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*Attorneys for Plaintiff DuPont
Air Products NanoMaterials L.L.C.*

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA**

DUPONT AIR PRODUCTS
NANOMATERIALS L.L.C. (a
Delaware limited liability company),

Plaintiff,

vs.

CABOT MICROELECTRONICS
CORPORATION (a Delaware
corporation),

Defendant.

No.

COMPLAINT

Plaintiff DuPont Air Products NanoMaterials L.L.C. (“DA NanoMaterials”),
by its attorneys, and as and for its Complaint against defendant Cabot
Microelectronics Corporation (“Cabot”), alleges and states as follows:

NATURE OF ACTION

1. This action arises under the Declaratory Judgment Act, 28 U.S.C. §§
2201 and 2202 and the patent laws of the United States, Title 35 U.S.C. § 1 et seq.

THE PARTIES

2. Plaintiff DA NanoMaterials is a limited liability company organized
and existing under the laws of the State of Delaware, having its principal place of
business at 2441 West Erie Drive, Tempe, Arizona 85282.

1 3. Upon information and belief, defendant Cabot is a corporation
2 organized and existing under the laws of the State of Delaware, having its principal
3 place of business at 870 N. Commons Drive, Aurora, Illinois 60504.

4 **JURISDICTION AND VENUE**

5 4. This is an action for a declaratory judgment of non-infringement,
6 invalidity and unenforceability. This Court has subject matter jurisdiction pursuant
7 to 28 U.S.C. §§ 1331, 1338(a) and 2201(a).

8 5. This Court has personal jurisdiction over Cabot. Cabot is qualified to
9 do business in the State of Arizona and has an agent for the service of judicial
10 process in this District. Upon information and belief, Cabot also has a regular and
11 established place of business in this District at 70 S. Val Vista Drive, Suite A3, PMB
12 619, Gilbert, Arizona 85296, and is and has been doing business in this District at all
13 times relevant hereto.

14 6. Venue is proper in this judicial district pursuant to 28 U.S.C. § 1391(a)-
15 (c).

16 **GENERAL ALLEGATIONS**

17 7. On information and belief, Cabot claims to own various United States
18 patents and has filed patent infringement suits in the United States to enforce its
19 rights under those patents.

20 8. Specifically, Cabot claims to be the owner of U.S. Patent
21 Nos. 4,954,142 (the “‘142 patent”), 5,958,288 (the “‘288 patent”), 5,980,775 (the
22 “‘775 patent”) and 6,068,787 (the “‘787 patent”). They are appended hereto as
23 Exhibits A-D, respectively.

24 9. An actual controversy exists between the parties hereto regarding the
25 non-infringement, invalidity and unenforceability of the ‘142, ‘288, ‘775 and ‘787
26 patents.

1 10. DA NanoMaterials has at all times relevant hereto manufactured and/or
2 sold products of the type accused of infringement by Cabot and continues to
3 manufacture and/or sell such products. Cabot's conduct has created on the part of
4 DA NanoMaterials a reasonable apprehension that DA NanoMaterials will be faced
5 with a patent infringement action if it continues to manufacture and/or sell its
6 accused products.

7 11. Cabot's conduct includes, *inter alia*, the sending of letters to DA
8 NanoMaterials regarding DA NanoMaterials alleged infringement of the '142 and
9 '288 patents.

10 12. Cabot's conduct further includes, *inter alia*: allegations made by Cabot
11 representatives to representatives of DA Nanomaterials, both during formal oral
12 discussions and subsequent follow-up discussions, that DA NanoMaterials is
13 allegedly infringing the '142, '288, '775 and '787 patents; contemporaneous
14 demands by Cabot's representatives during these discussions that DA NanoMaterials
15 cease-and-desist its allegedly infringing activities; and contemporaneous
16 representations by Cabot's representatives during these discussions that Cabot would
17 not hesitate to bring an action for patent infringement, if DA NanoMaterials did not
18 cease-and-desist its allegedly infringing activities.

19 13. DA NanoMaterials has preliminarily explained to Cabot why it has not
20 and does not infringe the '142, '288, '775 and '787 patents. Nevertheless, Cabot
21 continues to assert that DA NanoMaterials has infringed and continues to infringe the
22 '142, '288, '775 and '787 patents.

23 14. DA NanoMaterials has, or will in the near future, inform Cabot that it
24 will not cease-and-desist its allegedly infringing activities. Based on Cabot's actions
25 and statements to date, DA NanoMaterials has a current, real, reasonable and
26

1 imminent apprehension that Cabot will immediately file a civil action for patent
2 infringement against DA NanoMaterials upon receiving such information.

3 15. As a result of Cabot's actions and statements, an actual justiciable
4 controversy regarding the non-infringement, invalidity and unenforceability of the
5 '142, '288, '775 and '787 patents now exists.

6 **COUNT ONE**

7 **DECLARATORY JUDGMENT OF**
8 **NON-INFRINGEMENT OF THE '142 PATENT**

9 16. DA NanoMaterials repeats and realleges the averments of paragraphs
10 1-15 as if fully set forth herein.

11 17. There is an actual controversy between DA NanoMaterials and Cabot
12 as to the non-infringement of the claims of the '142 patent.

13 18. DA NanoMaterials has not infringed and does not infringe the claims of
14 the '142 patent.

15 **COUNT TWO**

16 **DECLARATORY JUDGMENT OF**
17 **NON-INFRINGEMENT OF THE '288 PATENT**

18 19. DA NanoMaterials repeats and realleges the averments of paragraphs
19 1-18 as if fully set forth herein.

20 20. There is an actual controversy between DA NanoMaterials and Cabot
21 as to the non-infringement of the claims of the '288 patent.

22 21. DA NanoMaterials has not infringed and does not infringe the claims of
23 the '288 patent.

COUNT THREE

**DECLARATORY JUDGMENT OF
INVALIDITY OF THE '288 PATENT**

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3 22. DA NanoMaterials repeats and realleges the averments of paragraphs
4 1-21 as if fully set forth herein.

5 23. There is an actual controversy between DA NanoMaterials and Cabot
6 as to the invalidity of the '288 patent.

7 24. The '288 patent is invalid for failure to comply with the patent laws of
8 the United States, including the requirements of 35 U.S.C. §§ 102, 103, and/or 112.

COUNT FOUR

**DECLARATORY JUDGMENT OF
UNENFORCEABILITY OF THE '288 PATENT**

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12 25. DA NanoMaterials repeats and realleges the averments of paragraphs
13 1-24 as if fully set forth herein.

14 26. There is an actual controversy between DA NanoMaterials and Cabot
15 as to the unenforceability of the '288 patent.

16 27. The '288 patent is unenforceable due to inequitable conduct committed
17 during the prosecution of the application that resulted in the '288 patent.

18 28. During the prosecution of the application that resulted in the '288
19 patent, applicants engaged in a pattern of intentional misrepresentations and
20 omissions relating to the subject matter of the '288 patent in an unfair effort to
21 convince the U.S. Patent and Trademark Office ("USPTO") Examiner to issue the
22 '288 patent. Such inequitable conduct is illustrated by and includes, for example,
23 that set forth in paragraphs 29 to 33.

24 29. During prosecution of the application that resulted in the '288 patent,
25 applicants did not disclose material information to the USPTO Examiner concerning
26 an analysis of a crucial prior art slurry undertaken by and/or for applicants.

1 Specifically, accompanying an Information Disclosure Statement dated
2 September 12, 1997, applicants submitted a trace metal analysis of a competitor's
3 prior art slurry that was purchased more than one year prior to the filing of the
4 application that resulted in the '288 patent. Though applicants knew the significance
5 of this analysis and how it related to the pending claims, applicants did not so inform
6 the USPTO Examiner. Applicants' analysis of the prior art slurry simply states that
7 the prior art slurry had about 25 ppm of iron and some other heavy metals.
8 Applicants failed to provide the USPTO Examiner sufficient information to
9 understand that the prior art slurry had at least one other oxidizer and abrasive.
10 Applicants also failed to inform the USPTO Examiner that the 25 ppm of iron was
11 encompassed by the range of catalyst concentration discussed in the specification of
12 the application that resulted in the '288 patent. Applicants further failed to inform
13 the USPTO Examiner that this 25 ppm of iron, in essentially any salt form, would be
14 present in the preferred catalyst range of 0.005 wt% to 0.5 wt%. This amount is also
15 within the catalytic amount described, for example, in claims 20, 22-23 and 42 of the
16 '288 patent.

17 30. During prosecution of the application that resulted in the '288 patent,
18 applicants explicitly disclaimed certain embodiments in view of rejections by the
19 USPTO Examiner, but failed to remove these embodiments from the claims.
20 Specifically, applicants, in response to a rejection over prior art U.S. Patent
21 No. 4,885,106 stated:

22 Applicants have recently determined that tin does not act
23 catalytically when combined with an oxidizing agent. As
24 a result, tin has been omitted from the list of useful metal
catalysts found in each pending application claim other
than claim 1.

25 Although applicants stated that they were going to disclaim tin as a catalyst, they did
26 not do so. Tin is listed as a catalyst in, for example, claim 13 of the '288 patent.

1 31. During prosecution of the application that resulted in the '288 patent,
2 applicants misrepresented prior art U.S. Patent No. 5,354,490 (the "'490 patent") in
3 arguments to the USPTO Examiner in order to avoid this prior art. The '490 patent
4 teaches a slurry containing one or two oxidizers, including silver nitrate and/or
5 hydrogen peroxide, but states that if only silver nitrate is used, the concentration is at
6 least 2%. Applicants mischaracterized the '490 patent, stating:

7 [I]n the *Yu* composition, the silver compound is present in
8 a concentration of at least 2%. (Col. 2, lns 57-60). At
9 such a high concentration, the silver compound is clearly
not present in the form of a catalyst or in a catalytic
amount.

10 The applicants misrepresented that, since the '490 patent required 2% silver nitrate,
11 the amount disclosed was so high that the silver nitrate was clearly for oxidation and
12 not for use as a catalyst. This misrepresentation is contrary to the specification of the
13 '288 patent, which states that "[t]he catalyst may be present in the chemical
14 mechanical polishing composition in an amount ranging from about 0.001 to about
15 2.0 weight percent." ('288 patent, Col. 5, lines 47-49). This misrepresentation is
16 also contrary to the claims of the '288 patent, such as, for example, claims 20, 22-23
17 and 42 of the '288 patent. This is further contrary to the disclosure of the '490
18 patent, which clearly and unambiguously states that 2% was a minimum only if silver
19 nitrate was used alone (that is, without other oxidizers). The '490 patent states: "If
20 utilizing AgNO₃ alone, the preferred composition is from about 2% to about 15% by
21 volume, with from about 2% to about 8% being most preferred." ('490 patent,
22 Col. 2, lines 57-59). That is, the '490 patent recommended adding silver nitrate and
23 optionally another oxidizer, but if silver nitrate was used alone, the minimum
24 concentration should be 2%.

25 32. During prosecution of the application that resulted in the '288 patent,
26 applicants misrepresented prior art U.S. Patent No. 5,340,370 (the "'370 patent") in

1 arguments to the USPTO Examiner in order to avoid this prior art. The '370 patent
2 teaches that "oxidizing agents including, but not limited to, potassium ferricyanide,
3 potassium dichromate, potassium iodate, potassium bromate, and vanadium trioxide,
4 can be used in the tungsten slurry," and "[a] slurry comprising between 0.01 and 0.3
5 molar potassium ferricyanide has been found to provide sufficient results." ('370
6 patent, Col. 6, lines 50-53, 65-67). A 0.01 molar (0.01 moles per liter) potassium
7 ferricyanide solution or slurry contains 0.33 wt% of the ferric compound. Applicant
8 misrepresented the '370 patent by explaining that the ferric compound was present in
9 too great an amount to be a catalyst. The amount of catalyst disclosed in the '370
10 patent is directly within the applicants' preferred range of 0.005 wt% to 0.5 wt%.
11 The amount disclosed is also within the catalytic amount described, for example, in
12 claims 20, 22-23 and 42 of the '288 patent.

13 33. The misrepresentations and omissions made by applicants and/or their
14 representatives during the prosecution of the application that resulted in the '288
15 patent, for example, in paragraphs 29-32 were material to the allowance of the '288
16 patent and permitted the applicants to obtain a patent that they should not have
17 obtained. Upon information and belief, the applicants and/or their agents knowingly
18 made these misrepresentations and omissions with the intent to mislead the USPTO.

19 34. DA NanoMaterials is being injured as a result of applicants'
20 misrepresentations and omissions because DA NanoMaterials has to expend time,
21 money and resources to defend against allegations of infringement of a patent that the
22 applicants should not have obtained.

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COUNT FIVE

**DECLARATORY JUDGMENT OF
NON-INFRINGEMENT OF THE '775 PATENT**

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3 35. DA NanoMaterials repeats and realleges the averments of paragraphs
4 1-34 as if fully set forth herein.

5 36. There is an actual controversy between DA NanoMaterials and Cabot
6 as to the non-infringement of the claims of the '775 patent.

7 37. DA NanoMaterials has not infringed and does not infringe the claims of
8 the '775 patent.

COUNT SIX

**DECLARATORY JUDGMENT OF
INVALIDITY OF THE '775 PATENT**

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12 38. DA NanoMaterials repeats and realleges the averments of paragraphs
13 1-37 as if fully set forth herein.

14 39. There is an actual controversy between DA NanoMaterials and Cabot
15 as to the invalidity of the '775 patent.

16 40. The '775 patent is invalid for failure to comply with the patent laws of
17 the United States, including the requirements of 35 U.S.C. §§ 102, 103, and/or 112.

COUNT SEVEN

**DECLARATORY JUDGMENT OF
UNENFORCEABILITY OF THE '775 PATENT**

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21 41. DA NanoMaterials repeats and realleges the averments of paragraphs
22 1-40 as if fully set forth herein.

23 42. There is an actual controversy between DA NanoMaterials and Cabot
24 as to the unenforceability of the '775 patent.

25 43. The '775 patent is unenforceable due to inequitable conduct committed
26 during the prosecution of the applications that led to the '775 patent. Specifically,

1 DA NanoMaterials repeats and realleges the averments of paragraphs 25-34 as if
2 fully set forth herein.

3 **COUNT EIGHT**

4 **DECLARATORY JUDGMENT OF**
5 **NON-INFRINGEMENT OF THE '787 PATENT**

6 44. DA NanoMaterials repeats and realleges the averments of paragraphs
7 1-43 as if fully set forth herein.

8 45. There is an actual controversy between DA NanoMaterials and Cabot
9 as to the non-infringement of the claims of the '787 patent.

10 46. DA NanoMaterials has not infringed and does not infringe the claims of
11 the '787 patent.

12 **COUNT NINE**

13 **DECLARATORY JUDGMENT OF**
14 **INVALIDITY OF THE '787 PATENT**

15 47. DA NanoMaterials repeats and realleges the averments of paragraphs
16 1-46 as if fully set forth herein.

17 48. There is an actual controversy between DA NanoMaterials and Cabot
18 as to the invalidity of the '787 patent.

19 49. The '787 patent is invalid for failure to comply with the patent laws of
20 the United States, including the requirements of 35 U.S.C. §§ 102, 103, and/or 112.

21 **COUNT TEN**

22 **DECLARATORY JUDGMENT OF**
23 **UNENFORCEABILITY OF THE '787 PATENT**

24 50. DA NanoMaterials repeats and realleges the averments of paragraphs
25 1-49 as if fully set forth herein.

26 51. There is an actual controversy between DA NanoMaterials and Cabot
as to the unenforceability of the '787 patent.

1 52. The '775 patent is unenforceable due to inequitable conduct committed
2 during the prosecution of the applications that led to the '787 patent. Specifically,
3 DA NanoMaterials repeats and realleges the averments of paragraphs 25-34 as if
4 fully set forth herein.

5 **JURY DEMAND**

6 53. DA NanoMaterials demands a trial by jury.

7 **PRAYER FOR RELIEF**

8 WHEREFORE, plaintiff DA NanoMaterials respectfully requests that this
9 Court enter judgment against Cabot, including:

- 10 a. a declaration that DA NanoMaterials has not infringed and is not
11 infringing the claims of the '142, '288, '775 and '787 patents;
- 12 b. a declaration that each of the claims of the '288, '775 and '787 patents
are invalid;
- 13 c. a declaration that the '288, '775 and '787 patents are unenforceable;
- 14 d. an injunction prohibiting Cabot from alleging infringement of the
15 claims of the '142, '288, '775 and '787 patents by DA NanoMaterials;
- 16 e. an award of damages DA NanoMaterials has sustained;
- 17 f. a declaration that this case is an "exceptional case" within the meaning
of 35 U.S.C. § 285 due to, *inter alia*, the above actions of Cabot;
- 18 g. an award of costs and attorneys fees and other expenses DA
19 NanoMaterials has been forced to incur; and
- 20 h. such further relief as this Court may deem just and proper.

21 December 8, 2006

Respectfully submitted:

22 JENNINGS, STROUSS & SALMON, P.L.C.

23 By /s/ Michael J. Farrell

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