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**Datasheet for the decision
of 7 October 2009**

Case Number: T 1125/07 - 3.3.10

Application Number: 99203631.9

Publication Number: 0983983

IPC: C07B 61/00

Language of the proceedings: EN

Title of invention:

Combinatorial synthesis and analysis of organometallic
compounds and catalysts

Patentee:

SYMYX TECHNOLOGIES

Opponent:

Degussa AG
Henkel AG & Co. KGaA

Headword:

Combinatorial synthesis/SYMYX

Relevant legal provisions:

EPC Art. 100 (c)

Keyword:

"Amendments (not allowable) - not unambiguously derivable from
application as filed, neither explicitly nor implicitly"

Decisions cited:

T 0389/86, T 0296/96, T 0823/96, T 0427/99, T 0860/00,
T 1206/01, T 0003/06

Catchword:

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Case Number: T 1125/07 - 3.3.10

D E C I S I O N
of the Technical Board of Appeal 3.3.10
of 7 October 2009

Party as of right:
(Opponent 01) Degussa AG
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Appellant:
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Respondent:
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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
7 May 2007 concerning maintenance of the
European patent No. 0983983 in amended form.

Composition of the Board:

Chairman: R. Freimuth
Members: J.-C. Schmid
J.-P. Seitz

Summary of Facts and Submissions

I. The Opponent 02 (Appellant) and Opponent 01 lodged appeals on 1 March 2007 and 23 May 2007, respectively, against the interlocutory decision of the Opposition Division, posted on 7 May 2007, which found that the European patent No. 983983 in the form as amended during the oral proceedings of 16 November 2006 met the requirements of the EPC, claim 1 reading as follows:

"1. A method for preparing an array of activated organometallic metal ligand compounds to enable the measurement of the effects of changes in, for example, the ligand core, substituents on the ligand core, the metal, counterions, activators, reaction conditions, solvents and additives, comprising

- a. making an array of spatially segregated organometallic metal ligand compounds in predefined regions of a substrate, wherein a first organometallic metal ligand compound is in a first region on said substrate and a second organometallic metal ligand compound is in a second region on said substrate, wherein said first organometallic metal ligand compound and said second organometallic metal ligand compound are different; and
- b. providing one or more activators to said first and second regions, wherein said activators are ionizing agents or alkylating agents."

II. Notices of opposition were filed against the granted patent requesting revocation of the patent in suit in

its entirety. The patent was opposed under Article 100(a) EPC for lack of novelty and inventive step, under Article 100(b) EPC for insufficiency of disclosure and under Article 100(c) EPC on the ground of extending the subject-matter beyond the content of the application as filed.

The Opposition Division held *inter alia* that the requirement of Article 123(2) EPC was met for the expressions objected to by the opponents as extending beyond the disclosure of the application as filed, the claims complying, thus, with said requirement.

III. On 18 August 2008, the Board issued a communication indicating that it was not directly apparent where was the disclosure in the application as filed of the claimed method of making an array of activated organometallic compounds and requested the Respondent to indicate the support of all features of claim 1 in their particular combination.

IV. According to the Respondent's (patent proprietor's) interpretation of the case law (decisions T 860/00; T 296/96; T 823/96; none published in OJ EPO), the content of the application as filed not only encompassed what could be directly and unambiguously deduced from its disclosure, but also included the implicit disclosure of the patent application, i.e. what any person skilled in the art would necessarily understand as a clear and unambiguous consequence of what was explicitly mentioned. The relevant question was whether a skilled person would seriously contemplate combining the different features cited in the application as filed. Whether or not a feature was

disclosed was a matter of the whole content of the application as filed and not solely based on isolated parts of the description.

The paragraph headed "Field of the Invention" on page 1, lines 9 to 15, of the application as filed specified that the invention related to methodologies for the synthesis, screening and characterization of organometallic compounds and catalysts. The methods provided for combinatorial synthesis, screening and characterization of libraries of supported organometallic compounds and catalysts. The summary of the invention on page 4 went on to say, in the very first lines thereof, that the invention related to the synthesis and characterization of arrays of catalysts and organometallic compounds, and in one aspect related to making and screening an array of metal-ligand compounds.

It was clear that the term "array" meant an orderly arrangement of interrelated object or items of equipment for accomplishing a particular task. Each object or item must therefore be addressable. An array of organometallic compounds must therefore comprise spatially segregated compounds in predefined regions on a substrate.

It was thus clear, from these first few lines, that the disclosed subject matter included a method for preparing an array of organometallic metal ligand compounds comprising the step (a) of making an array of spatially segregated organometallic metal ligand compounds in predefined regions of a substrate, wherein a first organometallic metal ligand compound was in a

first region on said substrate and a second organometallic metal ligand compound was in a second region on said substrate, wherein said first organometallic metal ligand compound and said second organometallic metal ligand compound were different.

The description thus clearly showed a skilled person that the claimed invention was contemplated and disclosed in the application as filed. There was no need for the skilled person reading the description to jump between disparate sections of the description to find the features being claimed since they were all either within the general description of the invention or within the knowledge of the skilled person, as explained in the initial portion of the description.

Throughout the application, various terms were used in a substantially interchangeable manner, and it would be quite clear to the skilled person that the key point was the production of an appropriate array rather than whether it could be said to have been "synthesized" or provided by any other means. For example, from the sentence starting at line 18 on page 19 it was apparent that metal ligand compounds may simply be "attached" to the substrate. That sentence alone was contrary to the Appellant's assertion that only a particular two-step synthesis process was disclosed. Also of significance was the simple point that the arrays of the invention were not technically/structurally different merely as a result of a particular method of preparation or formation adopted. Line 12 on page 1 of the application as filed referred, *inter alia*, to 20 libraries of supported organometallic compounds and catalysts. When this general principle was first referred to in the

general description of the invention starting at line 24 on page 4, the term "arrays" was used. In addition, arrays were also referred to throughout the application, as were the substrates which formed a critical part of an array. There was ample disclosure of activation throughout the application. For example, activators were referred to and defined in the passage bridging pages 8 and 9 of the application as filed. The sentence starting at line 23 on page 12 specifically referred to activation. Indeed, the application as a whole contained many references to activation in the context of the invention including claim 1 of the application as filed.

- V. At the oral proceedings held on 7 October 2009 the Appellant withdrew its request for reimbursement of the appeal fee. It contested the finding of the Opposition Division as regards the issue of amendments extending beyond the content of the application as filed arguing *inter alia* that step (a) of the claimed process was not disclosed in the application as filed. The application as filed only disclosed methods for making array of metal ligand compounds in two steps and did not disclose that arrays of metal ligands were directly prepared. The omission of those two steps in the claimed method contravened Article 123(2) EPC.
- VI. On 5 October 2009, opponent (01) withdrew its appeal. It had filed no submissions as regards the issue of amendments extending beyond the content of the application as filed. As a Party as of right, it did not file any request in these appeal proceedings.

VII. The sole Appellant requested that the decision under appeal be set aside and that the patent be revoked.

The Respondent requested in writing that the appeal be dismissed.

VIII. The oral proceedings were held in the absence of the Party as of right and the Respondent, which latter after having been duly summoned, informed the Board that it will not attend. At the end of the oral proceedings the decision of the Board was announced.

Reasons for the Decision

1. *Admissibility of the appeal*

The Appellant filed its notice of appeal on 1 March 2007 against the decision of the Opposition Division pronounced at the end of the oral proceedings on 16 November 2006, the reasoned decision being notified to the parties on 7 May 2007. The appeal was thus filed before the commencement of the two-month time limit stipulated in Article 108, first sentence, EPC.

However, the time limit stipulated in Article 108, first sentence, EPC by no means precludes the filing of an appeal before the decision has been notified but merely requires that it must be filed no later than two months from the date of its notification (see decision T 389/86, OJ EPO 1988, 87; T 427/99, not published in OJ).

The appeal was thus filed in due time. All the other requirements being met as well, the appeal is admissible, which finding has never been contested by the Respondent.

2. *Non-appearance at oral proceedings*

According to Article 11(3) of the Rules of Procedure of the Boards of Appeal (RPBA) the Board is not obliged to delay any step in the proceedings, including its decision, by reasons only of the absence at oral proceedings of any party duly summoned who may then be treated as relying only on its written case. In deciding not to attend the oral proceedings, the Respondent chose not to avail itself of the opportunity to present its observations and counter-arguments orally but instead to rely solely on its written case. Insofar the Respondent is deemed to have expected that during the oral proceedings the Board would consider any objections and arguments raised either by the Appellant or by the Board in its communication.

In the present case the Board had therefore the power and the duty to take a final decision at the oral proceedings on the case before it, notwithstanding the announced absence of the duly summoned Respondent.

3. *Amendments*

- 3.1 Claim 1 is directed to a method of preparation and comprises the feature (a) of "making an array of spatially segregated organometallic metal ligand compounds in predefined regions of a substrate" which has been objected to by the Appellant for having no

support in the application as filed. The Appellant argued that the application as filed only disclosed methods for making array of metal ligand compounds in two process steps and did not disclose that arrays of metal ligand could be directly prepared. The omission of those two process steps contravened Article 123(2) EPC.

- 3.2 In order to determine whether or not the subject-matter of a claim in a patent extends beyond the content of the application as filed it has to be examined whether that claim comprises technical information which a skilled person would not have objectively and unambiguously derived from the application as filed (see decisions T 296/96, point 3.1 of the reasons, penultimate paragraph; T 823/96, point 4.5 of the reasons, second paragraph ; T 860/00, point 1.1 of the reasons; T 1206/01, point 2.1 of the reasons; T 3/06, see point 4.1.4 of the reasons; none published in OJ EPO).

The content of an application as filed encompasses what is directly and unambiguously disclosed therein either explicitly or implicitly. In this context "implicit disclosure" means disclosure which any person skilled in the art would objectively consider as necessarily implied in the explicit content, e.g. in view of general scientific laws (T 860/00; *loc. cit.*).

Hence, the term "implicit disclosure" should not be construed to mean matter that does not belong to the content of the technical information provided by a document but may be rendered obvious on the basis of that content. Whilst common general knowledge must be

taken into account in deciding what is clearly and unambiguously implied by the explicit disclosure of a document, the question of what may be rendered obvious by that disclosure in the light of common general knowledge is not relevant to the assessment of what the disclosure of that document necessarily implies. The implicit disclosure means no more than the clear and unambiguous consequence of what is explicitly mentioned (see T 823/96; *loc. cit.*).

- 3.3 It is matter of fact that the application as filed does not explicitly disclose the step of making an array of spatially segregated organometallic metal ligand compounds (step (a) of the method of claim 1).

As the Appellant argued, the application as filed comprises four passages disclosing a method for preparing an array of metal ligands, two of which being specifically directed to arrays of spatially segregated metal ligand compounds.

Thus, on page 4, line 29 to page 5, line 11 and on page 14, lines 1 to 13, the method disclosed of making an array of metal ligand compounds comprises synthesizing a spatially segregated array of ligands and delivering a suitable metal precursor to each element of the array to create an array of metal ligand compounds.

The passages of the application as filed on page 13, lines 4 to 10 and lines 18 to 23 and claims 1 and 2 as filed disclose methods of making an array of metal ligand compounds wherein a first metal binding ligand and a second metal binding ligand are first

synthesized/delivered on/to a first and second regions on a substrate and then a first and a second metal ion are delivered to the first and second metal binding ligand to form the metal ligand compounds.

Thus, in each method of making an array of metal ligand compounds disclosed in the application as filed there are the process steps of first making an array of ligands and then delivering a metal ion or precursor to form the metal ligand compound whereas claim 1 only requires making an array of spatially segregated (organometallic) metal ligand compounds, thereby omitting those two particular process steps.

- 3.4 A generalisation of the specific disclosures referred to above has thus been made, as argued by the Appellant, since step (a) of claim 1 covers any method of making the array of metal ligand compounds while a method of making an array of metal ligand compounds is disclosed in the application as filed only as the result of two process steps, which are no longer required in present claim 1.

The mere disclosure in the application as filed of a particular method of making an array cannot form the basis of a generalisation to any method of making an array of metal ligand compounds since such generalisation provides the skilled person with technical information which is not directly and unambiguously derivable from the application as filed.

As a consequence the method claim 1 comprising the step (a) which covers any method of making the array of metal ligand compounds cannot be based on the

disclosure of the original application, but is an undue generalisation thereof, which extends beyond its content.

3.5 For the following reasons, the Board cannot accept the Respondent's arguments.

3.5.1 The Respondent argued that it was clear that an array of organometallic compounds must comprise spatially segregated compounds in predefined regions on a substrate and therefore the disclosure of the summary of invention on page 4 relating to the synthesis of arrays of organometallic was a clear support for a method for preparing an array of organometallic metal ligand compounds comprising the step (a) of making an array of spatially segregated organometallic metal ligand compounds in predefined regions of a substrate, wherein a first organometallic metal ligand compound was in a first region on said substrate and a second organometallic metal ligand compound was in a second region on said substrate, wherein said first organometallic metal ligand compound and said second organometallic metal ligand compound were different.

However, this argument is not relevant because it addresses the structure that an array must comprise based on its intended use. It therefore does not address its method of preparation, while the contested feature specifically relates to process step (a) of this method. Furthermore, at a first glance, it would not appear adequate that the disclosure of one single line in the application as filed could constitute the proper support for some nine lines full of technical features in claim 1.

3.6 The Respondent furthermore argued that the sentence starting at line 18 on page 19 where it was apparent that metal ligand compounds may simply be "attached" to the substrate was contrary to the Appellant's assertion that only a particular two-step synthesis was disclosed for the preparation of the array of spatially segregated metal ligand compounds.

This passage is however not relevant to this end, since it is directed to a different embodiment, i.e. an array of supported metal ligand compounds while step (a) of the claimed method concerns the preparation of an array of spatially segregated metal ligand compounds.

3.7 For the support of claim 1 in the application as filed, the Respondent furthermore relied on page 1, lines 12 and 13 and page 12, lines 19, 22 and 23, where there is to be found, however, no disclosure of any array whatsoever, these passages generally referring only to libraries. Page 3, line 16 addresses the state of the art, not the invention; thus, it cannot provide a support for the claimed method. The passage bridging pages 8 and 9 merely addresses the issue of activation, not any method of preparation. Accordingly, none of these cited passage can provide a support for step (a) of the claimed method.

3.8 Hence, the Board concludes that the subject matter of claim 1 as amended provides the skilled person with technical information which is not derivable from the application as filed.

Consequently, claim 1 extends beyond the content of the application as filed justifying the ground for opposition pursuant to Article 100(c) EPC, so that the Respondent's request must be rejected.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar

The Chairman

C. Rodríguez Rodríguez

R. Freimuth