

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

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MARTIN B. WOLK,
JAMES G. BENTSEN,
RALPH R. ROBERTS,
JOHN S. STARAL, and
YINGBO LI

Appeal 2007-0410
Application 10/414,066
Technology Center 1700

Decided: April 30, 2007

Before CHARLES F. WARREN, PETER F. KRATZ, and
JEFFREY T. SMITH, *Administrative Patent Judges*.

KRATZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the Examiner's final rejection of claims 1, 4, 5, 13, 17, 18, 24, 25, 28-30, and 35-40. Claims 14-16, 19-23, and 31-34 have been withdrawn from further consideration by the Examiner as drawn to a non-elected species. Claims 26 and 27, the only other claims that remain

Appeal 2007-0410
Application 10/414,066

pending in this application, are objected to as dependent claims including allowable subject matter. We have jurisdiction pursuant to 35 U.S.C. §§ 6 and 134.

The claimed invention is directed to an electroluminescent (EL) composition and an organic electronic device (OED) including such a composition. The (EL) composition includes a first compound of a Formula 1, as recited in claim 1, which compound has the characteristic(s) of a charge transporting, charge blocking, light emitting, and/or color conversion material. The elected species of the claimed composition under consideration by the Examiner in the rejection before us is described in the Supplemental Examiner's Answer (p. 3).¹ The elected species of Appellants' composition includes a second compound that is a polymeric material that has an aromatic radical, which radical is an aromatic core of the first compound. The second compound has at least one characteristic from those enumerated above for the first compound, and the composition is amorphous and solution processible. Appealed claim 1 is reproduced in the Claims Appendix attached to Appellants' Brief.

The Examiner relies on the following prior art references as evidence in rejecting the appealed claims:

Mori	US 5,281,489	Jan. 25, 1994
Burroughes	GB 2 348 316 A	Sep. 27, 2000
Hosokawa	JP 2001-097949 A	Apr. 10, 2001

¹ The rejection of record before us for consideration on appeal is specifically directed to Appellants' elected species as set forth in the Answer.

Appeal 2007-0410
Application 10/414,066

Claims 1, 4, 5, 13, 17, 18, 24, 25, 28-30, and 35-40 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mori in view of Hosokawa and Burroughs.

Appellants argue the rejected claims together as a group. Therefore, we select claim 1 as the representative claim on which we decide this appeal.

Appellants contend that the Examiner has not established adequate motivation to support combining a combination of materials from Hosokawa and Burroughes based on the teachings of Mori so as to render the composition of claim 1 *prima facie* obvious (Br. 14-15).

The Examiner, on the other hand, contends that the applied references, including Mori, would have led one of ordinary skill in the art to combine the above-described light emissive organic polymer of Burroughes with the light emissive compound (A-7) of Hosokawa in a manner so as to result in the claimed subject matter. In this regard, the Examiner maintains that:

It would have been obvious to one of ordinary skill in the art to have combined the luminescent materials taught by both Hosokawa et al. and Burroughes et al. in a mixed luminescent layer for an organic light emitting device according to Mori et al., because both Hosokawa et al. and Burroughes et al. teach the respective materials are suitable for a light emitting layer and primary reference Mori et al. teaches a mixture of light emitting compounds for forming a luminescent layer.

Answer 4-5.

Appellants do not dispute that compound (A-7) of Hosokawa corresponds to Appellants' first compound. Nor do Appellants contest that their second compound embraces the F8BT polymer of Burroughes.

Consequently, the dispositive question raised in this appeal is: Has the Examiner furnished an adequate reason (motivation) for one of ordinary

Appeal 2007-0410
Application 10/414,066

skill in the art to combine the light emissive F8BT polymer of Burroughes with the light emissive A-7 compound of Hosokawa for forming a mixed luminescent layer of a light emitting device according to Mori and in a manner that would have rendered the subject matter of representative claim 1 *prima facie* obvious?

We answer that question in the negative, on this record. Consequently, we reverse the Examiner's rejection for reasons stated herein and as set forth in the Briefs.

As acknowledged by the Examiner (Answer 3), Mori "fails to teach the specific first and second compounds under consideration" in this appeal, much less a composition including both of those materials (Br. 3-4). As argued by Appellants, Mori teaches an organic luminescent layer of an electroluminescent element, which layer comprises a mixture of components "chosen so as to have specific oxidation potential and reduction potential relationships therebetween" (Mori, col. 2, ll. 61-63; Br. 9).

Given these teachings of Mori, the Examiner has not fairly explained how and where Mori furnishes direction or motivation to pluck a particular compound from among many disclosed by Hosokawa and a particular polymer from among several disclosed by Burroughes for combination in an organic emissive layer. In particular, the Examiner does not even attempt to point out how the proposed combination of these two selected compounds, one from each of Burroughes and Hosokawa, would have satisfied the oxidation potential and reduction potential relationship criteria of Mori for combination in an organic luminescent layer according to Mori. Rather, the Examiner offers another basis for the proposed combination of the two selected light emissive components, one from each of Hosokawa and

Appeal 2007-0410
Application 10/414,066

Burroughes for use in an organic luminescent layer of a device according to Mori.

In this regard, the Examiner asserts that:

it would have been [prima facie] obvious for the artisan to have combined the references, because, absent evidence otherwise, “[i]t is *prima facie* obvious to combine two compositions taught by the prior art as useful for the same purpose, in order to form a third composition which is to be used for the very same purpose” (see *In re Kerkhoven*, 205 USPQ 1069, 1072 (CCPA 1980); *In re Susi*, 169 USPQ 423, 426 (CCPA 1971); *In re Crockett*, 126 USPQ 186, 188 (CCPA 1960)).

Answer 5.

However, the Examiner’s reliance on the cited case law, including *In re Kerkoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980), is misplaced as asserted by Appellants in the Brief (Br. 11-15). This is so because the Examiner has not articulated why one of ordinary skill in the art would discount the teachings of Mori as to using oxidation potential and reduction potential criteria for selecting materials to be part of the luminescent layer thereof based on the asserted legal presumption of the obviousness of mixing components used for the same purpose together that is generalized from the cited case law. After all, it is well established that the examiner has the initial burden of demonstrating that the teachings of the cited prior art would have suggested to one of ordinary skill that the claimed composition should be made, and that such a person would have a reasonable expectation of success in so doing. See *In re O’Farrell*, 853 F.2d 894, 903-904, 7 USPQ2d 1673, 1681 (Fed. Cir. 1988). This suggestion must come from the prior art, not Applicants’ disclosure. See *In re Dow Chemical Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1532 (Fed. Cir. 1988).

In sum, the difficulty we have with the explanation of the alleged motivation/suggestion for the proposed modification of Mori by the Examiner is that, the asserted case law has not been shown to be sufficiently related to the facts at hand to offset the expectation that one of ordinary skill in the art would use the disclosed selection criteria of Mori, the applied primary reference, in forming the luminescent layer composition. Further, the Examiner has not established with any particularity that the F8BT polymer of Burroughes and the compound (A-7) of Hosokawa represent art recognized suitable organic luminescent layer components that would have been expected to possess oxidation and reduction potential relationships therebetween, according to the criteria of Mori, so as to lead one of ordinary skill in the art toward selection thereof for use in combination. Nor has the Examiner otherwise established a particularized suggestion that would have led one of ordinary skill in the art to select and employ compound (A-7) of Hosokawa in combination with the f8BT polymer of Burroughes in a luminescent layer of a light emitting device according to Mori.

Appeal 2007-0410
Application 10/414,066

CONCLUSION

The decision of the Examiner to reject claims 1, 4, 5, 13, 17, 18, 24, 25, 28-30, and 35-40 under 35 U.S.C. § 103(a) as being unpatentable over Mori in view of Hosokawa and Burroughs is reversed.

REVERSED

tf/ls

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