

IDENTIFYING AND ANTEDATING PRIOR ART IN U.S. PRACTICE

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A. Prior Art under 35 U.S.C. §102(a)

A patent or literature reference *by another* that is published (printed publication) or laid-open before the invention thereof by the applicant for patent (generally, prior to an applicant's U.S. filing date) is available as prior art under 35 U.S.C. §102(a).

The term *by another* includes any difference in inventive entity, even among multiple inventors. For example, if X and Y file a patent application, and if X and C disclose the invention in a literature reference that is published prior to X and Y's U.S. filing date, then the subject literature reference is available as prior art under 35 U.S.C. §102(a).

B. Prior Art under 35 U.S.C. §102(b)

A patent or literature reference *by anyone* that is published *more than one year prior to an applicant's U.S. filing date* is available as prior art under 35 U.S.C. §102(b).

An inventor's own publication can not be applied as prior art under 35 U.S.C. §102(a), so long as a U.S. application is filed within one year of the publication date. This is called the "grace period" and is unique to United States patent law. For example, in many countries, the inventor's public disclosure prior to filing a patent application defeats novelty. However, if published more than one year prior to applicant's U.S. filing date, even the inventor's own publication can be applied as prior art under 35 U.S.C. §102(b).

The provision of §102(b) is called a "statutory bar". That is, a §102(b) reference cannot be removed or antedated under any

circumstances. When the examiner cites a §102(b) reference and assuming that the rejection is well founded, the applicant must then amend the claims to distinguish over the prior art.

C. Prior Art under 35 U.S.C. §102(e)

The provisions of §102(e) relate to U.S. patents, published U.S. patent applications and PCT applications published by WIPO. A U.S. patent or published U.S. patent application, *by another*, is available as prior art as of its effective U.S. filing date. A PCT application, *by another*, designating the U.S. and published by WIPO in English is available as prior art as of its PCT filing date.

35 USC §102(e)(1) relates to published U.S. patent applications:

Type of US Pat Appln Publication	Prior Art Status
(i) U.S. patent application published by the USPTO, by another, based on a regularly filed U.S. national application	Available as prior art as of its U.S. filing date
(ii) U.S. patent application published by the USPTO, by another, based on the U.S. national stage of a PCT application filed on or after November 29, 2000, where the PCT application was published by WIPO in English	Available as prior art as of its PCT filing date
(iii) U.S. patent appln published by the USPTO, by another, based on the U.S. national stage of a PCT appln filed on or after November 29, 2000, where the PCT appln was published by WIPO in a language other than English	No prior art date under §102(e), although the published PCT application is available as prior art under §102(a) or (b) as of the publication date of the PCT application
(iv) U.S. patent application published by the USPTO, by another, based on the U.S. national stage of a PCT application filed before November 29, 2000	No prior art date under §102(e), independent of whether or not the PCT appln was published by WIPO in English. The published PCT appln is available as prior art under §102(a) or (b) as of the publication date of the PCT application

35 U.S.C. §102(e)(2) separately addresses the prior art status of U.S. patents:

Type of U.S. Patent	Prior Art Status
(i) U.S. patent, by another, granted on a regularly filed U.S. national application	Available as prior art as of its U.S. filing date
(ii) U.S. patent, by another, granted on the U.S. national stage of a PCT application filed before November 29, 2000	Available as prior art as of the date that the requirements under 35 U.S.C. §371(c)(1), (2) and (4) have been met (filing fee, English translation and Declaration on file)
(iii) U.S. patent, by another, granted on the U.S. national stage of a PCT application filed on or after November 29, 2000, where PCT application was published by WIPO in English	Available as prior art as of its PCT filing date
(iv) U.S. patent, by another, granted on the U.S. national stage of a PCT application filed on or after November 29, 2000, where the PCT application was published by WIPO in a language other than English	No prior art date under §102(e), although the published PCT application is available as prior art under §102(a) or (b) as of the publication date of the PCT application

35 U.S.C. §102(e) as it relates to published PCT applications:

Type of PCT Application	Prior Art Status
(i) PCT application, by another, filed on or after November 29, 2000, designating the U.S. and published by WIPO in English	Available as prior art as of its PCT filing date
(ii) PCT application, by another, filed on or after November 29, 2000, designating the U.S. and published by WIPO in a language other than English	No prior art date under §102(e), although the published PCT application is available as prior art under §102(a) or (b) as of the publication date of the PCT application
(iii) PCT application, by another, filed before November 29, 2000, designating the U.S. and published by WIPO in English	No prior art date under §102(e), although the published PCT application is available as prior art under §102(a) or (b) as of the publication date of the PCT application

D. Two Kinds of Prior Art in the United States

The first kind of prior art constitutes foreign patent publications and technical literature references. These kind of references are prior art as of their *publication date*.

The second kind of prior art constitutes U.S. patents and published U.S. patent applications. U.S. patents and published U.S. patent applications are prior art as of their effective *U.S. filing date*.

E. Determining §102(e) Date in an Application Chain

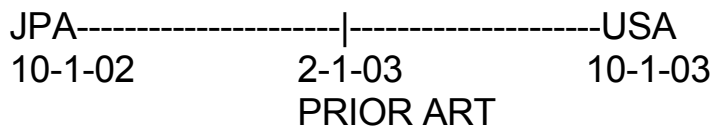
Importantly, in an application chain, the subject matter relied upon as prior art must be disclosed in the earlier-filed application in compliance with 35 U.S.C. §112, 1st paragraph, in order for that subject matter to be entitled to the earlier §102(e) offensive prior art date.

Example - U.S. application which discloses A and B and which claims benefit from an earlier-filed provisional application. The provisional application discloses A but not B. Subject matter A is prior art as of the provisional filing date, whereas subject matter B is prior art as of the filing date of the regular U.S. application.

F. Antedating a Reference by Perfecting the Claim to Priority

Suppose that Company X first files an application in Japan. Then, Company X files a corresponding application in the United States (and other countries) within one year of the Japanese filing date which claims priority from the Japanese application (35 U.S.C. §119).

Sometimes, the examiner will cite a reference during prosecution which has an effective prior art date falling between the time that the Japanese application was filed and the U.S. filing date. For example, suppose that an application was filed in Japan on October 1, 2002 and a corresponding U.S. application was filed on October 1, 2003 claiming the benefit of the Japanese application. During prosecution, the examiner cites a technical literature reference published on February 1, 2003 under §102(a). Or, suppose that the examiner cites a U.S. patent issued May 10, 2004 under §102(e)(2) *based on a U.S. application filed February 1, 2003*. These are called "intervening" references.



Such "intervening" references may be removed or antedated by

perfecting the claim to priority. This is a two step process, which includes:

1. submitting a verified English translation of the certified copy of the priority document (the certified copy of the Japanese application); and
2. pointing out written description support for the claims of the U.S. case in the priority document.

With regard to 2 above, if material was added to the specification before filing in the U.S., then some of the claims may not find written description support in the priority document. Such claims are only entitled to the later U.S. filing date, and the reference may not be antedated with respect to those claims.

Intervening references under §102(a) and §102(e) may be removed by perfecting the claim to priority. References which were published more than one year prior to the U.S. filing date constitute a statutory bar under §102(b) and cannot be removed.

A sample paper used to perfect the claim to foreign priority is attached.

G. Antedating a Reference under Rule 131

A Rule 131 Affidavit is used to overcome a prior art rejection by proving a date of invention prior to the effective date of the reference.

Under amended 35 U.S.C. §104 (the GATT amendments), inventive activities occurring in any WTO or NAFTA member country as of January 1, 1996 can be used by an applicant or patentee to establish a date of invention. Under 37 C.F.R. §1.131, an applicant may antedate a reference (that is not a statutory bar under §102(b)), by showing that the invention was completed in Japan or in any WTO or NAFTA country prior to the date of the prior art reference. When the prior art reference is a foreign patent or literature reference, its prior art date is its *publication date*. When the

prior art reference is a U.S. patent or a published U.S. patent application, its prior art date is its effective *U.S. filing date*.

This is done by submitting the applicant's Declaration of facts showing that the invention was *completed* in Japan prior to the effective date of the reference, together with proof (usually copies from the pertinent pages of the inventor's laboratory notebook).

The term "completed the invention" means (i) that the invention was actually made and successfully tested in its intended environment (this is also called an *actual reduction to practice*), or (ii) that the invention was *conceived* by the inventor prior to the date of the prior art reference, and that the inventor was *diligent* in reducing the invention to practice from a time just prior to the effective date of the reference.

For example, suppose that the invention relates to a device.

The invention is *conceived* when the inventor draws the device structure, knows how to make it, knows what to do with it (utility), and discloses all of this to a third part (non-inventor). The invention is *actually reduced to practice* when the inventor makes the device, and shows that the device operates in its intended environment (if workability is self-evident, then simply showing that the device was constructed may be sufficient).

As a second example, suppose that the invention relates to a new insecticide compound A.

The invention is *conceived* when the inventor writes down the structure of compound A, knows how to make it, knows what to do with it (utility), and discloses all of this to a third party (non-inventor). The invention is *actually reduced to practice* when the inventor makes compound A, confirms its chemical structure (e.g., by IR or NMR), and shows that compound A has good activity as an insecticide.

An invention can also be reduced to practice by filing a patent application (paper patent) that teaches how to make and use the

invention. This is called a *constructive reduction to practice*.

We call this “Rule 131 Affidavit Practice”, or swearing back of a reference. The filing of a Rule 131 Affidavit is *not* an admission that the prior art reference sought to be antedated renders the invention in question unpatentable. A sample Rule 131 Declaration is attached.

H. Rule 132 Affidavit

Where the applicant is one of the co-authors of a publication cited against his or her application (having a publication date within one year of the U.S. filing date), he or she may overcome the rejection by filing a Declaration under 37 C.F.R. §1.132 establishing that the publication describes the applicant’s own work.

For example, suppose that Professor M and his graduate student S publish an article on Professor M’s work on May 21, 2003, and Professor M files a patent application covering his work on February 9, 2004. The prior publication, by another, is available as prior art under §102(a). Professor M may file a Declaration stating that he is the sole inventor of the invention claimed in the patent application, and that graduate student S was merely working under his direction, to remove the publication as a reference under §102(a).

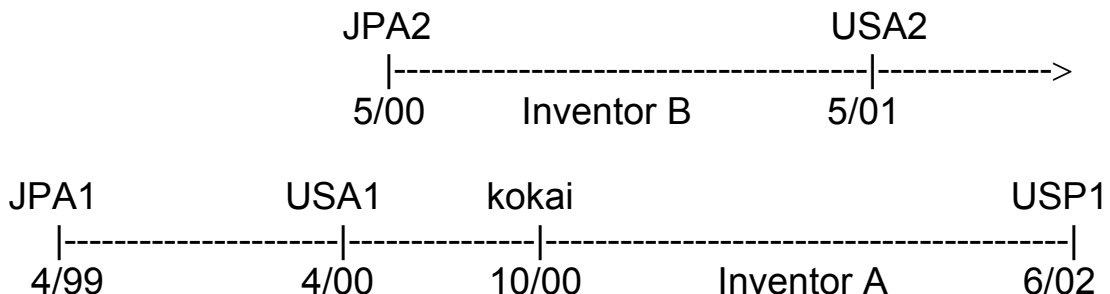
In a second scenario, when subject matter disclosed *but not claimed* in a U.S. patent or published U.S. patent application filed jointly by A and B, is claimed in a later application filed by A alone, the joint patent or application publication is available as prior art, by another, under §102(e). A Declaration by A unequivocally stating that A conceived or invented the subject matter disclosed in the patent or application publication and relied upon in the rejection can be filed to overcome the reference. Namely, this is a showing that the subject matter relied on (for the rejection) in the patent or application publication was the invention of applicant A alone.

I. Disqualifying Commonly Owned Prior Art

Prior art under 35 U.S.C. §102(e) may be disqualified for use in an obviousness rejection pursuant to 35 U.S.C. §103(c) by showing that the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

More particularly, §103 (c) applies to the situation where the claims are rendered obvious over a U.S. patent application or U.S. patent under 35 U.S.C. §102(e)/103 (alone or in combination with other prior art). That is, 35 U.S.C. § 103(c) applies only to prior art usable in an obviousness rejection under 35 U.S.C. §103. Amended §103(c) does not apply if the reference *anticipates* the claimed invention, or if the reference is a *statutory bar* under 35 U.S.C. §102(b) (issued or published more than one year prior to the U.S. filing date of the application), or if the reference is available as prior art under 35 U.S.C. §102(a).

Example:



Claimed Invention – U.S. application 2 (USA2), filed May 1, 2001, claiming foreign priority from Japanese patent application 2 (JPA2) filed May 1, 2000, invented by B and assigned to company X.

The examiner rejects the claims as being ***anticipated*** (lacking novelty) by the following U.S. patent.

Reference – U.S. patent 1 (USP1) issued June 1, 2002, based on a U.S. application (USA1) filed April 1, 2000, invented by A and assigned to company X. USP1 claims priority from JPA1 filed April 1, 1999.

USP1, by another, and having a U.S. filing date of April 1, 2000 prior to the May 1, 2001 U.S. filing date of USA2, is available as prior art against USA2 under §102(e). The kokai of JPA1, laid-open October 1, 2000, less than one year but prior to the May 1, 2001 U.S. filing date of USA2, is available as prior art against USA2 under §102(a).

The reference (USP1) may **not** be disqualified under amended §103(c) because the claimed invention is anticipated by USP1. Also, the reference cannot be removed by perfecting the claim to priority because the May 1, 2000 filing date of JPA2 is subsequent to the April 1, 2000 U.S. filing date of USP1. The claims must be amended so as to distinguish over the cited prior art, *even if the difference is an obvious difference*. Amended §103(c) can then be used to disqualify the reference with respect to any underlying obviousness rejection. The kokai of JPA1 laid-open October 1, 2000, and which is available as prior art under §102(a), may be antedated by perfecting the claim to priority to JPA2 filed May 1, 2000.

APPENDIX

1. Tables for Determining §102(e)(1) and (e)(2) Prior Art Dates and Examples
2. Perfecting Claim to Foreign Priority
3. Rule 131 Declaration
4. Rule 132 Declaration
5. 35 U.S.C. §102
6. Flowcharts - MPEP 706.02(f)(1)

Tables for Determining §102(e)(1) and (e)(2) Prior Art Dates

(for PCT applications filed on or after November 29, 2000 designating the U.S.)

Type of Published U.S. Application	§102(e)(1) Prior Art Date
Regularly filed U.S. application published by the USPTO under §122(b)	U.S. filing date
Regularly filed U.S. application claiming the benefit of a U.S. provisional application and published by the USPTO under §122(b)	Provisional filing date
Regularly filed U.S. application claiming the benefit of a foreign application and published by the USPTO under §122(b)	U.S. filing date
Regularly filed U.S. application claiming the benefit of both a U.S. provisional application and a foreign application, and published by the USPTO under §122(b)	Provisional filing date
PCT application published by WIPO in English	PCT filing date
PCT application claiming the benefit of a U.S. provisional application, published by WIPO in English	Provisional filing date
PCT application published by WIPO in a language <i>other</i> than English	No §102(e)(1) date, but the PCT publication is available as prior art under §102(a) or (b) as of the PCT publication date
PCT application claiming the benefit of a U.S. provisional application, published by WIPO in a language <i>other</i> than English	No §102(e)(1) date, but the PCT publication is available as prior art under §102(a) or (b) as of the PCT publication date

Type of U.S. Patent	§102(e)(2) Date
U.S. patent issuing from a regularly filed U.S. application	U.S. filing date
U.S. patent which is a continuation of a regularly filed U.S. application	Original U.S. filing date
U.S. patent issuing from a regularly filed U.S. application and claiming priority from a foreign application	U.S. filing date
U.S. patent issuing from a regularly filed U.S. application and claiming the benefit of a U.S. provisional application	Provisional filing date
U.S. patent issuing from a regularly filed U.S. application and claiming the benefit of both a foreign application and a U.S. provisional application	Provisional filing date
U.S. patent issuing from the U.S. national stage of a PCT appln, published by WIPO in English	PCT filing date
U.S. patent issuing from the U.S. national stage of a PCT application, published by WIPO in English, and claiming benefit of both a foreign application and a U.S. provisional application	Provisional filing date
U.S. patent issuing from the U.S. national stage of a PCT appln, published by WIPO in English, and claiming priority from a foreign application	PCT filing date
U.S. patent issuing from a continuation of a PCT application, published by WIPO in English, and claiming priority from a foreign application	PCT filing date (also known as by-pass continuation)
U.S. patent issuing from the U.S. national stage of a PCT application, published by WIPO in a language <i>other</i> than English	No §102(e)(2) prior art date, but the published PCT application is available as prior art under §102(a) or (b) as of the PCT publication date
U.S. patent issuing from the U.S. national stage of a PCT appln, published by WIPO in a language <i>other</i> than English, and claiming benefit of a U.S. provisional application	No §102(e)(2) prior art date, but the published PCT application is available as prior art under §102(a) or (b) as of the PCT publication date
U.S. patent issuing from the U.S. national stage of a PCT appln, published by WIPO in a language <i>other</i> than English, and claiming priority from a foreign application	No §102(e)(2) prior art date, but the published PCT application is available as prior art under §102(a) or (b) as of the PCT publication date
U.S. patent issuing from a continuation of a PCT application, published by WIPO in a language <i>other</i> than English and claiming the benefit of a U.S. provisional application	Continuation filing date (also known as by-pass continuation)
U.S. patent issuing from a continuation of a PCT application, published by WIPO in a language <i>other</i> than English and claiming priority from a foreign application	Continuation filing date (also known as by-pass continuation)

(54) **CERAMIC SUBSTRATE AND PROCESS FOR PRODUCING THE SAME**

(75) Inventors: **Yasuji Hiramatsu**, Gifu (JP); **Yasutaka Ito**, Gifu (JP)

(73) Assignee: **Ibiden Co., Ltd.**, Ogaki (JP)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/869,594**

(22) PCT Filed: **May 15, 2000**

(86) PCT No.: **PCT/JP00/03080**

§ 371 (c)(1),
(2), (4) Date: **Aug. 9, 2001**

(87) PCT Pub. No.: **WO01/63972**

PCT Pub. Date: **Aug. 30, 2001**

(30) **Foreign Application Priority Data**

Feb. 25, 2000 (JP) 2000-049482

(51) **Int. Cl.**⁷ **H05B 3/68**

(52) **U.S. Cl.** **219/444.1**

(58) **Field of Search** 219/444.1, 460.1, 219/461.1, 465.1, 466.1, 467.1, 468.1, 543, 544, 546, 547, 548, 338/307, 308, 314; 118/724, 725

(56) **References Cited**

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5,068,517 A * 11/1991 Tsuyuki et al. 219/543
5,072,236 A * 12/1991 Tatsumi et al. 219/543
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6,133,557 A * 10/2000 Kawanabe et al. 219/544

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JP 6-52974 2/1994
JP 8-273814 10/1996
JP 9-180867 7/1997
JP 2000-12194 1/2000

* cited by examiner

Primary Examiner—Sang Paik

(74) *Attorney, Agent, or Firm*—Oblon, Spivak, McClelland, Maier & Neustadt, P.C.

(57) **ABSTRACT**

An object of the present invention is to provide a ceramic substrate that is superior in heat uniformity and thermal shock resistance, and has a large chuck power in the case that the ceramic substrate is made to be an electrostatic chuck. The ceramic substrate of the present invention is a ceramic substrate comprising a conductor layer formed therein, characterized in that a section of the edge of the conductor layer is in a peaked shape.

18 Claims, 8 Drawing Sheets

What is the earliest prior art date of the '006 patent?

The '006 patent is based on the U.S. national stage of PCT/JP00/03080 filed May 15, 2000, and claims priority from Japanese Patent Appln. No. 2000-049482 filed February 25, 2000. The PCT application was published as WO 01/63972 on August 30, 2001.

Because the PCT application was filed before November 29, 2000, the U.S. patent has a §102(e) date of **August 9, 2001** (the date that the §371(c)(1), (2) and (4) requirements were met.

The PCT publication, WO 01/63972 is available as prior art under §102(a) as of its August 30, 2001 publication date.

The kokai of 2000-049482 is available as prior art under §102(a) as of its (approximate) August 25, 2001 laid-open date.

(54) **POLYMERIC FILM**

(75) Inventors: **Andrew Street**, Northamptonshire (GB); **Allan Lovatt**, Middlesbrough (GB); **Jane Constance Campbell**, Middlesbrough (GB); **Hikaru Takeuchi**, Kanagawa (JP); **Sumio Wakabayashi**, Ibaraki (JP); **Yasuo Fujieda**, Ibaraki (JP)

(73) Assignee: **DuPont Teijin Films US Ltd. Partnership**, Wilmington, DE (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 38 days.

(21) Appl. No.: **10/311,610**

(22) PCT Filed: **Jun. 26, 2001**

(86) PCT No.: **PCT/US01/20292**

§ 371 (c)(1),

(2), (4) Date: **Dec. 17, 2002**

(87) PCT Pub. No.: **WO02/00785**

PCT Pub. Date: **Jan. 3, 2002**

(65) **Prior Publication Data**

US 2004/0009361 A1 Jan. 15, 2004

(58) **Field of Search** 428/355 AC, 343, 428/480, 483, 522; 526/287, 318, 318.3, 318.4, 318.41, 318.44, 318.5, 319, 328, 329, 329.5, 329.7; 524/206, 221, 222, 227, 228, 230

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5,306,606 A *	4/1994	Tachibana et al.	430/533
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5,906,888 A *	5/1999	Hart	428/323

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EP	0 035 614 A1	9/1981
EP	0 357 196	* 3/1990
EP	0 429 179 A2	5/1991

* cited by examiner

What is the earliest prior art date of the '520 patent?

The '520 patent is based on the U.S. national stage of PCT/US01/20292 filed June 26, 2001. The PCT application was published in English as WO 02/00785 on January 3, 2002.

Because the PCT application was filed on or after November 29, 2000, and was published by WIPO in English, the '520 patent has a §102(e)(2) date of **June 26, 2001** (the PCT filing date).

The PCT publication, WO 02/00785 is available as prior art under §102(a) as of its January 3, 2002 publication date.

(12) **United States Patent**
Oku et al.

(10) **Patent No.:** **US 6,736,941 B2**
(45) **Date of Patent:** **May 18, 2004**

(54) PROCESS FOR PURIFYING PROPYLENE OXIDE	3,350,418 A 10/1967	Bowe et al.
	3,449,219 A 6/1969	Schmidt
	3,909,366 A * 9/1975	Schmidt et al. 203/69
(75) Inventors: Noriaki Oku, Ichihara (JP); Masaru Ishino, Sodegaura (JP)	4,402,794 A * 9/1983	Nemet-Mavrodin et al. .. 203/14
	4,437,939 A 3/1984	Bhise et al.
	5,262,017 A 11/1993	Meyer et al.
(73) Assignee: Sumitomo Chemical Company, Limited, Osaka (JP)	5,354,430 A 10/1994	Culbreth, III et al.
	5,354,431 A 10/1994	Taylor
	5,489,366 A * 2/1996	Jongenburger 203/14
(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.	6,500,311 B1 * 12/2002	Sawyer 203/44
FOREIGN PATENT DOCUMENTS		
(21) Appl. No.: 10/258,411	EP 0 389 300 A1	9/1990
(22) PCT Filed: Apr. 20, 2001	EP 0 673 935 A2	9/1995
(86) PCT No.: PCT/JP01/03444	OTHER PUBLICATIONS	
§ 371 (c)(1), (2), (4) Date: Oct. 24, 2002	Coulson et al, "Chemical Engineering" vol. Two Unit Operations 3rd Ed. 1977.*	
(87) PCT Pub. No.: WO01/83468	* cited by examiner	
PCT Pub. Date: Nov. 8, 2001		
(65) Prior Publication Data	<i>Primary Examiner</i> —Virginia Manoharan	
US 2003/0102206 A1 Jun. 5, 2003	(74) <i>Attorney, Agent, or Firm</i> —Sughrue Mion, PLLC	
(30) Foreign Application Priority Data	(57) ABSTRACT	
Apr. 28, 2000 (JP) 2000-130342	A process is described for purifying propylene oxide, which	

What is the earliest prior art date of the '941 patent?

The '941 patent is based on the U.S. national stage of PCT/JP01/03444 filed April 20, 2001, and claims priority from Japanese Patent Appln. No. 2000-130342 filed April 28, 2000. The PCT application was published in Japanese as WO 01/83468 on November 8, 2001.

Because the PCT application was filed on or after November 29, 2000, and was published by WIPO in a language other than English, the '941 patent has no §102(e)(2) date.

The PCT publication, WO 01/83468 is available as prior art under §102(a) as of its November 8, 2001 publication date.

The kokai of 2000-130342 is available as prior art under §102(a) as of its (approximate) **October 28, 2001** laid-open date.

REMARKS

I. Claim Rejections under 35 U.S.C. § 103(a)

A. Claims 1-2, 4, 6-13, 17-20, 22-28, 32-35, 37-44, and 48-51 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sugaya (EP 1197748) in view of JP 3-54444.

B. Claims 1-2 and 4-51 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sugaya (EP 1197748) in view of Tanino et al. (U.S. 4,656,455).

In response, Applicants submit herewith the verified English translations of Japanese Patent Application Nos. 2001-165327 and 2001-165328 filed May 20, 2001, to thereby perfect their claim to priority under 35 U.S.C. §119(a) and antedate the Sugaya reference published April 14, 2002.

Support for claims 1, 2, 4-9, 14-16, 32-40, 45-47, 49 and 51 is shown in the Table below. All references are to page and line number of the verified English translation. Claims 10-13, 17-31, 41-44, 48 and 50 which do not find support in the priority documents have been canceled. Claim 3 was previously canceled in the Amendment filed August 18, 2003.

Claim	JPA No. 2001-175333	JPA No. 2001-175334
1		Pg. 1, lines 4-8 and 12-16; Pg. 9, lines 16-20; Pg. 10, lines 20-21; Pg. 19, lines 2-18; Figs. 1(a) and 1(b)
2		Pg. 1, lines 9-11
4		Pg. 1, lines 17-24
5		Pg. 1, line 25 to Pg. 2, line 2
6		Pg. 2, lines 3-5
7		Pg. 2, lines 6-8
8		Pg. 2, lines 9-12
9		Pg. 2, lines 9-12
14	Pg. 1, lines 5-9	
15	Pg. 9, lines 1-2	
16	Pg. 10, lines 5-7	
32		See claim 1 above and Pg. 10, lines 5-6
33		Pg. 10, lines 21-22
34		Pg. 1, lines 12-16
35		Pg. 1, lines 17-24
36		Pg. 1, line 25 to Pg. 2, line 2
37		Pg. 2, lines 3-5
38		Pg. 2, lines 6-8
39		Pg. 2, lines 9-12
40		Pg. 2, lines 9-12
45	Pg. 1, lines 5-9	
46	Pg. 9, lines 1-2	
47	Pg. 10, lines 5-7	
49		Pg. 10, lines 21-22; Pg. 11, lines 5-6
51		Pg. 10, lines 21-22; Pg. 11, lines 5-6

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of :
Minoru KOIDE :
Appln. No. 09/555,555 : Group Art Unit: 3722
Confirmation No.: Unassigned : Examiner: H. Tsai
Filed: March 28, 2000 :
For: CUTTING TOOL AND HOLDER-CARRYING TOOL

DECLARATION UNDER 37 C.F.R. § 1.131

Commissioner for Patents
Washington, D.C. 20231

Sir:

1. I, Minoru Koide, do declare and state:
2. I am the sole inventor of claims 1-11 of the above-identified application.
3. The drawing attached hereto was prepared by me or under my direct supervision. All work and associated writings were carried out in Japan.
4. All dates on the attached exhibits have been masked unless otherwise stated herein by reference to specific dates.
5. Prior to October 21, 1998, I completed my invention as described and claimed in the above-identified application, as evidence by the following:
 - a. As shown in the attached drawing, I prepared a cutting tool including a nose portion, a rake face and a flank. The nose portion had a curve portion and a flat drag, and the flat drag was provided between the curve portion and the flank. The flat drag was provided on the inner side of the tangent

to a terminal end section of the curve portion. The flat drag angle θ made by the flat drag with the tangent was 5° . The width (w) of the flat drag viewed from the side of the rake face was 1.0 mm.

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: _____

Minoru Koide

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Taizo MASUMI

Appln. No.: 07/244,444

Group Art Unit: 111

Filed: September 14, 1988

Examiner: D. Schumaker

For: SUPERCONDUCTIVE PHOTOCONDUCTIVE-SUBSTANCE OF THE LA-CU-O
SYSTEM AND A METHOD FOR PRODUCING THE SAME

DECLARATION UNDER 37 C.F.R. § 1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

I, Taizo Masumi, declare and state that:

I am a citizen of Japan residing at 55-10, Utsukushigaoka 4-Chome, Midori-Ku,
Yokohama City, Kanagawa Pref., Japan;

I am a co-author of Journal of the Physical Society of Japan, Vol. 56, No. 9, pp. 3013-
3016 (September 1987) and (2) Journal of the Physical Society of Japan, Vol. 56, No. 12, pp.
4261-4264 (December 1987).

I am the sole inventor of the invention disclosed and claimed in the above-identified
application.

In order to demonstrate that although (a) Hidetoshi Minami and Hiroshi Shimada are
co-authors with me of Journal of the Physical Society of Japan, Vol. 56, No. 9, pp. 3013-3016

(September 1987), and (b) Hidetoshi Minami is a co-author with me of Journal of the Physical Society of Japan, Vol. 56, No. 12, pp. 4261-4262 (December 1987), they are not co-inventors of the invention disclosed and claimed in the above-identified application, I further declare and state:

I, Taizo Masumi, am an Associate Professor in the Department of Pure and Applied Sciences at the University of Tokyo, and I have managed the Cryogenic Center, the University of Tokyo, from 1981 to the present. Hidetoshi Minami is an assistant for research and Hiroshi Shimada is a graduate student at the University of Tokyo. Hidetoshi Minami and Hiroshi Shimada were named as co-authors of Article (1) above, and Hidetoshi Minami was named a co-author of Article (2) above because both Minami and Shimada simply acted at my behest and direction in the preparation and measurement of the sample materials described in the Articles (1) and (2). The disclosure of the Articles (1) and (2) was derived from my own inventive work. Neither Minami nor Shimada had a role in the discovery of the present invention and did not invent the subject matter of the above-identified application. I am the sole inventor of the invention disclosed and claimed in the above-identified application.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: _____

Taizo Masumi

35 U.S.C. 102 Conditions for patentability; novelty and loss of right to patent.

A person shall be entitled to a patent unless —

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or

(c) he has abandoned the invention, or

(d) the invention was first patented or caused to be patented, or was the subject of an inventor's certificate, by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application for patent or inventor's certificate filed more than twelve months before the filing of the application in the United States, or

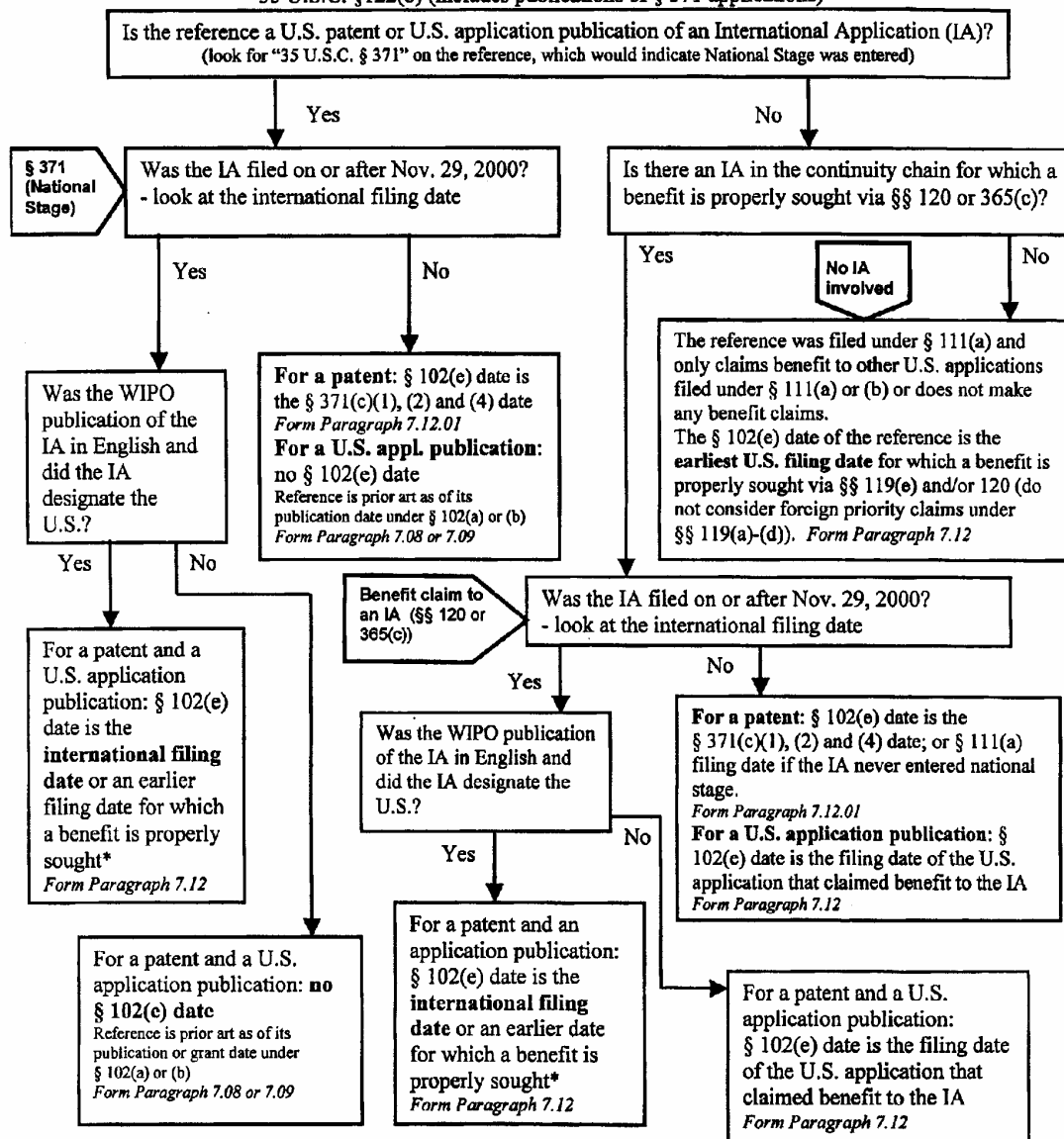
(e) the invention was described in —

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language; or

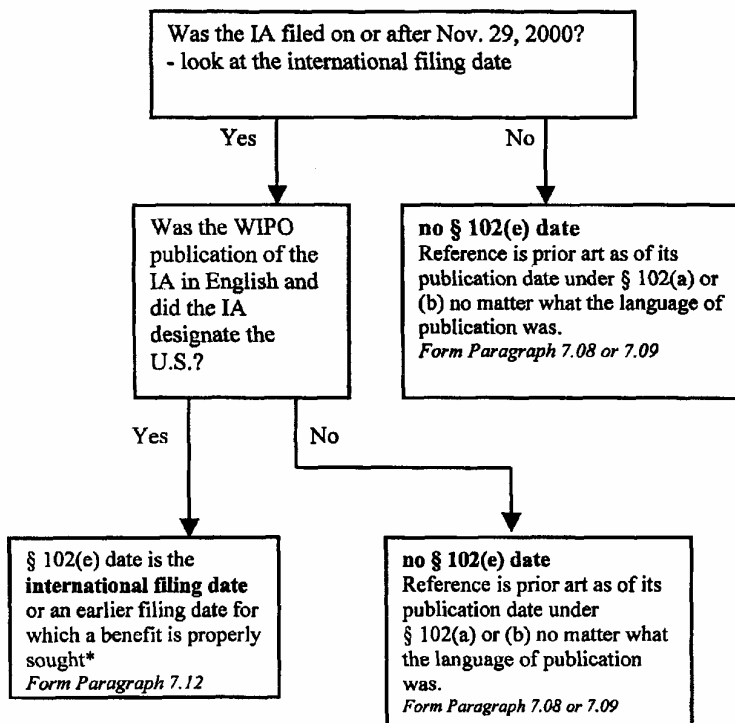
(f) he did not himself invent the subject matter sought to be patented, or

(g)(1) during the course of an interference conducted under section 135 or section 291, another inventor involved therein establishes, to the extent permitted in section 104, that before such person's invention thereof the invention was made by such other inventor and not abandoned, suppressed, or concealed, or (2) before such person's invention thereof, the invention was made in this country by another inventor who had not abandoned, suppressed, or concealed it. In determining priority of invention under this subsection, there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

FLOWCHARTS FOR 35 U.S.C. § 102(e) DATES:**Apply to all applications and patents, whenever filed****Chart I: For U.S. patent or U.S. patent application publication under 35 U.S.C. § 122(b) (includes publications of § 371 applications)**

* Consider benefit claims properly made under § 119(e) to U.S. provisional applications, § 120 to U.S. nonprovisional applications, and § 365(c) involving IAs. Do NOT consider foreign priority claims.

FLOWCHARTS FOR 35 U.S.C. § 102(e) DATES:
Apply to all applications and patents, whenever filed
Chart II: For WIPO publication of International Applications (IAs)



* Consider benefit claims properly made under § 119(e) to U.S. provisional applications, § 120 to U.S. nonprovisional applications, and § 365(c) involving IAs. Do NOT consider foreign priority claims.

Glossary of Terms:

U.S. patent application publication = pre-grant publication by the USPTO under 35 U.S.C. § 122(b)
International application (IA) = an application filed under the Patent Cooperation Treaty (PCT)
§ 371 application = an IA that has entered the national stage in the U.S. (35 U.S.C. § 371(c)(1), (2) and (4))
November 29, 2000 = the effective date for the amendments to §§ 102(e) and 374
WIPO = World Intellectual Property Organization
WIPO Publication = a publication of an IA under PCT Article 21(2) (e.g., Publication No. WO 99/12345)
§ 111(a) = provision of the patent code that states the filing requirements for **nonprovisional applications**
§ 111(b) = provision of the patent code that states the filing requirements for **provisional applications**
§ 119(e) = provision of the patent code that allows for **priority claims to provisional applications**
§ 119(a)-(d) = provision of the patent code that allows for **priority claims to foreign applications**
§ 120 = provision of the patent code that allows for **benefit claims to nonprovisional applications**
§ 365(c) = provision of the patent code that allows for **benefit claims to international applications**