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Datasheet for the decision of 09 April 2008

Case Number: T 0869/03 - 3.3.06

Application Number: 99203888.5

Publication Number: 0992281

IPC: B01J 19/00

Language of the proceedings: EN

Title of invention:
The combinatorial synthesis of novel materials

Applicants
The Regents of the University of California
Symyx Technologies Inc.

Opponent:
-

Headword:
Combinatorial synthesis/UNIVERSITY CALIFORNIA -SYMYX

Relevant legal provisions:
RPBA Art. 12(2), 13(1), 20

Relevant legal provisions (EPC 1973):
EPC Art. 56, 111(1), 112(1)

Keyword:
"Remittal to first instance (no)"
"Referral of a question to the Enlarged Board of Appeal (no)"
"Late filed requests (not admissible - number and filing time"
"Inventive step (no) - Problem invention (no); starting point: general common knowledge (evidence in the application); adaptation of basic technology (obvious)"

Decisions cited:
G 0003/98, T 0153/85

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0869/03 **-** 3.3.06

D E C I S I O N
of the Technical Board of Appeal 3.3.06
of 09 April 2008

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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 19 May 2003 refusing European patent application No. 99203888.5 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: P.-P. Bracke
Members: G. Raths
A. Pignatelli

Summary of Facts and Submissions

I. This appeal is from the decision of the Examining Division to refuse the European patent application No. 99203888.5 relating to the combinatorial synthesis of novel materials and which is a divisional application from application 95 937 472.9.

II. Claim 1 of the application as filed read:

"1. An apparatus for the preparation and use of a substrate having an array of at least 10 diverse materials in predefined regions thereon, the regions being of density greater than 0.1 regions/cm2 comprising:
a) a system for the delivery of a small, precisely metered amount of each reactant component into each reaction region
b) means to react the components delivered to each reaction region to form a material
c) means to screen the materials for useful properties."

III. The applicant (now the appellant) filed a main request and six auxiliary requests which were amended during oral proceedings before the Examining Division.

IV. In its decision the Examining Division found, inter alia, that the subject-matter of Claim 1 of the main request and auxiliary request 1a lacked novelty (Articles 52(1), 54(1),(2) EPC 1973), Claim 1 of auxiliary requests 1, 2 and 3 lacked clarity (Article 84 EPC 1973), Claim 1 of auxiliary request 4

lacked an inventive step (Article 56 EPC 1973) in view of document

(1) WO-A-93/09668 and

Claim 1 of auxiliary requests 5 and 6 contravened Article 123(2) EPC 1973.

V. The appellant filed an appeal against this decision and requested that the decision under appeal be set aside and a patent be granted on the basis of a main request or one of thirteen auxiliary requests.

VI. The Board's preliminary provisional opinion in the communication dated 29 March 2007 was, inter alia, that the subject-matter of claim 1 of all the requests did not involve an inventive step. As a starting point for assessing inventive step, the Board relied on the conditions of fundamental research and then referred to document (1) which addresses an approach for synthesizing novel materials in a more efficient, economical and systematic way whereby the screening of new products for new properties is included.

VII. With its reply dated 8 October 2007 to the above mentioned communication the appellant filed a new main request and six auxiliary requests.

VIII. In the annex to the summons to oral proceedings dated 13 November 2007, the Board stated, inter alia, that the subject-matter of claim 1 of all the requests appeared not to involve an inventive step.

IX. With the letter dated 10 March 2008 the appellant filed a main request and three auxiliary requests.

Claim 1 of the main request reads:

"1. Apparatus for the preparation and screening of more than 10 diverse inorganic materials in an array on a substrate having at least 10 predefined reaction regions, the apparatus comprising

a delivery system comprising reactant components of the inorganic materials and (a) a thin-film deposition system or (b) a powder dispenser for the delivery of a precisely metered amount of at least two reactant components of the inorganic materials to the predefined reaction regions of the substrate, the delivery system being adapted to deliver the components to the predefined regions on the substrate in a gradient of stoichiometries,

means to cause the components delivered to each reaction region to react simultaneously in the predefined regions of the substrate such that the diverse inorganic materials of the array are formed in parallel, such means comprising means for heating the predefined regions of the substrate and/or means for pressurizing the components under an inert atmosphere, oxygen or other gas, and

a system to screen the array of diverse inorganic materials on the substrate."

Claim 1 of the first auxiliary request differs from claim 1 of the main request in that "or (b) a powder dispenser" was deleted from the claim.

Claim 1 of the second auxiliary request differs from claim 1 of the first auxiliary request in that the passage

> "the thin film deposition technique being selected from evaporative, glow-discharge, gas-phase chemical and liquid-phase chemical techniques"

has been added between "thin-film deposition system," and "for the delivery".

Claim 1 of the third auxiliary request differs from claim 1 of the main request in that the passage

> "for a useful property selected from the group consisting of an electrical property, a thermal property, a mechanical property, a morphological property, an optical property, a magnetic property, or a chemical property"

has been added at the end of the claim.

X. Two days before the oral proceedings, with its letter dated 7 April 2008, the appellant filed a new main request and eleven auxiliary requests. It also requested that the case be remitted to the department of first instance for further prosecution, in particular for having made a further search.

XI. Oral proceedings took place on 9 April 2008. The appellant explained that the late submission of the requests filed on 7 April 2008 was due to a reorganisation of the patent department of its client.

XII. As to the presence of an inventive step, in writing and orally, the appellant's arguments can in essence be summarized as follows:

The appellant argued that in this case a proper starting point would be missing for assessing inventive step.

As to general common knowledge as a starting point, there would be no evidence on file. Hence, a further search would be necessary.

Document (1) would not be an appropriate starting point for assessing inventive step since this document related to organic chemistry and not to inorganic chemistry.

According to the experts' opinions of Prof. Dr. R. Schlogl and Prof. Dr. Klaus Kühlein, in particular according to document

(3) Expertise of Prof. Dr. Klaus Kühlein dated 9 December 2005

the skilled person in the field of inorganic chemistry would never have looked at document (1), and the skilled person in organic chemistry was locked in his field to the extent of not giving any hint for using its apparatus in other fields of chemistry.

If nevertheless, the skilled person started from document (1), he would have, in a first step, to make a generalization of the principle of automatising search experiments in order to multiply in a minimum of time the results and, in a second step, to apply this principle to the field of inorganic chemistry. These two steps would not be obvious.

As the skilled person in inorganic chemistry had not looked at document (1), he would not have got the idea to apply the principle of designing the experiments in an efficient way to obtain a maximum of information on successful combinations and reaction conditions.

The invention could be seen as a problem-invention.

XIII. The appellant requested
- that the decision under appeal be set aside and
- that the case be remitted to the department of first instance or,
- that a patent be granted according to the sets of claims filed under cover of the letter dated 10 March 2008 as main request or first to third auxiliary requests, or
- that the following question be referred to the Enlarged Board of Appeal:

> "*Is a Board of Appeal entitled to refuse a European Patent Application which otherwise meets the requirements of the EPC for the only reason that the claimed subject matter is considered as not involving an inventive step under Article 56 EPC in the light of the common general knowledge*

of the person skilled in the art, without any evidence or substantiation as to the subject or extent of the common general knowledge relied upon by the Board of Appeal?"

Reasons for the Decision

1. Procedural matters

1.1 Late filed requests

1.1.1 The twelve requests filed by telefax in the evening of 7 April 2008 could only be forwarded to the Board members in the morning of 8 April 2008.

Hence, there are no doubts that the twelve requests were late filed. Since the appellant argued in favour of their admissibility (see point 1.1.3) it is appropriate to decide on the merits.

1.1.2 It is established jurisprudence of the Boards of Appeal of the EPO that the appeal procedure as laid down in Articles 108, 110 and 111 EPC 1973 is designed to ensure that the oral proceedings are as brief and concentrated as possible and ready for decision at the conclusion of oral proceedings, if scheduled. Therefore amendments to the patent application documents should be filed at the earliest possible moment and the Board may disregard amendments, if they are not submitted in good time prior to oral proceedings (see e.g. T 153/85, OJ EPO 1988, 1, reasons n° 2.1).

This principle is set out in the Rules of Procedure of the Boards of Appeal (RPBA) as published in the OJ EPO 2007, 536. Accordingly, Article 12(2) RPBA [2007] stipulates that an appellant's complete case shall be presented with the statement of grounds of appeal. In particular, an appellant's statement of grounds of appeal shall indicate the reasons for requesting that the decision under appeal be reversed or amended. This principle was also valid in the former Rules of Procedure of the Boards of Appeal (see Article 10a(2) RBBA [2003], [2004], OJ EPO 2003, 89 and 2004, 541).

It is appropriate to observe that the amendments made to the previously filed requests made at a late stage of the proceedings may be admissible, if they are justified in the particular circumstances of the case. However, this does not mean that a party is completely free as to which steps are to be taken to that end. Rather on the contrary, Article 10b(1) of the RPBA [2003, 2004], respectively Article 13(1) RPBA [2007], stipulates that the Board's discretion to admit amendments to a party's case should be exercised in view of, inter alia, the need for procedural economy.

1.1.3 As to the justification of the lateness of the filing of the new requests, the appellant had mentioned in its telefax dated 7 April 2008 the following:

> "*The reasons for changing the order of the auxiliary requests and the introduction of additional requests will be explained during the oral proceedings, if required.*"

The appellant's representative during oral proceedings explained that the late filings were due to the disappearance of the whole patent department of its client and the difficulty of contacting newly appointed persons responsible for industrial property right.

1.1.4 The Board cannot however accept these explanations as a justification for filing twelve requests only two days before the oral proceedings since the difficulties encountered by the applicant's representative are circumstances extraneous to the proceedings.

Furthermore, the twelve requests are drafted in a manner that they could already have been filed in an earlier stage of the proceedings. Actually, they represent variations of particular embodiments of the subject-matter claimed in the requests filed with the letter dated 10 March 2008 (i.e. the ones considered by the Board in this decision). Due to said variations the number of requests amounted to a total of twelve requests without any recognizable necessity for splitting the requests in a greater number of requests.

The Board also observes that the appellant by filing the requests with the letter dated 10 March 2008 had an opportunity to react to the Board's communication dated 29 March 2007 and 19 November 2007 (annex to the summons to oral proceedings) and deal with all important issues raised by the Board. At that stage of the proceedings, the appellant was already in a position to draft the claims in the way they were drafted in the submissions dated 7 April 2008.

According to Article 10b(1) [2003, 2004], respectively 13(1) RPBA [2007], any amendment to a party's case after it has filed its grounds of appeal or reply may be admitted and considered at the Board's discretion. The discretion shall be exercised in view of inter alia the current state of the proceedings. Forwarding the requests practically the day before oral proceedings is to be considered as a too late stage.

1.1.5 For all the reasons above, the Board concludes that the twelve requests filed with telefax of 7 April 2008 are not admitted into the proceedings.

1.2 Remittal to the first instance (Article 111 EPC 1973)

1.2.1 As already indicated in its letter dated 7 April 2008, the appellant at the oral proceedings before the Board requested to have the case remitted to the department of first instance for further prosecution, in particular in order to have performed a further search.

The appellant's reasoning underlying this request was that document (1) would not be a suitable starting point for assessing inventive step.

1.2.2 From the discussion at the oral proceedings and from the proposed referral to the Enlarged Board of Appeal (see point XIII.), the appellant's reasoning can be summarized as follows: (a) from a further search revealing a new document, the appellant expected a change in the reasoning when assessing inventive step; (b) the sets of claims before the Board are different from those before the Examining Division, so the sets

should be sent back to the department of first instance for a first examination.

(a) According to the appellant, a further search could bring up a document closer to the subject-matter claimed according to the present invention or, alternatively, no further document. This latter result would be a proof that the claimed subject-matter is based on an inventive step. The other possible outcome of a further search, namely a document representing a state of the art closer than that of document (1), would allow to have a more suitable starting point when assessing inventive step.

As to this last possibility, the Board observes that a closer state of the art could rather weaken the appellant's position because the closer the prior art the higher the risk that the claimed subject-matter is obviously derivable thereof.

(b) Another presumption of the Board for considering the remittal as justified by the appellant is that the sets of claims are different before the Board from those before the Examining Division. So, in the appellant's opinion, first the Examining Division should decide on these claims.

Article 111(1) EPC 1973 leaves it to the discretion of the Board of Appeal to decide, on consideration of the circumstances of the particular case whether it should be remitted to the first instance or not. The Board is permitted to reach its own decision as to the merits. In principle, a case is referred back to the first instance when for instance the refusal was issued on

the strength of a lack of novelty only and the question of inventive step was not examined and cannot be immediately established. However, in the present case, the question of inventive step was already raised and discussed by the first instance.

The fact, that at the stage of the appeal proceedings, sets of claims are under consideration which were not yet seen by the first instance results from the decision of the Examining Division to refuse the then pending set of claims of the fourth auxiliary request for lack of inventive step and the fact that the appellant seized the (legitimate) opportunity to overcome the objection by filing different sets of claims.

So, the fact that new sets of claims, namely those of 10 March 2008, are at stake is a reaction of the appellant to the negative decision of the Examining Division with the objective to improve its position but does in this case not require the remittal to the first instance.

1.2.3 The Board, therefore, concludes not to refer the case back to the department of first instance.

2. Main request

2.1 Article 56 EPC 1973

2.1.1 According to the application in suit the invention relates to an apparatus for the parallel deposition, synthesis and screening of an array of diverse

materials at known locations on a single substrate surface (page 1, lines 18 to 20).

2.1.2 Document (1) relating to combinatorial strategies for polymer synthesis, discloses a method and devices for synthesizing high-density arrays of diverse polymer sequences, for delivering available libraries of compounds on specific regions of a substrate (see page 2, lines 25 to 30). The invention according to document (1) can e.g. be used as a synthesis tool or as a screening tool (in screening compound libraries) (page 10, lines 36 to 38).

The appellant was of the opinion that document (1) is not an appropriate starting point for evaluating inventive step, since it concerns the field of organic chemistry whereas the application in suit concerns inorganic chemistry. The Board agrees.

2.1.3 Even if according to the jurisprudence of the Boards of Appeal the "closest state of the art" is normally a prior art document disclosing subject-matter aiming at the same objectives as the claimed invention and having the most relevant technical features in common, for the Board, in this case, the introduction and the statement of "the need in the art" appearing in the patent application itself are of assistance. So, the Board, in the absence of a further document, relies on the introduction of the application in suit.

2.1.4 Under the heading "Background of the invention" in the introduction of the application as filed, the state of the art from the point of view of the skilled person on

the priority date of the application as filed is described as follows:

> "*The discovery of new materials with novel chemical and physical properties often leads to the development of new and useful technologies. Currently, there is a tremendous amount of activity in the discovery and optimization of materials, such as superconductors, zeolites, magnetic materials, phosphors, nonlinear optical materials, thermoelectric materials and high and low dielectric materials. Unfortunately, even though the chemistry of extended solids has been extensively explored, few general principles have emerged that allow one to predict with certainty the composition, structure and reaction pathways for the synthesis of such solid state compounds. Moreover, it is difficult to predict a priori the physical properties a particular three dimensional structure will possess*." (page 1, line 30 to page 2, line 5)
>
> "*[T]he preparation of new materials with novel chemical and physical properties is at best happenstance with our* [i.e. the applicant's] *current level of understanding.*
>
> *Consequently, the discovery of new materials depends largely on the ability to synthesize and analyze new compounds. Given approximately 100 elements in the periodic table which can be used to make compositions consisting of three, four, five, six or more elements, the universe of*

possible new compounds remain largely unexplored." (page 2, lines 17 to 23).

The application also illustrates some techniques being already state of the art:

"*One of the processes whereby nature produces molecules having novel functions involves the generation of large collections (libraries) of molecules and the systematic screening of those collections for molecules having a desired property.*" (page 2, lines 25 and 27).

"*Th[e] notion of generating and screening large libraries of molecules has recently been applied to the drug discovery process. The discovery of new drugs can be linked to the process of finding a key which fits a lock of unknown structure. One solution to the problem is to simply produce and test a large number of different keys in the hope that one will fit the lock.*"

"*.....Using this logic, methods have been developed for the synthesis and screening of large libraries...*"

"*...Using these various methods, arrays containing thousands or millions of different elements can be formed...*"
(page 2, line 31 to page 3, line 4, lines 21 to 22).

2.1.5 In this case, the only appropriate course is to start from the acknowledged circumstances described in the

application itself since its description represents optimally the situation in which the person skilled in inorganic chemistry was at the priority date of the application in suit. The Board sees no reasons to deviate from this prior art as the starting point for further development.

So, the skilled person was looking for ways to overcome the slow synthesis step in the field of inorganic chemistry and to accelerate research by increasing the number of tests.

2.1.6 In the light of this state of the art, the problem underlying the application in suit is to provide means allowing an efficient, economical and systematic approach for the synthesis of novel materials in the field of inorganic chemistry and for screening of such materials for useful properties.

The formulation of this problem is in line with the need felt by the applicant at the priority date of the application in suit:

> "*As such, there exists a need in the art for a more efficient, economical and systematic approach for the synthesis of novel materials and for the screening of such materials for useful properties*" (page 2, lines 22 to 24).

2.1.7 The proposed solution to this technical problem according to claim 1 is an apparatus comprising

a delivery system comprising reactant components of the inorganic materials and (a) a thin-film deposition

system or (b) a powder dispenser for the delivery of a precisely metered amount of at least two reactant components of the inorganic materials to the predefined reaction regions of the substrate, the delivery system being adapted to deliver the components to the predefined regions on the substrate in a gradient of stoichiometries,

means to cause the components delivered to each reaction region to react simultaneously in the predefined regions of the substrate such that the diverse inorganic materials of the array are formed in parallel, such means comprising means for heating the predefined regions of the substrate and/or means for pressurizing the components under an inert atmosphere, oxygen or other gas, and

a system to screen the array of diverse inorganic materials on the substrate.

2.1.8 For the Board, the technical problem has been plausibly solved with the claimed apparatus. See also the examples disclosed in the application in suit (pages 59 to 69 (line 6) and pages 70 to 77). There are no doubts that this technical solution according to claim 1 allows to speed up research by producing a high number of results in parallel.

2.1.9 The question which remains to be answered is whether the proposed solution involves an inventive step or not.

2.1.10 The answer to this question contains two approaches:

On the one hand, the appellant argued that in this case a problem invention is at stake, and on the other hand,

the appellant argued the non-obviousness of the proposed solution.

2.1.11 As to the problem invention, the appellant's argument was that the applicant was the first to have systemised and automatised research programmes in the field of inorganic chemistry. Nobody else before the applicant would have had the idea of the combinatorial approach to inorganic materials discovery.

The Board does not agree. The principle of designing research experiments in a systematic way was already disclosed by document (1) relating to combinatorial strategies for polymer synthesis. The teaching of this citation provided a clue to overcoming the problem of time consuming experimentation. So, there was no discovery of an unrecognised problem.

It has to be taken into consideration that it is the normal task of the skilled person to be constantly occupied with the achievement of improvements of known devices, in this case, the apparatus according to document (1). Since the common problem, i.e. the effects to be achieved, in this case, a high number of tests in a minimum of time, was already known and was recognised as generally desirable, there is no inventive merit in formulating the problem. Therefore, the aims set by the application in suit cannot be regarded as comprising anything inventive.

Therefore, the argument relating to a problem invention fails.

2.1.12 As to the non-obviousness or obviousness of the proposed solution, the skilled person was aware of document (1) relating to combinatorial strategies for polymer synthesis, particularly to polymer sequences, more particularly to peptides.

Actually, this document describes the technology regarding a basic apparatus for preparing and screening an array of a plurality of reaction products, the apparatus allowing to conduct a plurality of reactions on a single substrate; at least 100 reaction regions being on the single substrate and each reaction region being capable of conducting a separate reaction (see e.g. claim 26). In other words, said apparatus allows to prepare and screen more than 10 diverse materials in predefined regions on a substrate:

> "*In such methods compounds are deposited on predefined regions of a substrate. The reaction of the immobilized compound (or compounds) with various test compositions such as the members of the chemical library or a biological extract are tested by dispensing small aliquots of each member of the library or extract to a different region. Competitive assays or other well-known techniques can be used to identify a desired activity.*" (page 11, lines 22 to 29)

> "*Thus the reactant concentrations and other parameters can be varied independently from reaction site to reaction site, to optimize the procedure.*" (page 12, lines 16 to 18).

Therefore, the apparatus described by document (1) is seen as an incentive to solve the above mentioned technical problem (see point 2.2.4) with a similar type of apparatus since it fulfils the requirements of a more efficient, economical and systematic approach for the synthesis of novel materials and the screening of such materials for new properties.

2.1.13 The question is whether the skilled person would have adapted the apparatus according to document (1) relating to organic materials, i.e. polymers, particularly polymer sequences, more particularly peptides to the field of inorganic chemistry.

As already said before (see point 2.1.11) it is the normal task of the skilled person to be constantly occupied with the achievement of improvements of known devices, in this case, the apparatus according to document (1).

2.1.14 The appellant argued that the adaptation would require two essential steps which would not be obvious: first, a generalisation step, and second, a specialisation step.

As the apparatus according to document (1) is used in the field of organic chemistry the skilled person, in a first step, would have to detach the apparatus from the field of organic chemistry in order to extrapolate it to an apparatus in general, said apparatus allowing to increase the number of tests per time unit. Then, in a second step, namely the specialisation step, the skilled person would have to apply an adaptation step, i.e. he would have to adapt this apparatus for the

purpose of inorganic materials. Both steps however would not be obvious at all. As evidence for non-obviousness the appellant relied on experts' opinions. The appellant mentioned in its letter dated 5 February 2002 (page 6) some remarks which could be interpreted as a prejudice for further adapting the apparatus disclosed by document (1). It relied on the scepticism of Prof. Dr. Klaus Kühlein (see document (3)) and Prof. Dr. R Schlogl which can be summarized as follows: The person skilled in inorganic chemistry would not have turned to document (1) because big companies did not. Further, the skilled person representative for document (1) was so locked in the field of organic chemistry that he did not give any hints for using the apparatus in other fields.

The Board does not agree to this reasoning. The professors' scepticism did not prevent any skilled person from at least trying to modify the apparatus of document (1) for the purpose of using it in another field of chemistry. If there was a chance to increase the testing frequency, a skilled person had an interest at least to try to adapt the apparatus. A skilled person looking for increasing the number of tests would pick up any hints helping him to achieve his objective. The prospect of speeding up research was a strong incentive for the skilled person. Therefore, the argument relating to the professors' scepticism or to a technical prejudice in the art fails.

The fact that the scientist in organic chemistry did not give a hint to adapt the apparatus for another field of chemistry or to mention a potential use of a similar apparatus in another field does not prevent the

scientist in inorganic chemistry from taking advantage of this idea and adapt the apparatus for his field.

2.1.15 The field of inorganic materials implies that the delivery system and the reaction mechanism differ from those used in organic chemistry.

For instance, the stepwise coupling according to document (1) is different from chemical reactions involving inorganic materials in predefined regions on the substrate in a gradient of stoichiometries.

2.1.16 In the delivery system according to the present invention, a small, precisely metered amount of each reactant is delivered to each reaction region. Therefore the thin-film deposition technique or the delivery in the form of powder is used. However, the Board observes that the thin-film deposition techniques were known.

Evidence therefore is found in the application in suit:

> "*Thin-film deposition techniques in combination with physical masking techniques or photolitographic techniques can be used to deposit thin-films of the various reactants on predefined regions on the substrate. Such thin-film deposition techniques can generally be broken down into the following four categories: evaporative methods, glow-discharge processes, gas-phase chemical processes, and liquid-phase chemical techniques.*" (page 25, lines 11 to 16).

In the application in suit, it is expressly referred to the "Handbook of Thin-Film Deposition Processes and Techniques, Noyes publication (1988)" (page 25, lines 26 and 27).

In addition to the foregoing, dispensers can be utilized to generate diverse combinations of reactant components in the form of powder on a single substrate. As the application in suit does not describe in more details the delivery method for powders, the applicant assumed that the skilled person knows how to proceed. So, this delivery method is part of the common general knowledge. Otherwise, there would be a lack of disclosure under Article 83 EPC 1973.

As to the delivery of the components in a gradient of stoichiometries, any chemist in inorganic chemistry is able to determine the required stoichiometric amounts of components. Therefore, for the Board, a skilled person would be able to replace "step-wise protocol" and the sequential varying of the added monomer according to document (1) with a stoichiometric addition of inorganic materials to react with another inorganic material. Here only basic knowledge in inorganic chemistry is required.

2.1.17 As to the "means to cause the components to react", the application in suit refers to techniques which are usual in the art, for instance, solution based techniques, photochemical techniques, polymerization techniques, template directed synthesis techniques, epitaxial growth techniques, sol-gel process, thermal, infrared or microwave heating, calcination, sintering and annealing (see page 46, lines 29 to 33). The Board

can only but agree to the statement in the application in suit (page 47, lines 3 to 4):

> "*The selection in any given case will be readily apparent to those skilled in the art.*"

This passage is sufficient evidence that the "means to cause the components to react" are part of the common general knowledge of the person skilled in the art.

It goes without saying that the skilled person is able to provide heating means and pressurizing means. At least, the application in suit does not describe any specific problems to be overcome when heating or pressurizing.

2.1.18 It results from the application in suit itself (page 51, lines 7 to 18) that scanning systems (Raman spectroscopy, NMR spectroscopy, etc) used to screen for the properties of the materials which are obtained are conventional ones and known to those of skill in the art (page 51, lines 6 to 7).

2.1.19 The success of the invention [e.g. licences, collaborations, the wide rang of materials, the current widespread and current appreciation of the technology (letter dated 5 February 2002, page 6, middle of the page)] is not a standard for patentability. Therefore this argument does not succeed.

2.1.20 In a final step, the skilled person had only to assemble the screening device with the apparatus with which the new samples were synthesised.

There was no step presenting a technical hurdle to be overcome with inventive ingenuity. At least, no problems were mentioned in the application in suit to this end.

2.2 For all the reasons above, the subject-matter of Claim 1 does not involve an inventive step and, therefore, does not meet the requirements of Article 56 EPC 1973.

3. First, Second and Third requests

3.1 Claim 1 of all the auxiliary requests have, inter alia, in common the feature of a delivery system comprising a thin-film deposition technique. Claim 1 of the second auxiliary request specifies these techniques, claim 1 of the third auxiliary request the useful properties of materials obtained. In claim 1 of the first auxiliary request, the powder dispenser has been deleted.

3.2 So, the reasoning set out in points 2.1.1 to 2.1.20 and 2.2 applies mutatis mutandis to claim 1 of the three auxiliary requests. It follows that the subject-matter of each of claim 1 of these requests does not involve an inventive step, and hence does not meet the requirements of Article 56 EPC 1973.

4. None of the requests is allowable.

5. Referral to the Enlarged Board of Appeal (Article 112(1) (a) EPC 1973)

5.1 According to Article 112(1)(a) EPC 1973, a referral to the Enlarged Board of Appeal is only admissible if a

decision is required in order to ensure uniform application of the law or if an important point of law arises. The answer to the referred question should not be merely of theoretical or general interest, but has to be essential to reach a decision on the appeal in question (see, for example, G 3/98, OJ EPO 2001, 62, Reasons No. 1.2.3).

5.2 The question put forward by the appellant (see point XIII.) concerns in essence the refusal of an application by the Board for lack of inventive step whereby the Board would base the lack of inventive step on common general knowledge of the skilled person without having any evidence for the common general knowledge.

5.3 In the present case, since no prior art was available, which was more relevant than the one described in the introductory part of the application, the Board considered the common general knowledge acknowledged by the appellant itself (see points 2.1.4 and 2.1.5) as the most reasonable starting point for assessing inventive step.

Thus, the common general knowledge was not put into question and it was therefore not necessary to rely on additional evidence for it.

5.4 To decide on the present appeal, an answer of the Enlarged Board of Appeal is not required, and hence the request of referring the question must be refused.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

P. Cremona P.-P. Bracke