

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HIDEAKI KURODA

Appeal No. 2002-0003
Application No. 09/056,794

ON BRIEF

Before DIXON, GROSS, and BARRY, **Administrative Patent Judges**.
DIXON, **Administrative Patent Judge**.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 11-18, which are all of the claims pending in this application.

We REVERSE.

Appellant's invention relates to a semiconductor device having a selectively deposited conductive layer. An understanding of the invention can be derived from a reading of exemplary claim 12, which is reproduced below.

12. A process of production of a semiconductor memory device having a memory array including memory cells and a peripheral circuit on one substrate comprising:

forming an interlayer insulating layer covering said memory array and peripheral circuit;

forming said memory cells;

exposing a surface of diffusion regions in the peripheral circuit after forming said memory cells;

forming a covering conductive layer on the exposed surface of the diffusion regions in the peripheral circuit; and

flattening by chemical mechanical polishing.

The prior art of record relied upon by the examiner in rejecting the appealed claims is as follows:

Suwanai et al. (Suwanai)	5,025,741	Jun. 25, 1991
Iijima et al. (Iijima)	5,903,053	May 11, 1999

Claims 11-18 stand rejected under 35 U.S.C. § 103 as being unpatentable over Suwanai in view of Iijima.

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Rather than reiterate the conflicting viewpoints advanced by the examiner and appellant regarding the above-noted rejections, we make reference to the examiner's answer (Paper No. 15, mailed May 21, 2001) for the examiner's reasoning in support of the rejections, and to appellant's brief (Paper No. 14, filed Feb. 26, 2001) for appellant's arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by appellant and the examiner. As a consequence of our review, we make the determinations which follow.

Appellant argues that the examiner has not established a *prima facie* case of obviousness of the claimed invention whereas the examiner has not shown that it would have been obvious to one of ordinary skill in the art to replace the reactive ion etching (RIE) of Suwanai for patterning, rather than "flattening" as recited in claim 12, with chemical mechanical polishing as maintained by the examiner. The examiner admits that Suwanai does not teach the use of flattening by chemical mechanical polishing. (See answer at page 3.) The examiner maintains that RIE and chemical mechanical

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polishing are interchangeable processes and relies on the teachings of Iijima to evidence this interchangeability. Additionally, the examiner maintains that appellant's specification "hinted" of this well-known interchangeability of RIE and chemical mechanical polishing to flatten conductive layers. Appellant disagrees with the examiner's conclusion. (See brief at page 5.) We agree with appellant and find that the examiner's conclusion is based upon speculation. While the examiner has referred to the teachings in Iijima, we do not find these teachings to teach an interchangeability of RIE and chemical mechanical polishing to flatten conductive layers as maintained by the examiner. Therefore, we cannot agree with the examiner that Iijima would have suggested the use of chemical mechanical polishing in place of the use of RIE to flatten conductive layers as taught by Suwanai. Since Iijima does not remedy the deficiency in Suwanai as admitted by the examiner, we cannot sustain the examiner's rejection of independent claim 12 and its dependent claims 11, 13 and 14. Similarly, we cannot sustain the rejection of independent claims 15, 16 and 18 which contain similar limitations and dependent claim 17.

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CONCLUSION

To summarize, the decision of the examiner to reject claim 11-18 under 35 U.S.C. § 103 is reversed.

REVERSED

JOSEPH L. DIXON
Administrative Patent Judge

ANITA PELLMAN GROSS
Administrative Patent Judge

LANCE LEONARD BARRY
Administrative Patent Judge

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