

The opinion in support of the decision being entered today was not written for publication in a law journal and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte RANDY J. SHUL, CHRISTI G. WILLISON,  
W. KENT SCHUBERT, RONALD P. MANGINELL,  
MARY-ANNE MITCHELL, and PAUL C. GALAMBOS

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Appeal No. 2006-1268  
Application No. 10/165,356

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ON BRIEF

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Before KIMLIN, GARRIS, and FRANKLIN, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 6-9, 11 and 12. Claim 6 is illustrative:

6. A method for fabrication of silicon-based microstructures, comprising the deposition and patterning of an etching delay layer, and further comprising an etching process, the thickness and location of said etching delay layer being chosen to compensate for aspect-ratio-dependent etching effects.

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In the rejection of the appealed claims, the examiner  
relies upon the following references:

Zhang et al. (Zhang)	6,291,357 B1	Sep. 18, 2001
Yasuda et al. (Yasuda)	6,703,132 B1	Mar. 9, 2004
		filed Dec. 22, 1999)

Appellants' claimed invention is directed to a method for fabricating a silicon-based microstructure. The process involves the deposition and patterning of an etching delay layer which retards the etching of large areas of a substrate relative to narrower areas. It is known in the art that "[b]oth wet and dry etching procedures exhibit an effect called aspect-ratio-dependent etching, in which a narrow feature being defined by etching deepens less rapidly than does a wide feature being defined under the same etching conditions" (page 4 of specification, second paragraph).

Appealed claims 6-9 and 11 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Zhang. Claim 12 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhang in view of Yasuda.

We have thoroughly reviewed the respective positions advanced by appellants and the examiner. In so doing, it is our determination that the examiner's rejections are not well-founded.

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We consider first the examiner's § 102 rejection. It is fundamental that a reference cited in a § 102 rejection must describe every feature of the claimed invention. In the present case, the claimed method requires a deposition and patterning of an etching delay layer. Zhang, on the other hand, fails to provide any description of patterning the etching delay, or passivating, layer. While the examiner cites column 3, lines 14-25 of Zhang for the position that "Zhang clearly teaches the patterning of the etch delay layer" (page 5 of Answer, first paragraph), the referenced portion of Zhang pertains to an overlying pattern of etch-resistant features 24, which are not part of the etching delay layer. The examiner goes on to say that "Zhang clearly teaches to pattern the etch-passivating layer indirectly through the etch resistance feature by selectively depositing the etch passivation layer in the openings create [sic, created] by using photoresist mask (24) as a template for patterning step" (page 5 of Answer, second paragraph). However, there is no disclosure in Zhang that teaches such a selective deposition, and the examiner has pointed to none. Like appellants, we find that the more reasonable interpretation of the reference is that the passivation layer is formed by a blanket deposition.

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Yasuda, cited by the examiner for the separate § 103 rejection of dependent claim 12, does not remedy the basic deficiency of Zhang discussed above.

In conclusion, based on the foregoing, we are constrained to reverse the examiner's rejections.

REVERSED

EDWARD C. KIMLIN	)	
Administrative Patent Judge	)	
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	)	
	)	
	)	
BRADLEY R. GARRIS	)	BOARD OF PATENT
Administrative Patent Judge	)	APPEALS AND
	)	INTERFERENCES
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	)	
BEVERLY A. FRANKLIN	)	
Administrative Patent Judge	)	

ECK:clm

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