

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

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. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte FRANCIS P. DALY  
and DANIEL OSTGARD

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Appeal No. 1997-0183  
Application 08/206,623

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ON BRIEF

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Before HANLON, OWENS, and WALTZ, Administrative Patent Judges.  
WALTZ, Administrative Patent Judge.

**DECISION ON APPEAL**

This is an appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1 through 18. Claims 19 through 27, the only other claims pending in this application, stand withdrawn from consideration as directed to a nonelected invention (Brief, page 2).

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According to appellants, the invention is directed to a method of making a catalyst and the catalyst product useful in the reaction of sodium chlorite to produce chlorine dioxide, wherein the outside edge of the catalyst support is impregnated with palladium or another platinum group metal and the catalyst support is modified by a Group IA carbonate, Group IIA carbonate, or MgO (Brief, pages 2-3). Illustrative claim 1 is reproduced below:

1. A catalyst having an exterior surface comprising palladium for producing chlorine dioxide, consisting essentially of a catalyst support selected from the group consisting of (a) a support modified by a Group IA carbonate salt or a Group IIA carbonate salt or MgO and (b) a support consisting of a Group IA carbonate salt or a Group IIA carbonate salt or MgO, wherein the exterior surface of said catalyst support is impregnated with palladium or palladium and another platinum group metal or palladium and a Group IB metal.

The examiner has relied upon the following reference as evidence of obviousness:

Kaiser	3,974,102	Aug. 10, 1976
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Claims 1 through 18 stand rejected under 35 U.S.C. § 103 as unpatentable over Kaiser (Answer, page 3). We reverse the examiner's decision for reasons which follow.

**OPINION**

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The examiner finds that Kaiser discloses a catalytic composition which comprises a Group VIII metal and a Group IB metal deposited on an alumina support with a subsequent treatment of the support with an alkali or alkaline earth metal salt

(Answer, page 3). The examiner concedes that Kaiser "does not teach the pretreatment of the support with alkali or alkaline earth metal compounds prior to impregnating the support with Group VIII and IB metals." (*Id.*).

The examiner states that the "dispositive issue" in this case is whether the post-impregnation of the Kaiser support with alkali and alkaline earth metal compounds renders obvious the subject matter of the claims on appeal (*Id.*). The examiner states that there is "no dispute" about the teachings of Kaiser but it is the examiner's position "that a person of ordinary skill would have been motivated to treat the support with the alkali metal *before* the impregnation of such support with the catalytic metals since any acidic properties would have been inherently neutralized as the catalytic impregnation step progresses." (Answer, page 4, emphasis added). The examiner further states that "such preimpregnation of the

support with the alkali metal would have provided greater control over the acidity of the final product." (*Id.*). This position is in contrast to the examiner's position elsewhere in the Answer that "the sequence of addition of the alkali or alkaline earth metal to the support is not patentably significant" (Answer, page 3) and "the point at which the alkali or alkaline earth metal is added to the support is an obvious choice." (Answer, page 4).

We find no support for either of the examiner's positions in the record before us. The examiner cites no evidence or convincing reasons to support his first position that pretreatment of the support with an alkali or alkaline earth compound would have accomplished the goals of Kaiser, namely neutralization of any acidic functionalities (see Kaiser, col. 3, ll. 39-49). The examiner likewise fails to cite any evidence or convincing reasons why such preimpregnation of the support with alkali metal would have provided greater control over the acidity of the final product.

Regarding the examiner's second position that the sequence of addition of the alkali or alkaline earth metal compounds "is not patentably significant " or is "an obvious

choice," there is no evidence or convincing reasons of record to support this position. Kaiser is directed to a catalyst for the isomerization of alpha-pinene to beta-pinene, with the object of increasing the conversion and retaining the specificity of the catalyst for beta-pinene formation (col. 1, ll. 5-10 and 55-59). Neutral to basic conditions must be maintained to suppress acidic by-product formation which affects selectivity (col. 1, ll. 67-68; col. 2, ll. 17-24). Kaiser teaches that the alpha-pinene isomerization process is "acutely acid sensitive" as acidic conditions can deactivate the catalyst and commercially prepared Group VIII catalysts admixed with a Group IB metal on an alumina support contain residual anions which can form acid during the isomerization process (col. 3, ll. 4-8 and 13-26). Kaiser further teaches that

The acidic functionality displayed by the Group VIII catalyst admixed with Group IB metal on an alumina support can be suppressed by subjecting the supported catalyst and Group IB metal to a neutralization treatment. This involves treating the supported catalyst and Group IB metal with at least about 0.002 weight parts per weight of alumina of an alkali metal or alkaline earth metal neutralizing agent provided from an alkali metal or alkaline earth metal salt or hydroxide inert to the catalyst. (Col. 3, ll. 39-48).

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From these teachings of Kaiser, it is clear that the acidic functionality that is neutralized by the alkali or alkaline earth compound results from the Group VIII metal admixed with Group IB metal on the alumina support, i.e., the mixed metal catalyst (see col. 2, ll. 14-15; col. 3, ll. 39-43). Thus there is no teaching, motivation or suggestion in Kaiser to treat the alumina support *per se* with the neutralizing agent to form the modified support required by part (a) of claim 1 on appeal. The examiner has not pointed to any disclosure or teachings in Kaiser or supplied convincing reasons that the support *per se* contains acidic functionalities that must be neutralized or that pretreating the support with the neutralizing agent would subsequently neutralize the acidic functionalities present in the later impregnation of Group VIII and IB catalyst metals. Accordingly, the teachings of Kaiser do not support the examiner's "obvious choice" position. *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984) ("The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification. [Citations omitted].").

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The initial burden is on the examiner to establish a *prima facie* case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). For the foregoing reasons, we determine that the examiner has not established a *prima facie* case of obviousness. Accordingly, the examiner's rejection of the claims on appeal is reversed. Because we reverse on the basis of failure to establish a *prima facie* case of obviousness, we need not reach the issue of the sufficiency of the Daly Declaration under 37 CFR § 1.132 (see Appendix 1 attached to the Brief).

The decision of the examiner is reversed.

**REVERSED**

ADRIENE LEPIANE HANLON )  
Administrative Patent Judge )  
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TERRY J. OWENS	)	APPEALS AND
Administrative Patent Judge	)	
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THOMAS A. WALTZ	)	
Administrative Patent Judge	)	

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