

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEALS BOARD

JOHN W. SMITH,
CLAIRE MCGUINNESS, and ANDREW P. SHARRATT,
Junior Party
(Patent 8,633,340),

v.

VELLIYUR NOTT MALLIKARJUNA RAO
and ALLEN CAPRON SIEVERT
Senior Party
(Reissue application 14/552,613)

Patent Interference No. 106,099
(Technology Center 3900)

Before: SALLY GARDNER LANE, JAMES T. MOORE, and DEBORAH KATZ,
Administrative Patent Judges.

LANE, *Administrative Patent Judge.*

JUDGMENT - Bd. R. 127(a)

A decision granting Motion 2 of junior party John W. Smith, Claire McGuinness, and Andrew P. Sharratt. (Smith) has been entered. (Decision, Paper 133). As a result of this Decision, all the involved claims of senior party Velliyur Nott Mallikarjuna Rao and Allen Capron Sievert (Rao) are unpatentable to Rao and Rao lacks standing to continue in the interference. Bd. R. 201. Accordingly, we enter judgment against Rao.

Order

It is

ORDERED that judgment on priority is entered against senior party Rao as to Count 1, the sole Count of the interference (Declaration, Paper 1, 4);

FURTHER ORDERED that claims 17, 18, 20-22, and 27-37 of Rao application 14/552,613, which correspond to Count 1, are FINALLY REFUSED. (Declaration, Paper 1, 4); 35 U.S.C. § 135(a);¹

FURTHER ORDERED that the parties are directed to 35 USC § 135(c) and Bd. R. 205 regarding the filing of settlement agreements;

FURTHER ORDERED that a party seeking judicial review timely serve notice on the Director of the United States Patent and Trademark Office; 37 C.F.R. §§ 90.1 and 104.2. *See also* Bd. R. 8(b). Attention is directed to *Biogen Idec MA, Inc., v. Japanese Foundation for Cancer Research*, 785 F.3d 648, 654–57 (Fed. Cir. 2015) (determining that pre-AIA § 146 review was eliminated for interference proceedings declared after September 15, 2012); and

¹ Any reference to a statute in this Judgment is to the statute that was in effect on March 15, 2013 unless otherwise indicated. See Pub. L. 112-29, § 3(n), 125 Stat. 284, 293 (2011).

FURTHER ORDERED that a copy of this judgment be entered into the administrative records of the involved Smith patent and involved Rao application.

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Administrative Patent Judges.

LANE, *Administrative Patent Judge.*

Decision - Motions - 37 C.F.R. § 41.125

I. INTRODUCTION

Junior party John W. Smith, Claire McGuinness, and Andrew P. Sharratt. (Smith)¹ is involved in this interference on the basis of its patent 8,633,340. Senior party Velliyur Nott Mallikarjuna Rao and Allen Capron Sievert (Rao)² is involved in the interference on the basis of its application 14/552,613, which is an application for reissue of Rao patent 8,318,992.³

Smith filed three substantive motions in this first, non-priority, phase of the interference.⁴

Smith Motion 1 is a motion for judgment against Rao on the basis that all the Rao claims are unpatentable under 35 USC §135(b) (2).⁵ (Smith Motion 1, Paper 54). Rao opposed this motion. (Rao Opposition 1, Paper 70). Smith replied. (Smith Reply 1, Paper 119). Smith Motion 2 is a motion for judgment against Rao on the basis that all the Rao involved claims are unpatentable for failure to comply with the written description requirement of the first paragraph of

¹ Smith identifies its real party in interest as “MEXICHEM AMANCO HOLDING S.A. de C.V., the assignee of record, which is a subsidiary of Mexichem Soluciones Integrales Holding, S.A. de C.V., which is a subsidiary of Mexichem, S.A.B. de C.V”. Smith also takes a “position that Mexichem UK Ltd is also a Real Party-in-interest [since] Mexichem UK Ltd. is a subsidiary of Mexichem Fluor, S.A. de C.V, which is a subsidiary of Mexichem, S.A.B. de C.V.. (Smith Real Party Notice, Paper 10).

² Rao identifies its real party in interest as “The Chemours Company FC, LLC”. (Rao Real Party Notice, Paper 4).

³ We understand the specifications of the Rao patent (Ex. 2006) and the application for reissue (Ex. 2001) to be essentially the same. For convenience we will cite to the 8,318,992 ('992) patent (Rao patent).

⁴ The panel determined that no oral argument was needed and none was ordered. Bd. R. 124.

⁵ Any reference to a statute is to statute that was in effect on March 15, 2013 unless otherwise indicated. See Pub. L. 112-29, § 3(n), 125 Stat. 284, 293 (2011).

35 U.S.C. §112. (Smith Motion 2, Paper 55). Rao opposed this motion. (Rao Opposition 2, Paper 71). Smith replied. (Smith Reply 2, Paper 117). Smith Motion 3 is a motion for judgment against Rao on the basis that all the Rao involved claims are unpatentable for failure to comply with the enablement requirement of the first paragraph of 35 U.S.C. §112. (Smith Motion 3, Paper 56). Rao opposed this motion. (Rao Opposition 3, Paper 72). Smith replied. (Smith Reply 3, Paper 118).

Rao did not file any substantive motions.

We grant Smith Motion 2 and dismiss the remaining Smith motions.

II. DISCUSSION

The evidence supports any findings of fact in this Decision by a preponderance of the evidence.

The Board may take up motions for decision in any order and may take such other action appropriate to secure the just, speedy, and inexpensive determination of the proceeding. Bd. R. 125(a). To be sufficient a motion must provide a showing, supported with appropriate evidence, such that, if unrebutted, it would justify the relief sought. The burden of proof is on the movant. Bd. R. 208(b).

A. The Rao involved claims

Rao involved claims 17, 18, 20-22, and 27-37 correspond to Count 1, the sole count of the interference. (Declaration, Paper 1, 4).

Rao claim 30, which makes up a portion of Count 1,⁶ is illustrative of the Rao involved claims and is reproduced below:

30. A process comprising the steps of:

⁶ The Count also includes Smith claim 31. (Declaration, Paper 1, 4).

(i) contacting 3,3,3-trifluoropropene (1243zf) with chlorine in the presence of a catalyst, wherein the catalyst comprises activated carbon, alumina and/or an oxide of a transition metal to produce 1,1,1-trifluoro-2,3-dichloropropane (243db);

(ii) converting 243db to 3,3,3-trifluoro-2-chloroprop-1-ene ($\text{CF}_3\text{CCl}=\text{CH}_2$ (1233xf)); and

(iii) contacting the 1233xf with a fluorinating agent to produce a compound of formula $\text{CF}_3\text{CFXCH}_3$, wherein $\text{X}=\text{Cl}$ or F .

(Rao Clean Copy of Claims, Paper 6, indentations and spacing added).⁷

B. Smith Motion 2

Each of Smith Motions 1 and 2 presents a threshold issue, i.e., an issue that if decided in the movant's favor would deprive the opposing party of standing in the interference. Bd. R. 201. Each of Smith Motions 1 and 2 depend upon Smith showing that Rao did not, either in its earlier filed applications (Smith Motion 1) or in its involved application (Smith Motion 2), have written description support for the subject matter of Rao's involved claims. (Smith Motion 1, Paper 54, 2:2-4; Smith Motion 2, Paper 55, 1:1-6).

It appears that the Rao involved claims were at least substantially copied from Smith involved claims for purposes of initiating this interference and Rao acknowledges as much. (Rao Opposition 2, Paper 71, 3:17-23; Sandford Declaration, Ex. 2018, ¶17; Thrasher Declaration, Ex. 1001, ¶20).

⁷ Each party provided a helpful table of abbreviations and we use those abbreviations in this decision. (See, e.g., Smith Motion 2, Paper 55, iv; Rao Opposition 2, Paper 71, iii-iv). For simplicity we refer to 1,1,1-trifluoro-2,3-dichloropropane, which is abbreviated as R-243db in the tables, as "243db".

We elect to first consider whether the currently involved Rao specification provides sufficient support for the Rao involved claims. That issue is addressed by Smith Motion 2 where Smith seeks judgment on the basis that the Rao involved claims are unpatentable for insufficient written description. Smith has the burden of providing a showing, supported with appropriate evidence, such that if unrebutted, the requested relief is justified. Bd. R. 208(b). We have considered all arguments in the parties' briefing on Smith Motion 2, and all portions of the testimony pointed out to us in that briefing even if not specifically cited in this decision.

1. Summary of parties' positions

Smith argues that the Rao involved specification does not show possession sufficient for written description support of a step where 1243zf is converted into 243db in the presence of the catalysts listed in the Rao involved claims. (Smith Motion 2, Paper 55, 10:11-15:2).⁸ Smith notes, *inter alia*, that the examples of the Rao specification show that 243db is formed only when no catalyst is present and none of the examples, or other Rao disclosure, would have provided sufficient guidance for using the listed catalysts to form 243db. (Smith Motion 2, Paper 55, 9:3-12:10).

Rao opposes arguing that, *inter alia*, based on its specification Examples 1 and 2 where 243db was the predominant product formed without an added catalyst,

⁸ As an initial matter we note that, as to Smith Motion 2, we consider only whether Smith has shown that the involved Rao specification, i.e., the '613 specification, provides the required written description support and do not consider whether any Rao benefit application supports the involved Rao involved claims. Description within the earlier applications is not the inquiry before us in Smith Motion 2.

one skilled in the art would have recognized that 243db was produced and consumed in favor of downstream products, such as 1233xf and 245cb in Examples 3, 5, and 6, in the presence of a chromium oxide/cobalt catalyst. (Rao Opposition, Paper 71, 11:5-12:18, citing e.g., Thrasher Declaration, Ex. 1001, ¶ 62). Smith points out that, in these examples relied upon by Rao, no example using each of the categories of catalysts found in the Rao involved claims is provided. (Smith Motion 1, Paper 55, 13:1-14:14).

2. *Legal Principles*

Where claims are added to an application after filing, we evaluate whether the claims are sufficiently described under the first paragraph of 35 USC §112 by looking to see if the disclosure conveys with reasonable clarity to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date. *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1562–63 (Fed. Cir. 1991). “Put another way, one skilled in the art, reading the original disclosure, must immediately discern the limitation at issue in the claims.” *Purdue Pharma L.P. v. Faulding Inc.*, 230 F.3d 1320, 1323 (Fed. Cir. 2000). The written description inquiry is a factual one and is evaluated on a case-by-case basis. *Id.*

It is not necessary that the claimed subject matter be described in exactly the same terms as used in the claims but the description must “indicate to persons skilled in the art that as of the earlier date the applicant had invented what is now claimed.” See *Eiselstein v. Frank*, 52 F.3d 1035, 1038 (Fed. Cir. 1995). Whether the inventor has provided adequate written description, either explicitly or inherently, must be determined from consideration of the disclosure as a whole. *Reiffin v. Microsoft Corp.*, 214 F.3d 1342, 1346 (Fed. Cir. 2000).

The written description requirement does not require any particular form of disclosure or that the specification recite the claimed invention in haec verba.

However, a description that merely renders the invention obvious does not satisfy the requirement. *Lockwood v. Am. Airlines*, 107 F.3d 1565, 1571–72 (Fed. Cir. 1997). The question is whether the application necessarily discloses the particular claimed subject matter. *See Goeddel v. Sugano*, 617 F.3d 1350, 1355-56 (Fed. Cir. 2010). (Written description was insufficient for priority benefit where one skilled in the art could have “immediately understood” or “envision[ed]” the invention.); *See also Tronzo v. Biomet, Inc.*, 156 F.3d 1154, 1159 (Fed. Cir. 1998).

In support of its briefing each party directs us to, *inter alia*, the testimony of expert witnesses to support the arguments presented.

Smith directs us to the testimony of Dr. Graham Sandford. (Sandford Declaration, Ex. 2018).⁹ We have reviewed Dr. Sandford’s credentials and find Dr. Sandford qualified to testify regarding the technical issues arising in this interference. (Sandford Declaration, Ex. 2018, ¶¶ 1-4 and Exhibit A).

Rao directs us to the testimony of Dr. Joseph S. Thrasher. (Thrasher Declaration, Ex. 1001). We have reviewed Dr. Thrasher’s credentials and find Dr. Thrasher qualified to testify regarding the technical issues arising in this interference. (Thrasher Declaration, Ex. 1001, ¶¶ 4-9 and Thrasher Curriculum vitae, Ex. 1002).

A person having ordinary skill in the art is presumed to know the relevant prior art. *In re GPAC*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). We agree with the parties, who substantially agree regarding what constitutes such a person, that one of ordinary skill in the art would have the qualifications and training asserted by Dr. Sandford and Dr. Thrasher. (Sandford Declaration, Ex. 2018, ¶27; Thrasher Declaration, Ex. 1001, ¶16).

⁹ Smith was authorized to file and did file a corrected version of Dr. Sandford’s declaration. (Order, Paper 64; original Graham Declaration, Ex. 2003). We have considered only the corrected declaration filed as Exhibit 2018.

We give claims their broadest reasonable interpretation by considering not only the claim language but also how one skilled in the art would understand the claim in view of the specification. *Phillips v. AWH*, 415 F.3d 1303, 1316, (Fed. Cir. 2005). In interferences, if a claim is copied from another as is the case here, we interpret that claim in view of the originating disclosure for purposes of evaluating written description. We do this to assess whether the party copying the claims has adequate basis to do so and thereby challenge the priority of invention of the party originally claiming the subject matter. *See Agilent v. Affymetrix, Inc.*, 567 F.3d 1366, 1375 (Fed. Cir. 2009). (“Stated more directly, does Besemer have adequate basis to copy Schembri's claim and thereby challenge Schembri's priority of invention?”). Rao acknowledges that under these circumstances its involved claims are construed in view of the Smith involved specification for purposes of evaluating written description in accordance with *Agilent*. (Rao Opposition 2, Paper 71, 3:17-23).

3. *Discussion (Smith Motion 2)*

Smith argues that the Rao specification fails to convey with reasonable clarity that Rao had possession of each step of the claimed process. We agree with Smith witness Dr. Sandford's testimony that “all of the [Rao] claims at issue require at least the following: (1) R-1243zf is reacted with chlorine (Ch₂), (2) the reaction takes place in the presence of activated carbon, alumina, and/or an oxide of a transition metal, and (3) R-243db is produced from the reaction.” (Sandford Declaration, Ex. 2018, ¶39). It is the second listed requirement of the claims, i.e. that the reaction leading to the production of 243db takes place in the presence of the listed catalysts, that Smith asserts is not described adequately by the Rao specification.

We construe copied claims in view of the originating disclosure, here that of Smith. *Agilent* at 1375. The Smith specification provides that “[t]he invention provides a process for preparing 1,1,1-trifluoro-2,3-dichloropropane [243db], which process comprises contacting 3,3,3-trifluoropropene [1243zf] with chlorine (Cl₂) in the presence of a catalyst to produce 1,1,1-trifluoro-2,3-dichloropropane [243db], wherein the catalyst comprises activated carbon, alumina and/or an oxide of a transition metal.” (Smith involved patent, Ex. 2011, 1:11-17). Dr. Sandford notes that, in contrast to the Rao specification, the Smith specification “expressly records [in an example] that 243db is obtained in the product mixture in his invention.” (Sandford Declaration, Ex. 2018, ¶61; Smith involved patent, Ex. 2011, 23:24-28, stating that “zinc/chromia is a surprisingly effective catalyst for the conversion of 1243zf to 243db (and the onward conversion of 243db to 1233xf).”).

Dr. Sandford’s supporting testimony indicates that Dr. Sandford considered the entire Rao specification and found that “a person of ordinary skill in the art would understand from Rao's specifications that the only embodiment disclosed where 243db was present, i.e. the only embodiment showing 243db present in the product mixture[,] was the process illustrated using a pre-reactor that contained no catalyst [and that] [t]he pre-reactor is expressly stated to be empty or packed with an inert material to HCl or HF.” (Sandford Declaration, Ex. 2018, ¶¶57-59, referring to Rao patent, Ex. 2006, 5:63-6:16, 38-46, 60-67, 7:1-6). Dr. Sandford discusses other portions of the Rao specification where 243db is mentioned. For example, Dr. Sandford notes that “[a]t Column 8 of the Rao's '992 patent, the specification states, without reference to a particular embodiment, that the product mixture could have 243db as a recoverable by-product in certain cases [and] at Column 12, the examples and table of results show 243db being present in the

product mixture without catalyst and zero 243db being recorded with catalyst.” (Sandford Declaration, Ex. 2018, ¶60).

Dr. Sandford states his opinion that “[a]s such, the POSITA would not consider the Rao specifications as disclosing the claimed reaction [since] [t]he reaction as claimed is not noted in the Rao specifications, there are no examples demonstrating the claimed reaction, and other processes allow for the production of 243db.” (Sandford Declaration, Ex. 2018, ¶64, Exhibit E).

The results found at Table 1 of the Rao specification, discussed by Smith and Dr. Sandford, appear to show the only examples of producing 243db. Table 1, where it is noted that Examples 1 and 2 were carried out in the absence of the catalyst, is reproduced below:

TABLE 1

Chlorofluorination of HFC-1243zf

(Part A)

Ex. No.	HF/1243/Cl ₂ Ratio	T, ° C.	1243zf	243db	244db	1234yf	245cb	1233xf
1	10/1/4	140	3.0	54.2	9.8	5.7	0	1.4
2 ^a	10/1/1	140	31.3	46.2	11.8	2.8	0	1.5
3 ^b	10/1/1	300	5.9	0	0	5.9	22.2	30.7
4 ^c	10/1/4	325	0	0	0	0	0	0
5	10/1/1	350	9.1	0	0	11.3	11.3	25.2
6	10/1/1	375	12.8	0	0	11.6	6.3	20.6

(Part B)

Ex. No.	HF/1243/Cl ₂ Ratio	T, ° C.	1233zd	1234ze	245fa	1223xd	233ab	226ba	227ca
1	10/1/4	140	7.7	—	—	1.0	6.3	0	0
2 ^a	10/1/1	140	1.4	—	—	0	1.3	0	0
3 ^b	10/1/1	300	4.1	2.1	1.3	20.2	0	0	0
4 ^c	10/1/4	325	0	0	0	0	0	23.8	13.9
5	10/1/1	350	12.4	4.7	1.9	18.1	0	0.2	0
6	10/1/1	375	17.6	6.5	2.3	16.1	0	0.2	0

^a243db and 244db confirmed by ¹H and ¹⁹F NMR.

^b245cb and 1233xf confirmed by ¹H and ¹⁹F NMR.

^cAdditional major products were 215aa, 216aa, 216ba, 225aa, 225ba, 226ca, 226da

Table 1 of the Rao specification is shown above. (Rao patent, Ex. 2006, 11-12).

As Smith notes the results in this table show the presence of 243db only where the reaction was “carried out in the absence of catalyst.” In no other of the examples, all of which use only the specific catalyst 98% chromium/2% cobalt (98/2 Cr/Co), is 243db reported as present. (Sandford Declaration, Ex. 2018, ¶¶53-54 referring to Rao patent, Ex. 2006, Table 1 at col. 11-12). Dr. Sandford testified that he “did not find anywhere in any of the [Rao] applications of any discussion of the presence of 243db in the product mixture in experiments performed in the presence of a catalyst [and that] [i]n fact, when no catalyst is used, 243db is recorded as being present in the product mixture while zero is the recorded value when a catalyst is used.” (Sandford Declaration, Ex. 2018, ¶54).

Even if the Rao specification could be seen to describe production of 243db in the presence of a catalyst, Dr. Sandford testified that Rao’s specification does not convey possession of a step of forming 243db using the catalysts required by the Rao involved claims. Dr. Sandford notes that only a 98% chromium/2% cobalt catalyst is shown in the examples of the Smith specification. While many other catalysts are recited as possible choices in the Rao specification (See e.g., Rao patent, Ex. 2006, 7:18-53), Dr. Sandford testifies that “[p]roviding a long list of catalysts without testing does not inform the POSITA of any actual catalyst to use.” Dr. Sandford further opines that, for reasons he elaborates upon further in his declaration testimony, “catalysts are not predictable [and] they require extensive testing to know whether the catalysts are acceptable, and there are many variables and parameters that a POSITA must contend with when selecting a catalyst.” (Sandford Declaration, Ex. 2018, ¶¶40-52). Dr. Sandford testifies that only one specific catalyst, a 98% chromium/2% cobalt catalyst, was used in the Rao specification examples where catalyst was present. Dr. Sandford testifies that the extensive lists of catalysts in the Rao specification would not have provided one skilled in the art with enough information to select the particular catalysts claimed

by Rao for use in the required step of producing 243db. (Sandford Declaration, Ex. 2018, ¶¶67-69).

Smith Motion 2 is persuasive to show that the Rao involved specification did not convey with reasonable clarity to those skilled in the art that Rao had possession of the claimed subject matter as of the filing date of the Rao involved application. *Vas-Cath Inc.* 935 F.2d at 1562–63. Smith’s arguments are supported by convincing and credible evidence, including Dr. Sandford’s testimony, which indicates that he considered the Rao disclosure as a whole, including the specific examples therein, and what that disclosure would have conveyed to one skilled in the art, in forming his opinions. We turn to Rao Opposition 2.

Rao opposes Smith Motion 2 arguing essentially that, while its specification does not expressly provide a separate process step of producing 243db by contacting R-1243zf with chlorine in the presence of the specifically claimed catalysts, one skilled in the art would have understood that 243db was formed as an intermediate which was consumed in the examples provided such that no amount was recorded in the relevant results at its Table 1. (Rao Opposition 2, Paper 71, 12:7-9, Thrasher Declaration, Ex. 1001, ¶62). Rao directs us to the testimony of Dr. Thrasher who is of the opinion that “one of ordinary skill in the art would readily recognize and immediately envisage that Rao had possession of the claimed invention involving the production of 243db from the examples in the Rao applications and the state of knowledge in the art as discussed below.” (Thrasher Declaration, Ex. 1001, ¶51).

However, as we discuss further herein, much of Dr. Thrasher’s testimony as well as many of the arguments presented in the Rao opposition appear to be more relevant to whether the Rao involved specification would have rendered obvious to one skilled in the art the claimed subject matter than to whether that subject matter

is described as required by 112, ¶1. *See Goeddel v. Sugano*, 617 F.3d at 1355-56; *Lockwood v. Am. Airlines*, 107 F.3d at 1571-72.

In support of its position, Rao points to a statement said to have been made by Smith counsel before the European Patent Office indicating that examples 1-6 of the involved Rao specification “describe a process where 1243zf is converted to 243db using a chromia/cobalt catalyst”. (Rao Opposition 2, Paper 71, 1:17-2:6, 14:10-18, citing Ex. 1041 which Rao asserts references the PCT of the application from which its ’992 patent claims priority). As Smith notes though the statement does not refer to the involved Rao specification itself which plainly states that 243db is obtained in examples 1 and 2 “in the absence of catalyst”. (Smith Reply 2, Paper 117, fn. 1). We give little if any weight to this statement for at least the reason that it does not appear to accurately reflect the contents of the involved Rao specification. Despite any prior statement by Smith counsel in another proceeding, Rao’s description is not sufficient if its disclosure did not reasonably convey to those skilled in the art that Rao had possession of the claimed subject matter as of the filing date.

Rao argues its description is sufficient based on the examples provided asserting that 243db is not reported as being present in the Table 1 examples because it is an intermediate that is consumed in production of 1233xf. (Rao Opposition 1, Paper 71, 11:5-12:18, citing Thrasher Declaration ¶¶54-62). It appears that the reaction described by Rao and supported by Dr. Thrasher’s testimony would be a possible route to 1233xf. (Sandford deposition transcript, Ex. 1003, 115:19-116:3). However, to be sufficient description must necessarily be present such that one skilled in the art would recognize its disclosure. *Goeddel*, 617 F.3d at 1355. Dr. Sandford testified that while one route to make 1233xf includes multi-step reactions via 243db as an intermediate, this is not the only possible route. According to Dr. Sandford “there are other possible routes to the

production of 1233xf from 1243zf...[f]or example, by addition of chlorine monofluoride (ClF), prepared by reaction of chlorine with HF, through 244db, before carrying on, by various ways, to various other products, including 1233xf.” (Sandford Declaration, Ex. 2018, ¶62, referring to Exhibit E of his declaration). As Smith notes in its Reply 2, Dr. Thrasher recognizes that other routes are possible, even if not preferred or common ones. (Thrasher Deposition Transcript, Ex. 2021, 101:5-19). Further, as discussed above, the Rao specification Table 1 examples use only 98/2 Cr/Co as a catalyst. We do not find this disclosure to be sufficient description of a process of the Rao involved claims which requires the use of other catalysts not sufficiently linked to the production of 243db within the Rao specification. (Sandford Declaration, Ex. 2018, ¶¶59, 60, 67-69).

We agree with Rao that isolation of 243db is not required by the Rao involved claims. (Rao Opposition 2, Paper 71, 17:6-18:2). However, a distinct step of actually producing 243db in the presence of the catalysts recited in the Rao involved claims is required and must necessarily be present. (See, e.g, Rao claim 30 “to produce 1,1,1-trifluoro-2,3-dichloropropane (243db)”). Smith has shown, and Rao has not convincingly argued to the contrary, that Rao’s description failed to provide adequate direction to the claimed process having a separate step of forming 243db from 1234zf in the presence of the specifically claimed catalysts.

We have reviewed those portions of the Rao specification pointed out to us as supporting its position that the claimed invention is described. (Rao Opposition 2, Paper 71, 4:11-5:18, citing, e.g., Rao patent, Ex. 2006, 1:64-2:2; 2:12-22; 7:18-19; 8:35-39; 55-67; 9:36-37). However, we agree with Dr. Sandford’s testimony, as discussed above, that none of these portions would have provided sufficient guidance to the specific step required by the Rao claims, i.e., a distinct step of forming 243db in the presence of the claimed catalysts. We do not find the general directions and lengthy lists of catalysts recited in these portions of specification to

provide sufficient guides or “blaze marks” to direct one skilled in the art to the claimed process step requiring the catalysts recited in the Rao involved claims. *See In re Ruschig*, 379 F.2d 990, 994-995 (CCPA 1967).

Rao directs us to various prior art references said to show that the claimed catalysts were chlorofluorination catalysts well known in the art. (Rao Opposition 2, Paper 71, 5:20-7:10; Thrasher Declaration, Ex. 1001, ¶88). Rao also argues that the prior art would have provided one skilled in the art with a reasonable expectation of being able to form 243db from 1234zf either with or without a catalyst. (Rao Opposition 2, Paper 71, 13:1-14:7). That the specification might have rendered the claimed invention obvious, i.e., that selection of a particular catalyst or adding a catalyst would have been obvious to one skilled in the art, is not the standard for written description. As we noted above in haec verba support is not necessary but the specification must do more than render the invention obvious. *Lockwood v. Am. Airlines*, 107 F.3d at 1571–72.

Finally we note that we have reviewed the portions of Dr. Sandford’s cross-examination testimony Rao has pointed out to us even if not specifically discussed herein. (Rao Opposition 2, Paper 71, 16-17, referring to Sandford Deposition Transcript, Ex. 1003). We do not find persuasive reason in this cross-examination testimony to discredit those portions of Dr. Sandford’s testimony relied upon above. As we have noted we find Dr. Sandford’s testimony on the issue of written description to have been based on a consideration of the involved Rao specification as a whole, including the specific examples therein, and what that specification would have conveyed to one skilled in the art.

For reasons stated above, we find that, in the circumstances before us, the involved Rao specification does not support the Rao claimed subject matter in the manner required by the first paragraph of 35 USC §112.

We GRANT Smith Motion 2.

III. CONCLUSION

We grant Smith Motion 2 for judgment that the Rao involved claims are unpatentable. Because Rao lacks standing to continue in this proceeding, we enter judgment against Rao in a separate paper to follow. We need not, and do not, consider Smith Motions 1 and 3.

IV. ORDER

It is

ORDERED that Smith Motion 2 is GRANTED;

FURTHER ORDERED that Smith Motion 1 and 3 are DISMISSED as moot; and

FURTHER ORDERED that judgment against Rao will be entered in a separate paper to follow.

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