

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte RONALD J. TONUCCI  
and  
DOUGLAS H. PEARSON

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Appeal No. 2002-0204  
Application 09/154,243<sup>1</sup>

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ON BRIEF

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Before PAK, WALTZ, and PAWLIKOWSKI, Administrative Patent Judges.  
PAK, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 22 through 27 and 30. See the Brief, pages 1-2. Claim 28 and 29, the remaining claims in the above-identified application, have been objected to as being dependent upon a rejected claim, but have been indicated to

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<sup>1</sup>Application for patent filed September 16, 1998.

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be allowable when they are rewritten in independent form including all of the limitations of the base claim and any intervening claims. See the Advisory Action dated April 21, 2000, Paper No. 8.

APPEALED SUBJECT MATTER

According to appellants, "[t]he claims stand or fall together." Therefore, for purposes of this appeal, we select claim 22 and determine the propriety of the examiner's rejection based on this claim alone consistent with 37 CFR § 1.192(c)(7) (2000).<sup>2</sup> Claim 22 is reproduced below:

22. A modified substrate, comprising:  
a substrate; and

disposed on and in contact with said substrate, a plurality of at least  $10^6$  features comprising material deposited on said substrate wherein said features have a packing density of at least  $10^4$  features/cm<sup>2</sup>, wherein said features cover a patterned area on said substrate that is at least 1" across, and wherein said features have a minimum feature size of less than 200 nm.

REFERENCE

The examiner relies on the following sole prior art

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<sup>2</sup>See In re McDaniel, 293 F.3d 1379, 1383, 63 USPQ2d 1462, 1465 (Fed. Cir. 2002) ("If the brief fails to meet either requirement [of 37 CFR § 1.192(c)(7)(2000)], the Board is free to select a single claim from each group of claims subject to a common ground of rejection as representative of all claims in that group and to decide the appeal of that rejection based solely on the selected representative claim.").

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reference:

Tonucci et al. (Tonucci)                    5,264,722                    Nov. 23, 1993

REJECTION

Claims 22 and 27 and 30 stand rejected under 35 U.S.C.  
§ 102(b) as anticipated by, or in the alternative under 35 U.S.C.  
§ 103 as unpatentable over, the disclosures of Tonucci.

OPINION

We have carefully reviewed the claims, specification and prior art, including all of the evidence and arguments advanced by both the examiner and the appellants in support of their respective positions. This review has led us to conclude that the examiner's Sections 102 and 103 rejections are well founded. Accordingly, we will sustain them for essentially the reasons set forth in the Answer. We add the following primarily for emphasis and completeness.

Tonucci teaches a nanochannel glass matrix which is used as a host or cast for the deposition of a variety of materials. See column 4, lines 50-52. This nanochannel glass matrix provides "a patterned arrangement of channels or holes whose dimensions can be controlled to as small as a few nanometers." See column 4, lines 52-54. This nanochannel glass matrix has a large number of channels or pores scalable to greater than or equal to  $10^8$  in a

variety of configurations, with their size being a micron to less than 100 Å and packing densities as great as 10<sup>12</sup> elements/cm<sup>2</sup>. See column 2, lines 25-38. It allows one of ordinary skill in the art to make nanometer scale deposition of materials using molecular beam epitaxy type deposition techniques and a variety of high temperature chemical vapor deposition techniques. See column 2, lines 38-45. In one example, Tonucci teaches depositing or filling a semiconductor material in the channel of the nanochannel glass matrix, which is in fluid communication with a substrate. See, e.g., Figures 11 thorough 15 in conjunction with column 8, lines 6-20. Thus, Tonucci in this embodiment forms a device comprising a substrate, the claimed feature and a nanochannel glass matrix. See, e.g., Figure 11.

We note that the appellants argue that Tonnucci uses a nanochannel glass matrix as part of its device. See, e.g., the Brief, page 4. However, by virtue of using "comprising" in the claims on appeal, the appellants do not preclude the presence of a nanochannel glass matrix. See In re Baxter, 656 F.2d 679, 686-87, 210 USPQ 795, 802-03 (CCPA 1981) (the transition term "comprising" permits the inclusion of steps, elements, or materials not recited in a claim). In any event, in another example, Tonucci teaches an inversion fabrication process in

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which a nanochannel glass matrix and a channel glass therein are etched away, leaving a cast of semiconductors or metals on a substrate. See Tonucci, column 8, line 67 to column 9, line 9, together with Figure 11. From this disclosure, one of ordinary skill in the art would have been led to make semiconductors or metals having the claimed characteristics (cast) on a substrate as required by the claims on appeal.

In view of the foregoing, we affirm the examiner's decision rejecting the claims on appeal under 35 U.S.C. § 102(b) or 35 U.S.C. § 103.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

CHUNG K. PAK	)	
Administrative Patent Judge	)	
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	)	
	)	BOARD OF PATENT
THOMAS A. WALTZ	)	APPEALS AND
Administrative Patent Judge	)	INTERFERENCES
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BEVERLY A. PAWLIKOWSKI	)	
Administrative Patent Judge	)	

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