

PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing (day/month/year)	25.04.2017
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Applicant's or agent's file reference 092554	FOR FURTHER ACTION See paragraph 2 below
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International application No. PCT/JP2017/002428	International filing date (day/month/year) 25.01.2017	Priority date (day/month/year) 01.02.2016
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International Patent Classification (IPC) or both national classification and IPC
C08L63/00 (2006.01) i, C08K3/00 (2006.01) i, C08K3/26 (2006.01) i, C08K3/34 (2006.01) i, C08L101/00 (2006.01) i, H01L51/50 (2006.01) i, H05B33/04 (2006.01) i, H01L31/048 (2014.01) n

Applicant
AJINOMOTO CO., INC.

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

**CORRECTED
VERSION**

Name and mailing address of the ISA/JP	Date of completion of this opinion	Authorized officer
Facsimile No.		Telephone No.

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Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - the international application in the language in which it was filed
 - a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2. This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
 - a. forming part of the international application as filed:
 - in the form of an Annex C/ST.25 text file.
 - on paper or in the form of an image file.
 - b. furnished together with the international application under PCT Rule 13ter.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. furnished subsequent to the international filing date for the purposes of international search only:
 - in the form of an Annex C/ST.25 text file (Rule 13ter.1(a)).
 - on paper or in the form of an image file (Rule 13ter.1(b) and Administrative Instructions, Section 713).
4. In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

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Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement	Novelty (N)	Claims <u>4, 9-12</u>	YES
		Claims <u>1-3, 5-8</u>	NO
	Inventive step (IS)	Claims <u>4</u>	YES
		Claims <u>1-3, 5-12</u>	NO
	Industrial applicability (IA)	Claims <u>1-12</u>	YES
		Claims _____	NO

2. Citations and explanations:

Document 1: JP 2009-29919 A (SUMITOMO BAKELITE CO., LTD.) 12 February 2009, claims (Family: none)

Document 2: WO 2008/044579 A1 (SUMITOMO BAKELITE CO., LTD.) 17 April 2008, claims & US 2008/0085969 A1, claims & CN 101522793 A

Document 3: JP 2011-84667 A (AJINOMOTO CO., INC.) 28 April 2011 (Family: none)

The invention as in claims 1-3 and 5-8 lacks novelty and does not involve an inventive step in the light of document 1 cited in the ISR.

Document 1 discloses an epoxy resin composition for semiconductor sealing, the epoxy resin composition containing an epoxy resin, curing agent, 0.01-5 wt% of a semi-calcined hydrotalcite, and an inorganic filler such as talc. In this arrangement, document 1 does not disclose the relationship of the thermogravimetric decrease rates of the resin composition at a prescribed temperature before and after moisture absorption, but because the invention disclosed in document 1 contains

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semi-calcined hydrotalcite in the amount considered to be ideal in the description of the present application, it is considered that the characteristics set forth in claim 1 of the present application are satisfied.

The invention as in claims 9-12 does not involve an inventive step in the light of document 1 cited in the ISR.

Document 1 does not specify that the resin composition is used for an organic EL element, and the resin composition is formed into a sheet shape and used. However, a person skilled in the art could appropriately use the invention disclosed in document 1 in a variety of devices such as organic EL devices including semiconductors, and select the shape to be molded.

The invention as in claims 1-3 and 5-8 lacks novelty and does not involve an inventive step in the light of document 2 cited in the ISR.

Document 2 discloses an epoxy resin composition for semiconductor sealing, the epoxy resin composition containing an epoxy resin, curing agent, 0.01-3 wt% of a semi-calcined hydrotalcite, and an inorganic filler such as talc. In this arrangement, document 2 does not disclose the relationship of the thermogravimetric decrease rates of the resin composition at a prescribed temperature before and after moisture absorption, but since the invention disclosed in document 2 contains semi-calcined hydrotalcite in the amount considered to be ideal in the description of the present application, it is considered that the characteristics set forth in claim 1 of the present application are satisfied.

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The invention as in claims 9-12 does not involve an inventive step in the light of document 2 cited in the ISR.

Document 2 does not specify that the resin composition is used for an organic EL element, and the resin composition is formed into a sheet shape and used. However, a person skilled in the art could appropriately use the invention disclosed in document 2 in a variety of devices such as organic EL devices including semiconductors, and select the shape to be molded.

The invention as in claim 4 is novel and involves an inventive step in relation to documents 1-3 cited in the ISR.

Documents 1-3 do not disclose a heat-curable resin composition for sealing in which the contained amounts of a semi-calcined hydrotalcite and particularly talc are specified. The present invention accordingly exhibits the advantageous effect of obtaining excellent sealing performance.