

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference CWR 2 290 PC	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US01/12278	International filing date (day/month/year) 16 APRIL 2001	Priority date (day/month/year) 14 APRIL 2000
International Patent Classification (IPC) or national classification and IPC IPC(7): H01M 6/18; 6/00 and US Cl.: 29/623.5		
Applicant CASE WESTERN RESERVE UNIVERSITY		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 0 sheets.

3. This report contains indications relating to the following items:

- I Basis of the report
- II Priority
- III Non-establishment of report with regard to novelty, inventive step or industrial applicability
- IV Lack of unity of invention
- V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI Certain documents cited
- VII Certain defects in the international application
- VIII Certain observations on the international application

Date of submission of the demand 14 NOVEMBER 2001	Date of completion of this report 08 JULY 2002
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer JOHN S. MAPLES Telephone No. (703) 308-0661

I. Basis of the report

1. With regard to the elements of the international application:*

 the international application as originally filed the description:

pages 1-10 , as originally filed
 pages NONE , filed with the demand
 pages NONE , filed with the letter of _____

 the claims:

pages 11-13 , as originally filed
 pages NONE , as amended (together with any statement) under Article 19
 pages NONE , filed with the demand
 pages NONE , filed with the letter of _____

 the drawings:

pages 1-3 , as originally filed
 pages NONE , filed with the demand
 pages NONE , filed with the letter of _____

 the sequence listing part of the description:

pages NONE , as originally filed
 pages NONE , filed with the demand
 pages NONE , filed with the letter of _____

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
 the language of publication of the international application (under Rule 48.3(b)).
 the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/ or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in printed form.
 filed together with the international application in computer readable form.
 furnished subsequently to this Authority in written form.
 furnished subsequently to this Authority in computer readable form.
 The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
 The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

the description, pages NONE
 the claims, Nos. NONE
 the drawings, sheets/fig NONE

5. This report has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

**Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. statement**

Novelty (N)	Claims	<u>1-15, 17</u>	YES
	Claims	<u>16, 18</u>	NO
Inventive Step (IS)	Claims	<u>1-15, 17</u>	YES
	Claims	<u>16, 18</u>	NO
Industrial Applicability (IA)	Claims	<u>1-18</u>	YES
	Claims	<u>NONE</u>	NO

2. citations and explanations (Rule 70.7)

Claims 16 and 18 lack novelty under PCT Article 33(2) as being anticipated by either MOULTON ET AL. or BATES ET AL. or HOBSON.

See column 3, line 74 through column 4, line 57 of MOULTON ET AL. along with Figure 2. In BATES ET AL., reference is made to column 3, line 21 through column 4, line 8 and Figure 3. See column 3, line 42 through column 4, line 52 and Figure 2 in the patent to HOBSON.

Claims 1-15 and 17 meet the criteria set out in PCT Article 33(2)-(4), because the prior art does not teach or fairly suggest the method of making a microbattery including the steps of depositing droplets of both the electrode and the electrolyte material onto a substrate. Nor does the prior art fairly suggest forming a microbattery utilizing an ink-jet printer to form the electrode layers and the electrolyte layer.

Claims 1-18 meet the criteria set out in PCT Article 33(4), because the method of making the microbattery could be utilized in producing a battery for microelectromechanical systems.

_____ NEW CITATIONS _____
NONE

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

Claim 18 is objected to under PCT Rule 66.2(a)(iii) as containing the following defect in the form or contents thereof: the expression "anode electrolyte" found in line 3 of claim 18 is incorrect.

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claims 13 and 17 are objected to under PCT Rule 66.2(a)(v) as lacking clarity under PCT Article 6 because the claims are indefinite for the following reasons: In claim 13, line 3, the microbattery of claim 1 is referenced. It is also noted that claim 13 recites a first and second electrode and an electrolyte. It is unclear if the materials set forth in claim 13 are the same or are different materials than those materials recited in claim 1. In claim 17, line 2, it is indefinite with what reference the term "another" is referring to?

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

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