the surface uniformity of the process layer across the plurality of sensing locations;

and

autonomously changing a process control variable of a process control device based on the determined surface uniformity to affect the rate of processing the process layer in at least one of the sensing locations.

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### ***DISCUSSION***

The Examiner rejected claims 26 to 36 and 38 to 45 under 35 U.S.C. § 102(b) as anticipated by Gevelber; and claim 37 under 35 U.S.C. § 103(a) as obvious over the combination of Gevelber and Hieber. (Answer, pp. 3-4.)

We reverse the aforementioned rejections. We need to address only the independent claims, i.e., claims 36 and 45.

Rather than reiterate the conflicting viewpoints advanced by the Examiner and Appellants concerning the above-noted rejection, we refer to the Answer, Brief and Reply Brief for the full exposition thereof.

We reverse the Examiner's rejections of the claimed subject matter for the reasons set forth in the Briefs. We add the following comments primarily for completeness and emphasis.

Anticipation under § 102 requires that the identical invention that is claimed was previously known to others and thus is not new. *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d 1565, 1576, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991); *Titanium Metals Corp. of Am. v. Banner*, 778 F.2d 775, 780, 227 USPQ 773, 777-78 (Fed. Cir. 1985); *Lindemann Maschinenfabrik GmbH v. American Hoist and Derrick Co.*, 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984).

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We cannot uphold the Examiner's rejection. Appellants' claims 36 and 45 both require processing a process layer on a wafer wherein the thickness of the process layer is measured in a plurality of sensing locations during the processing of the process layer. The measurements determine the surface uniformity of the process layer across the plurality of sensing locations. The Examiner has not adequately explained where Gevelber discloses the plurality of sensing locations for controlling the uniformity of the processing layer on a substrate as required by the claimed invention. We note that Gevelber discloses:

“[i]t may be desirable to vary the composition of the coating as the coating is growing to achieve various objectives, such as functionally grading the coating to match the thermal expansion coefficient of the substrate and then to gradually change the thermal expansion coefficient. This can be achieved by integrating the deposition rate to determine the coating thickness (or measuring coating thickness directly) and then adjusting the chemicals and/or deposition conditions to favor different compositions in the reactions (see FIG. 7). FIG. 7 shows a control structure which allows coordinated composition-thickness control.”  
(Col. 13, ll. 6-16).

However, Gevelber does not indicate that the determination of the coating thickness (or measuring coating thickness) is performed by plurality of sensing locations.

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**CONCLUSION**

The rejections of claims 26 to 36 and 38 to 45 under 35 U.S.C. § 102(b) as anticipated by Gevelber; and claim 37 under 35 U.S.C. § 103(a) as obvious over the combination of Gevelber and Hieber are reversed.

**REVERSED**

TERRY J. OWENS  
*Administrative Patent Judge*

PAUL LIEBERMAN  
*Administrative Patent Judge*

JEFFREY T. SMITH  
*Administrative Patent Judge*

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