

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TETSUYUKI KURATA and HIROSHI KOEZUKA

Appeal No. 95-3170
Application No. 07/813,749¹

ON BRIEF

Before KIMLIN, GARRIS and WARREN, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 2-16, all the claims remaining in the present application.

Claim 16 is illustrative:

16. An exposed photoresist, said exposed photoresist having been formed by (a) applying on a substrate a

¹ Application for patent filed December 30, 1991.

Appeal No. 95-3170
Application No. 07/813,749

photoresist having a non-linear optical property which increases with respect to increasing light intensity, and (b) exposing the photoresist using a reduction optical system with a mask.

In addition to the admitted state of the prior art found in the present specification, the examiner relies upon the following reference as evidence of obviousness:

Diemeer et al. (Diemeer)	5,142,605	Aug. 25, 1992
		(filed Sep. 7, 1989)

Appellants' claimed invention is directed to an exposed photoresist formed by using a reduction optical system to expose a photoresist having a non-linear optical property which increases with respect to increasing light intensity. According to appellants, "the exposed photoresist according to the present invention obtains a high resolution of from 0.25-0.35 Fm, even in a resist having a thickness of approximately 1 Fm" (page 3 of principal Brief).

Appealed claims 2-16 stand rejected under 35 U.S.C. § 112, first paragraph, as being based upon a non-enabling disclosure. In addition, the appealed claims stand rejected under 35 U.S.C. § 103 as being unpatentable over Diemeer in view of the admitted prior art.

Appeal No. 95-3170
Application No. 07/813,749

Upon careful consideration of the opposing arguments presented on appeal, we will sustain neither of the examiner's rejections.

Regarding the rejection of the appealed claims under § 112, first paragraph, we are in essential agreement with the position set forth by appellants in their Reply Brief. In essence, the examiner has not carried his initial burden of establishing with objective evidence or compelling scientific reasoning that one of ordinary skill in the art would not be able to practice the claimed invention without undue experimentation. In re Marzocchi, 439 F.2d 220, 223, 169 USPQ 367, 369 (CCPA 1971). The examiner's statement that forms the basis of his legal conclusion, that it is not possible for one skilled in the art to produce the claimed photoresist from the brief description found in the specification, is without factual support (page 5 of Answer).

We now turn to the examiner's rejection of the appealed claims under 35 U.S.C. § 103. The examiner appreciates that Diemeer, the primary reference, fails to disclose (1) the claimed photoresist that has a non-linear optical property which increases with respect to increasing light intensity and

Appeal No. 95-3170
Application No. 07/813,749

(2) exposing a photoresist using a reduction optical system. In the words of the examiner, the teachings of Diemeer "differ from those of the applicant in that the applicant teaches the use of similar photoresists and the exposure of the photoresists using a reduction optical system" (page 4 of Answer). However, the examiner has failed to explain in what specific respects the photoresists of appellants and Diemeer are "similar." Lacking in the examiner's position is any rationale that establishes that the photoresists of Diemeer or the admitted prior art have the presently claimed "non-linear optical property which increases with respect to increasing light intensity." In the absence of such rationale, it cannot be reasonably concluded that the claimed photoresist would have been obvious to one of ordinary skill in the art in view of the photoresist of Diemeer, notwithstanding their purported "similarity." Likewise, the examiner's statement that "[t]he use of the reduction optical system is disclosed in the specification and is known to be used with similar photoresists as those of the claimed invention" (page 4 of Answer), is without the requisite factual support. Again, the examiner has not established the specific similarity between

Appeal No. 95-3170
Application No. 07/813,749

the claimed photoresist and the photoresists of the admitted prior art that are subjected to an exposure to a reduction optical system. Consequently, we find that the prior art relied upon by the examiner fails to establish a prima facie case of obviousness for the claimed subject matter.

One final point remains. In the event of further prosecution of the subject matter at bar, the examiner should consider whether the exposed photoresist disclosed by Diemeer inherently has a "non-linear optical property which increases with respect to increasing light intensity," as presently claimed. We say this because appellants' specification attributes the claimed property to the photoresist structure having a nitrostilbene functional group, and the photoresist material of Diemeer possesses nitrostilbene functional groups. For the appropriate, controlling legal principle, the examiner should consult In re Spada, 911 F.2d 705, 15 USPQ2d 1655 (Fed. Cir. 1990) and In re Best, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977).

In conclusion, based on the foregoing, the examiner's decision rejecting the appealed claims is reversed.

REVERSED

Appeal No. 95-3170
Application No. 07/813,749

EDWARD C. KIMLIN)	
Administrative Patent Judge)	
)	
)	
)	
BRADLEY R. GARRIS)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
)	
)	
CHARLES F. WARREN)	
Administrative Patent Judge)	

clm

Appeal No. 95-3170
Application No. 07/813,749

Stephen A. Becker
Lowe, Price, LeBlanc & Becker
99 Canal Center Plaza, Ste. 300
Alexandria, VA 22314