

The opinion in support of the decision being entered today  
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* PATRICK FUERTES,  
RODOLPHE TAMION,  
GUY FLECHE and  
SERGE COMINI

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Appeal 2007-2187  
Application 10/148,793  
Technology Center 1700

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Decided: October 4, 2007

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Before CHUNG K. PAK, THOMAS A. WALTZ, and LINDA M.  
GAUDETTE, *Administrative Patent Judges*.

GAUDETTE, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the rejection of claims 11-25 and 28, the only claims pending in the application. Although the action appealed from was a non-final rejection, we have jurisdiction pursuant to 35 U.S.C. §§ 6 and 134 since these claims have been twice presented and rejected. *See Ex parte Lemoine*, 46 USPQ2d 1420, 1423 (BPAI 1994).

We REVERSE.

Claim 11 is illustrative of the invention and is reproduced below:

11. A process for the preparation of a lactic acid ester composition from a lactic acid composition, comprising:

- a) a stage of conversion, with removal of water, of said lactic acid composition into a lactic acid oligomeric composition exhibiting a mean degree of polymerization (MDP) of between 3 and 30,
- b) a subsequent stage of mixing and of reaction of said oligomeric composition which is purified or unpurified with an alcohol, in the presence of a transesterification catalyst, for the purpose of esterifying all or a portion of the lactic acid present, in a monomeric, dimeric, oligomeric or polymeric form, in said oligomeric composition, and
- c) an optional stage of purification of the lactic acid ester composition thus obtained.

The Examiner relies on the following prior art references to show unpatentability:

Taniyama	JP 8-040983	Feb. 13, 1996
Okada	JP 6-065230	Mar. 1998

The Examiner made the following rejection<sup>1</sup>:

Claims 11-25 and 28 under 35 U.S.C. § 102(b) as anticipated by Taniyama, as evidenced by Okada.

## ISSUE

Appellants concede that Taniyama discloses a process for preparation of a lactic acid ester composition. However, Appellants contend that

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<sup>1</sup> The Examiner has withdrawn the rejection of claims 11-25 and 28 under 35 U.S.C. § 103 as unpatentable over Taniyama, as evidenced by Okada, in view of Verser. Answer 3.

Taniyama's method utilizes a lactide (i.e., a dimer whose degree of polymerization is constant at 2) and, therefore, does not anticipate the claimed method which utilizes a lactic acid oligomeric composition having a mean degree of polymerization between 3 and 30. The Examiner points out that the Taniyama reference refers to Okada as a source of its lactide. The Examiner notes that Okada discloses "the production of poly(lactic acid) having a molecular weight of 200-4000 which, using a molecular weight for lactic acid of 90 calculates to a mean degree of polymerization of 2 to 44." Answer 4. Therefore, the Examiner contends that Taniyama's method anticipates claims 11-25 and 28.

Based on the contentions of the Examiner and the Appellants, the issue before us is: Has the Examiner established that Taniyama inherently discloses the use of a lactic acid oligomeric composition in his method of manufacturing a lactic acid ester?

For the reasons discussed below, we answer this question in the negative.

#### RELEVANT FINDINGS OF FACT

- 1) Taniyama discloses a method for manufacturing a lactic acid ester composition by reacting a lactide with alcohol in the presence of an acid catalyst. Claim 1.
- 2) Taniyama notes that "lactide (3,6-dimethyl-1,4-dioxane -2,5-dione) has been used as a raw material for lactic-acid polymers. . . . For example, JP H6-65230 A discloses that the lactide is obtained almost quantitatively after distillation, wherein said lactide is produced by heating a low-molecular weight lactic acid oligomer, which is obtained

by heat dehydration of lactic acid, at the temperature of 130-230°C under a reduced pressure and in the presence of alkali metal compounds.” [0004].

- 3) Okada (JP H6-65230 A) discloses a method for producing a lactide in which a polylactic acid having a molecular weight of 200-4000 is used as a raw material. P. 3, para. 1.
- 4) According to Okada, lactic acid is preferably produced by dehydrating condensation of the lactic acid in the presence of a high-boiling point alcohol under reduced pressure. P. 3, para. 2.
- 5) Okada discloses that the reaction produces “lactic acid, a lactic acid decomposition product, a lactic acid oligomer, and the compound of the alkali metal used as a catalyst and the like, and they can be treated without worrying especially about environmental contamination.” P. 4, para 2.
- 6) Okada teaches that the lactide is distilled away, recrystallized and used for a polymer raw material. P. 7, para. 4.

#### ANALYSIS AND CONCLUSIONS

Appellants concede that Taniyama’s method inherently includes a step of forming a lactide. Reply Br. 2 (“the depolymerization and purification of OKADA are necessarily included in TANIYAMA to the extent that TANIYAMA makes its lactide according to the teachings of OKADA”). However, Appellants argue that Taniyama’s method does not expressly or inherently disclose a step of forming a lactic acid oligomeric composition, i.e., an intermediate product formed during the step of forming a lactide. Br. 4-5.

A reference is anticipatory within the meaning of § 102 if it discloses each and every claim limitation either expressly or inherently. *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950 (Fed. Cir. 1999); *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1432 (Fed. Cir. 1997). We are in agreement with Appellants that Taniyama’s method does not anticipate Appellants’ claimed method because Taniyama’s process clearly requires a “lactide,” not a lactic acid oligomeric composition as claimed. While it may be true that a lactic acid oligomeric composition is inherently produced during the step of producing the lactide used in Taniyama’s method, Taniyama does not expressly or inherently disclose the use of such intermediate product in its method.<sup>2</sup>

Because the Examiner has failed to make a prima facie showing of anticipation, the rejection of claims 11-25 and 28 under 35 U.S.C. § 102(b) as anticipated by Taniyama, as evidenced by Okada, is reversed.

#### OTHER ISSUES

Although we have concluded that the Examiner’s rejection is not sustainable under 35 U.S.C. § 102, the Examiner and Appellants should consider whether claims 11-25 and 28 are patentable under 35 U.S.C. § 103 in view of the combined teachings of Taniyama and Okada.

REVERSED

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<sup>2</sup> In this regard, Appellants emphasize that a lactic acid oligomeric composition would not be present in Okada’s final product, since “Okada seeks to make lactide of the highest purity possible.” Appeal 5.

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