

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 28

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TOHRU NAKAGAWA

Appeal No. 1996-3676
Application No. 08/284,982

HEARD: January 27, 2000

Before KIMLIN, JOHN D. SMITH and WARREN, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-3. Claims 4 and 5, the other claims remaining in the present

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application, stand withdrawn from consideration. Claim 1 is illustrative:¹

1. A scanning electromechanical microscope probe comprising a metal wire having a body and a front end, wherein the body of the metal wire is covered with an organic thin film and the organic thin film is a chemical adsorption film comprising an alkyl group or an alkyl fluoride group bonded to the body of the metal wire by covalent siloxane bonds, and wherein the front end of the metal wire is an exposed metal surface.

The examiner relies upon the following references as evidence of obviousness:

Josowicz et al. (Josowicz) 4,959,130 Sep. 25, 1990

Hackh's Chemical Dictionary 611 (Julius Grant ed., 4th ed., McGraw-Hill Book Co. n.d.) (Hackh's)

Fu-Ren F. Fan et al. (Fan), 60 Analytical Chemistry no. 8, 751-58 (Apr. 15, 1998)

Appellant's claimed invention is directed to a scanning electrochemical microscope probe comprising a metal wire that is covered with an organic thin film of, for example, trichlorosilane. The film is chemically adsorbed to the metal wire via covalent siloxane bonds.

¹ We note that appellant's amendment after final (Paper No. 18), although stated to be entered by the examiner, has not been clerically entered. For purposes of this appeal, we will consider claim 1 as amended in Paper No. 18.

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Appealed claims 1-3 stand rejected under 35 U.S.C. § 103 as being unpatentable over Josowicz in view of Hackh's.

Claims 1-3 also stand rejected under 35 U.S.C. § 103 over Fan in view of Josowicz and Hackh's.

Upon careful consideration of the opposing arguments presented on appeal, we agree with appellant that the examiner has failed to establish a prima facie case of obviousness for the claimed subject matter. Accordingly, we will not sustain the examiner's rejections.

We consider first the rejection of the appealed claims under § 103 over Josowicz in view of Hackh's. As urged by appellant, and acknowledged by the examiner, Josowicz does not teach or suggest the presently claimed organic thin film "comprising an alkyl group or an alkyl fluoride group bonded to the body of the metal wire by covalent siloxane bonds." Josowicz discloses an insulating layer for an ultramicroelectrode that is an improvement over glass and an epoxy resin. Josowicz discloses that "the insulating layer is made from alkenyl-substituted poly(1,4-phenylene) ether, poly(1,4-phenylene) thioether or poly(1,4-aniline), whose

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phenyl groups are cross-linked by alkylene groups in an ortho-position with two to ten carbon atoms" (column 2, lines 9-14).

In order to remedy this deficiency in the Josowicz disclosure, the examiner relies upon Hackh's for disclosing "silicone rubber to be well-known for its use as protective coating material for wires" (page 3 of Answer). However, appellant explains at pages 5-8 of the Brief that the silicone rubber coating disclosed by Hackh's does not result in the claimed "chemical adsorption film comprising an alkyl group or an alkyl fluoride group bonded to the body of the metal wire by covalent siloxane bonds." The examiner does not dispute appellant's explanation but offers the legal conclusion that "it would nevertheless be obvious to one of ordinary skill in the art to attach the coating by a covalent bond . . . [because] [t]he covalent bond is chemical in nature and would be expected to be stronger than a physical bond" (page 6 of Answer). However, the examiner fails to provide the requisite teaching or suggestion in the prior art for making the necessary modifications to the collective teachings of Josowicz and Hackh's to arrive at the claimed invention. At best, the examiner has simply described a possible advantage

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of utilizing appellant's chemical adsorption film instead of silicone rubber.

Regarding the rejection of claims 1-3 over Fan in view of Josowicz and Hackh's, the collective teachings of Josowicz and Hackh's, for the reasons set forth above, would not have suggested the substitution of appellant's organic thin film for the glass coating of Fan's scanning electrochemical microscope.

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

REVERSED

EDWARD C. KIMLIN)	
Administrative Patent Judge)	
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JOHN D. SMITH)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
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CHARLES F. WARREN)	
Administrative Patent Judge)	

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