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Alexandria, Virginia 22313-1450
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/423,749	05/12/2009	7531709	SCALZI-METHOD	6408

41599 7590 04/22/2009
GREGORY J. GORE
70 WEST OAKLAND AVENUE, SUITE 316
DOYLESTOWN, PA 18901

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 241 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Michael Scalzi, Doylestown, PA;
Wade Meese, Worthington, OH;

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
 or **Fax** (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

41599 7590 01/05/2009

GREGORY J. GORE
 70 WEST OAKLAND AVENUE, SUITE 316
 DOYLESTOWN, PA 18901

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

Gregory J. Gore	(Depositor's name)
/Gregory J. Gore/	(Signature)
April 3, 2009	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/423,749	06/13/2006	Michael Scalzi	SCALZI-METHOD	6408

TITLE OF INVENTION: METHOD FOR ACCELERATED DECHLORINATION OF MATTER

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$300	\$0	\$1055	04/06/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
JOHNSON, EDWARD M	1793	588-316000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Gregory J. Gore

2

3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

Innovative Environmental Technologies, Inc.

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Doylestown, PA

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☒ Issue Fee
- ☒ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number 071733 (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

☒ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature /Gregory J. Gore/

Date April 3, 2009

Typed or printed name Gregory J. Gore

Registration No. 30,057

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Electronic Patent Application Fee Transmittal

Application Number:	11423749			
Filing Date:	13-Jun-2006			
Title of Invention:	METHOD FOR ACCELERATED DECHLORINATION OF MATTER			
First Named Inventor/Applicant Name:	Michael Scalzi			
Filer:	Gregory J. Gore/Meghan Rogers			
Attorney Docket Number:	SCALZI-METHOD			
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl issue fee	2501	1	755	755
Publ. Fee- early, voluntary, or normal	1504	1	300	300

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1055

Electronic Acknowledgement Receipt

EFS ID:	5089065
Application Number:	11423749
International Application Number:	
Confirmation Number:	6408
Title of Invention:	METHOD FOR ACCELERATED DECHLORINATION OF MATTER
First Named Inventor/Applicant Name:	Michael Scalzi
Customer Number:	41599
Filer:	Gregory J. Gore/Meghan Rogers
Filer Authorized By:	Gregory J. Gore
Attorney Docket Number:	SCALZI-METHOD
Receipt Date:	03-APR-2009
Filing Date:	13-JUN-2006
Time Stamp:	09:59:36
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Electronic Funds Transfer
Payment was successfully received in RAM	\$ 1055
RAM confirmation Number	5039
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part Zip	Pages (if appl.)
			PXX-1002	Page 005	

1	Issue Fee Payment (PTO-85B)	IssueFee.pdf	167771 0fa25a0f994acaaab57eb923783689bd208a309e	no	1
Warnings:					
Information:					
2	Fee Worksheet (PTO-06)	fee-info.pdf	31791 29ef061c66fa7f53e60eed08aa6596ae5fed4afc	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			199562		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number		11423749
Filing Date		2006-06-13
First Named Inventor	Michael Scalzi	
Art Unit	1744	
Examiner Name		
Attorney Docket Number	SCALZI-METHOD	

AE
219-
09

/EMJ/	20	494,061 0494061		1893-03-21	Day	
	21	1929659		1933-10-10	Trumble et al.	
	22	2362674		1944-11-14	Spangler et al.	
	23	2421765		1947-06-10	Taylor	
	24	2424440		1947-07-22	Duffy	
	25	2617765		1952-11-11	Swarr	
	26	2966921		1961-01-03	Whiteman	
↓	27	3486297		1969-12-30	Eisinga et al.	
/EMJ/	28	3805819		1974-04-23	Etter	

If you wish to add additional U.S. Patent citation information please click the Add button.

Add

U.S.PATENT APPLICATION PUBLICATIONS

Remove

Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
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NOTICE OF ALLOWANCE AND FEE(S) DUE

41599 7590 01/05/2009

GREGORY J. GORE
70 WEST OAKLAND AVENUE, SUITE 316
DOYLESTOWN, PA 18901

EXAMINER

JOHNSON, EDWARD M

ART UNIT

PAPER NUMBER

1793

DATE MAILED: 01/05/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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11/423,749

06/13/2006

Michael Scalzi

SCALZI-METHOD

6408

TITLE OF INVENTION: METHOD FOR ACCELERATED DECHLORINATION OF MATTER

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$300	\$0	\$1055	04/06/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**
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P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax **(571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

41599 7590 01/05/2009

GREGORY J. GORE
 70 WEST OAKLAND AVENUE, SUITE 316
 DOYLESTOWN, PA 18901

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Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/423,749	06/13/2006	Michael Scalzi	SCALZI-METHOD	6408

TITLE OF INVENTION: METHOD FOR ACCELERATED DECHLORINATION OF MATTER

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$300	\$0	\$1055	04/06/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
JOHNSON, EDWARD M	1793	588-316000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/423,749	06/13/2006	Michael Scalzi	SCALZI-METHOD	6408
41599	7590	01/05/2009	EXAMINER	
GREGORY J. GORE 70 WEST OAKLAND AVENUE, SUITE 316 DOYLESTOWN, PA 18901			JOHNSON, EDWARD M	
			ART UNIT	PAPER NUMBER
			1793	
DATE MAILED: 01/05/2009				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 241 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 241 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability	Application No.	Applicant(s)	
	11/423,749	SCALZI ET AL.	
	Examiner	Art Unit	
	Edward M. Johnson	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Applicant's terminal disclaimer filed on 9/3/08.
2. ☒ The allowed claim(s) is/are 11-26, which have been renumbered 1-16.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. ☐ Notice of References Cited (PTO-892) | 5. ☐ Notice of Informal Patent Application |
| 2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date ____. |
| 3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date ____ | 7. ☐ Examiner's Amendment/Comment |
| 4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. ☒ Examiner's Statement of Reasons for Allowance |
| | 9. ☐ Other ____. |

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance: Applicant's terminal disclaimer overcomes the rejection of record for obviousness-type double patenting over claims 1-10 of US Patent 7,129,388.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M. Johnson whose telephone number is 571-272-1352. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1793

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Edward M. Johnson/
Primary Examiner
Art Unit 1793

EMJ



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

BIB DATA SHEET

CONFIRMATION NO. 6408

SERIAL NUMBER 11/423,749	FILING or 371(c) DATE 06/13/2006 RULE	CLASS 435	GROUP ART UNIT 1793	ATTORNEY DOCKET NO. SCALZI-METHOD	
APPLICANTS Michael Scalzi, Doylestown, PA; Wade Meese, Worthington, OH; ** CONTINUING DATA ***** This application is a CON of 10/610,558 07/02/2003 PAT 7,129,388 which claims benefit of 60/437,983 01/06/2003 ** FOREIGN APPLICATIONS ***** ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** ** SMALL ENTITY ** 06/23/2006					
Foreign Priority claimed ☐ Yes ☒ No 35 USC 119(a-d) conditions met ☐ Yes ☒ No Verified and /EDWARD M Acknowledged JOHNSON/ Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY PA	SHEETS DRAWINGS 1	TOTAL CLAIMS 10	INDEPENDENT CLAIMS 1
ADDRESS GREGORY J. GORE 70 WEST OAKLAND AVENUE, SUITE 316 DOYLESTOWN, PA 18901 UNITED STATES					
TITLE METHOD FOR ACCELERATED DECHLORINATION OF MATTER					
FILING FEE RECEIVED 425	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit		

<i>Index of Claims</i> 	Application/Control No. 11423749	Applicant(s)/Patent Under Reexamination SCALZI ET AL.
	Examiner Edward M Johnson	Art Unit 1793

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☒ Claims renumbered in the same order as presented by applicant					☐ CPA		☐ T.D.		☐ R.1.47	
CLAIM		DATE								
Final	Original	03/31/2008	08/04/2008	11/24/2008						
	1	✓		-						
	2	✓		-						
	3	✓		-						
	4	✓		-						
	5	✓		-						
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	21		✓	=						
	22		✓	=						
	23		✓	=						
	24		✓	=						
	25		✓	=						
	26		✓	=						

Search Notes 	Application/Control No. 11423749	Applicant(s)/Patent Under Reexamination SCALZI ET AL.
	Examiner Edward M Johnson	Art Unit 1793

SEARCHED			
Class	Subclass	Date	Examiner
588	313,315,316,318,319,320,402,406,415,261	3/31/08	EJ
423	240R,240S		
updated		8/4/08	EJ
updated		11/22/08	EJ

SEARCH NOTES			
Search Notes		Date	Examiner
Inventor name search		3/31/08	EJ
EAST search			
updated		11/22/08	EJ

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
588	316,406,415	11/22/08	EJ

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Application Number 	Application/Control No. 11/423,749	Applicant(s)/Patent under Reexamination SCALZI ET AL.	
Document Code - DISQ		Internal Document – DO NOT MAIL	

TERMINAL DISCLAIMER	☒ APPROVED	☐ DISAPPROVED
Date Filed : 03 Sept. 2008	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:
Dorethea Lawrence 7,129,388

U.S. Patent and Trademark Office

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Michael Scalzi

ART UNIT: 1793

SERIAL NO.: 11/423,749

EXAMINER: Johnson, Edward M.

FILED: 06/13/2006

CONF. NO.: 6408

FOR: METHOD FOR ACCELERATED DECHLORINATION OF MATTER

Gregory J. Gore
Attorney at Law
70 W. Oakland Avenue, Suite 316
Doylestown, PA 18901

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE WITH TERMINAL DISCLAIMER

Dear Sirs:

In response to the Office Action of August 7, 2008, please see the Remarks/Arguments attached and the Terminal Disclaimer submitted herewith:

Remarks/Arguments begin on page 2 of this paper

Terminal Disclaimer, USPTO Form PTO/SB/26, is submitted herewith with payment of \$65 small-entity terminal disclaimer fee under 37 CFR 1.20(d).

REMARKS/ARGUMENTS

Claims 11-26 stand rejected on the ground of nonstatutory obviousness-type double patenting being unpatentable over claims 1-10 of U.S. Patent 7,129,388. The applicant has submitted herewith a terminal disclaimer to overcome this rejection. A Statement Under 37 C.F.R. 3.73(b) executed by the assignee is submitted herewith in support of the terminal disclaimer.

All of the grounds for objection and rejection have been traversed by the filing of the terminal disclaimer submitted herein. It is therefore believed that claims 11-26 presently pending in this application are now in condition for allowance and allowance at an early date is hereby solicited.

Respectfully submitted,

/Gregory J Gore/

GREGORY J. GORE
Reg. No. 30,057
Attorney for Applicant
Ph. (215) 348-1442
Fax (215) 348-7643

DATE: September 3, 2008

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**TERMINAL DISCLAIMER TO OBIATE A DOUBLE PATENTING
REJECTION OVER A "PRIOR" PATENT**Docket Number (Optional)
SCALZI-METHOD

In re Application of: Michael Scalzi et al.

Application No.: 11/423,749

Filed: 06/13/2006

For: METHOD FOR ACCELERATED DECHLORINATION OF MATTER

The owner*, Innovative Environmental Technologies, Inc., of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term **prior patent** No. 7,129,388 as the term of said prior patent is defined in 35 U.S.C. 154 and 173, and as the term of said **prior patent** is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the **prior patent** are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 and 173 of the **prior patent**, "as the term of said **prior patent** is presently shortened by any terminal disclaimer," in the event that said **prior patent** later:

- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

1. ☐ For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

2. ☒ The undersigned is an attorney or agent of record. Reg. No. 30057

/Gregory J Gore/

Signature

Sept. 3, 2008

Date

Gregory J. Gore

Typed or printed name

215-348-1442

Telephone Number

- ☒ Terminal disclaimer fee under 37 CFR 1.20(d) included.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

This collection of information is required by 37 CFR 1.321. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

STATEMENT UNDER 37 CFR 3.73(b)Applicant/Patent Owner: Michael Scalzi and Wade MeeseApplication No./Patent No.: 7,129,388 Filed/Issue Date: 10/31/2006Entitled: METHOD OF ACCELERATED DECHLORINATION OF MATTERINNOVATIVE ENVIRONMENTAL TECHNOLOGIES, INC., a Corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of less than the entire right, title and interest
(The extent (by percentage) of its ownership interest is _____ %)

in the patent application/patent identified above by virtue of either:

- A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 014251, Frame 0449, or for which a copy thereof is attached.

OR

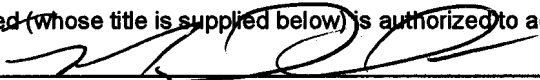
- B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.
2. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.
3. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.☐ As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.



Signature

Michael Scalzi

Printed or Typed Name

President

Title

8/28/08

Date

215-766-1603

Telephone Number

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Patent Application Fee Transmittal

Application Number:	11423749			
Filing Date:	13-Jun-2006			
Title of Invention:	METHOD FOR ACCELERATED DECHLORINATION OF MATTER			
First Named Inventor/Applicant Name:	Michael Scalzi			
Filer:	Gregory J. Gore/Catherine Cavella			
Attorney Docket Number:	SCALZI-METHOD			
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Statutory disclaimer	2814	1	65	65
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				65

Electronic Acknowledgement Receipt

EFS ID:	3879473
Application Number:	11423749
International Application Number:	
Confirmation Number:	6408
Title of Invention:	METHOD FOR ACCELERATED DECHLORINATION OF MATTER
First Named Inventor/Applicant Name:	Michael Scalzi
Customer Number:	41599
Filer:	Gregory J. Gore/Catherine Cavella
Filer Authorized By:	Gregory J. Gore
Attorney Docket Number:	SCALZI-METHOD
Receipt Date:	03-SEP-2008
Filing Date:	13-JUN-2006
Time Stamp:	13:31:43
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Electronic Funds Transfer
Payment was successfully received in RAM	\$65
RAM confirmation Number	7909
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part (if appl.)	Pages (if appl.)
			PXX-1002	Page 025	

1		Resp-OA2.pdf	65863 8148b2acbef02b73795061dbf5b469f2d417ea6a	yes	2
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Amendment - After Non-Final Rejection		1	1	
	Applicant Arguments/Remarks Made in an Amendment		2	2	
Warnings:					
Information:					
2	Terminal Disclaimer Filed	TermDiscl.pdf	70298 b15deb2e307f34ca99924d42fbae3453d35ed72b	no	1
Warnings:					
Information:					
3	Assignee showing of ownership per 37 CFR 3.73(b).	Stmt373signed.pdf	65902 1436e4ea296ec9779e78a72cab4d572e4c8a49e9	no	1
Warnings:					
Information:					
4	Fee Worksheet (PTO-06)	fee-info.pdf	30081 b285217409cf8617588787368a05cc5fc3f9347b	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			232144		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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11/423,749

06/13/2006

Michael Scalzi

SCALZI-METHOD

6408

41599

7590

08/07/2008

GREGORY J. GORE

70 WEST OAKLAND AVENUE, SUITE 316

DOYLESTOWN, PA 18901

EXAMINER

JOHNSON, EDWARD M

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

08/07/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 11/423,749	Applicant(s) SCALZI ET AL.	
	Examiner Edward M. Johnson	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) ☐ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413) |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) ☐ Information Disclosure Statement(s) (PTO/SB/08) | 5) ☐ Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) ☐ Other: _____ |

DETAILED ACTION

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 11-26 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 7,129,388. Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been obvious to one of ordinary skill in the art at the time the invention was made to claim a zero valent metal because the '388 patent claims

Art Unit: 1793

a zero valent iron and to inject a hydrogen donor because the '388 patent claims a polyacetate mixture including vitamins B2 and B12.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M. Johnson whose telephone number is 571-272-1352. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Edward M. Johnson/
Primary Examiner
Art Unit 1793

EMJ

<i>Index of Claims</i> 	Application/Control No. 11423749	Applicant(s)/Patent Under Reexamination SCALZI ET AL.
	Examiner Edward M Johnson	Art Unit 1793

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
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☐ Claims renumbered in the same order as presented by applicant				☐ CPA		☐ T.D.		☐ R.1.47	
CLAIM		DATE							
Final	Original	03/31/2008	08/04/2008						
	1								
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	3								
	4								
	5								
	6								
	7								
	8								
	9								
	10								
	11		✓						
	12		✓						
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	16		✓						
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	26		✓						
	1	✓							
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	7	✓							
	8	✓							
	9	✓							
	10	✓							

<i>Index of Claims</i> 	Application/Control No. 11423749	Applicant(s)/Patent Under Reexamination SCALZI ET AL.
	Examiner Edward M Johnson	Art Unit 1793

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=	Allowed

-	Cancelled
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N	Non-Elected
I	Interference

A	Appeal
O	Objected

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	Examiner Edward M Johnson	Art Unit 1793

SEARCHED			
Class	Subclass	Date	Examiner
588	313,315,316,318,319,320,402,406,415,261	3/31/08	EJ
423	240R,240S		
updated		8/4/08	EJ

SEARCH NOTES		
Search Notes	Date	Examiner
Inventor name search	3/31/08	EJ
EAST search		

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Michael Scalzi, et al. ART UNIT: 1793
SERIAL NO.: 11/423,749 EXAMINER: Edward M. Johnson
FILED: 06/13/2006 CONF. NO.: 6408
FOR: METHOD FOR ACCELERATED DECHLORINATION OF MATTER

Gregory J. Gore
Attorney at Law
70 W. Oakland Avenue, Suite 316
Doylestown, PA 18901

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE

Dear Sirs:

In response to the Office Action of April 8, 2008, please see the Remarks/Arguments attached.

Remarks/Arguments begin on page 2 of this paper.

Appl. No. 11/163,685
Response Dated April 24, 2008
Reply to Office Action of April 8, 2008

REMARKS/ARGUMENTS

The outstanding Office Action appears to be in error. As informally discussed with the Examiner by telephone on April 21, 2008, the applicant is submitting this response to affirm that claims 1-10, indicated by the Examiner as pending in this application, have, to the contrary, been previously canceled by applicant's preliminary amendment filed October 3, 2006. Also at that time, new claims 11-26 were presented and are the claims correctly pending in this application for examination.

It is therefore requested that the applicant's October 3, 2006 preliminary amendment be reconsidered, that claims 11-26 pending in this application be examined, and that a non-final Office Action be issued thereon.

Respectfully submitted,

/Gregory J Gore/

GREGORY J. GORE
Reg. No. 30,057
Attorney for Applicant
Ph. (215) 348-1442
Fax (215) 348-7643

DATE: April 24, 2008

Electronic Acknowledgement Receipt

EFS ID:	3200603
Application Number:	11423749
International Application Number:	
Confirmation Number:	6408
Title of Invention:	METHOD FOR ACCELERATED DECHLORINATION OF MATTER
First Named Inventor/Applicant Name:	Michael Scalzi
Customer Number:	41599
Filer:	Gregory J. Gore/Catherine Cavella
Filer Authorized By:	Gregory J. Gore
Attorney Docket Number:	SCALZI-METHOD
Receipt Date:	24-APR-2008
Filing Date:	13-JUN-2006
Time Stamp:	10:02:21
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
1		ScalziContResponseOA1.pdf	66087 42240d4007a5296b8de9efd47607e96e5be4666c	yes	2

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Amendment - After Non-Final Rejection	1	1
	Applicant Arguments/Remarks Made in an Amendment	2	2
Warnings:			
Information:			
Total Files Size (in bytes):		66087	
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.			



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

11/423,749

06/13/2006

Michael Scalzi

SCALZI-METHOD

6408

41599

7590

04/08/2008

GREGORY J. GORE

70 WEST OAKLAND AVENUE, SUITE 316

DOYLESTOWN, PA 18901

EXAMINER

JOHNSON, EDWARD M

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

04/08/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 11/423,749	Applicant(s) SCALZI ET AL.	
	Examiner Edward M. Johnson	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) ☒ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413) |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) ☒ Information Disclosure Statement(s) (PTO/SB/08) | 5) ☐ Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/06</u> . | 6) ☐ Other: _____ |

DETAILED ACTION

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-10 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 7,129,388. Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been obvious to one of ordinary skill in the art at the time the invention was made to claim a gas under pressure as the patented fracturizing

Art Unit: 1793

gas and to inject a hydrogen donor as the patented polylactate ester, wherein claim 6 claims the same species in both.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M. Johnson whose telephone number is 571-272-1352. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Edward M. Johnson/
Primary Examiner
Art Unit 1793

EMJ

Notice of References Cited	Application/Control No. 11/423,749	Applicant(s)/Patent Under Reexamination SCALZI ET AL.	
	Examiner Edward M. Johnson	Art Unit 1793	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-7,129,388	10-2006	Scalzi et al.	588/316
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

<i>Index of Claims</i> 	Application/Control No. 11423749	Applicant(s)/Patent Under Reexamination SCALZI ET AL.
	Examiner Edward M Johnson	Art Unit 1793

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant			☐ CPA			☐ T.D.			☐ R.1.47		
CLAIM		DATE									
Final	Original	03/31/2008									
	1	✓									
	2	✓									
	3	✓									
	4	✓									
	5	✓									
	6	✓									
	7	✓									
	8	✓									
	9	✓									
	10	✓									

Search Notes 	Application/Control No. 11423749	Applicant(s)/Patent Under Reexamination SCALZI ET AL.
	Examiner Edward M Johnson	Art Unit 1793

SEARCHED			
Class	Subclass	Date	Examiner
588	313,315,316,318,319,320,402,406,415,261	3/31/08	EJ
423	240R,240S		

SEARCH NOTES		
Search Notes	Date	Examiner
Inventor name search	3/31/08	EJ
EAST search		

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)

Application Number		11423749
Filing Date		2006-06-13
First Named Inventor	Michael Scalzi	
Art Unit	1744	
Examiner Name		
Attorney Docket Number	SCALZI-METHOD	

U.S. PATENTS

[Remove](#)

Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
/EMJ/	1	4488850		1984-12-18	Wernimont	
	2	5264018		1993-11-23	Koenigsberg et al.	
	3	6238570		2001-05-29	Sivavec	
	4	6245235		2001-06-12	Perriello	
	5	6255551		2001-07-03	Shapiro et al.	
	6	6312605		2001-11-06	Kerfoot	
	7	6464864		2002-10-15	Sivavec	
/EMJ/	8	5277815		1994-01-11	Beeman	

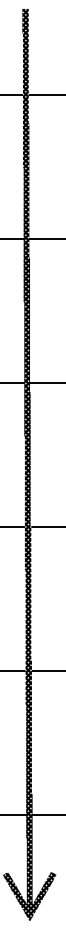
**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number		11423749
Filing Date		2006-06-13
First Named Inventor	Michael Scalzi	
Art Unit		1744
Examiner Name		
Attorney Docket Number		SCALZI-METHOD

/EMJ/	9	5602296		1997-02-11	Hughes et al.	
	10	5975798		1999-11-02	Liskowitz et al.	
	11	5833855		1998-11-10	Saunders	
	12	5411664		1995-05-02	Seech et al.	
	13	6068777		2000-05-30	Kimura et al.	
	14	6420594		2002-07-16	Farone et al.	
	15	6472198		2002-10-29	Semprini et al.	
	16	6265205		2001-07-24	Hitchens et al.	
	17	6303367		2001-10-16	Kataoka et al.	
	18	6344355		2002-02-05	Hince et al.	
/EMJ/	19	6150157		2000-11-21	Keasling et al.	

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	11423749
Filing Date	2006-06-13
First Named Inventor	Michael Scalzi
Art Unit	1744
Examiner Name	
Attorney Docket Number	SCALZI-METHOD

/EMJ/	20	0494061		1893-03-21	Day	
	21	1929659		1933-10-10	Trumble et al.	
	22	2362674		1944-11-14	Spangler et al.	
	23	2421765		1947-06-10	Taylor	
	24	2424440		1947-07-22	Duffy	
	25	2617765		1952-11-11	Swarr	
	26	2966921		1961-01-03	Whiteman	
	27	3486297		1969-12-30	Eisinga et al.	
/EMJ/	28	3805819		1974-04-23	Etter	

If you wish to add additional U.S. Patent citation information please click the Add button.

Add

U.S.PATENT APPLICATION PUBLICATIONS

Remove

Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	11423749
Filing Date	2006-06-13
First Named Inventor	Michael Scalzi
Art Unit	1744
Examiner Name	
Attorney Docket Number	SCALZI-METHOD

	1					
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If you wish to add additional U.S. Published Application citation information please click the Add button.

FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1							☐

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1		☐

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature	/Edward M. Johnson/ (03/31/2008)	Date Considered	
--------------------	----------------------------------	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	11423749
Filing Date	2006-06-13
First Named Inventor	Michael Scalzi
Art Unit	1744
Examiner Name	
Attorney Docket Number	SCALZI-METHOD

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☐ Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ None

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Gregory J Gore/	Date (YYYY-MM-DD)	2006-07-20
Name/Print	Gregory J. Gore	Registration Number	30,057

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.



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BIB DATA SHEET

CONFIRMATION NO. 6408

SERIAL NUMBER 11/423,749	FILING or 371(c) DATE 06/13/2006 RULE	CLASS 435	GROUP ART UNIT 1754	ATTORNEY DOCKET NO. SCALZI-METHOD		
APPLICANTS Michael Scalzi, Doylestown, PA; Wade Meese, Worthington, OH; ** CONTINUING DATA ***** This application is a CON of 10/610,558 07/02/2003 PAT 7,129,388 which claims benefit of 60/437,983 01/06/2003 ** FOREIGN APPLICATIONS ***** ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** ** SMALL ENTITY ** 06/23/2006						
Foreign Priority claimed ☐ Yes ☒ No 35 USC 119(a-d) conditions met ☐ Yes ☒ No Verified and /EDWARD M Acknowledged JOHNSON/ Examiner's Signature		☐ Met after Allowance Initials	STATE OR COUNTRY PA	SHEETS DRAWINGS 1	TOTAL CLAIMS 10	INDEPENDENT CLAIMS 1
ADDRESS GREGORY J. GORE 70 WEST OAKLAND AVENUE, SUITE 316 DOYLESTOWN, PA 18901 UNITED STATES						
TITLE METHOD FOR ACCELERATED DECHLORINATION OF MATTER						
FILING FEE RECEIVED 425	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:			☐ All Fees		
				☐ 1.16 Fees (Filing)		
				☐ 1.17 Fees (Processing Ext. of time)		
				☐ 1.18 Fees (Issue)		
				☐ Other _____		
			☐ Credit			

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number

11/423749

CLAIMS AS FILED - PART I

(Column 1)	(Column 2)	(Column 3)
FOR	NUMBER FILED	NUMBER EXTRA
BASIC FEE (37 CFR 1.16(a))		
TOTAL CLAIMS (37 CFR 1.16(c))	minus 20 =	*
INDEPENDENT CLAIMS (37 CFR 1.16(b))	minus 3 =	*
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(d))		

SMALL ENTITY

OR

OTHER THAN SMALL ENTITY

RATE	FEE
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+ \$	=
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OR

* If the difference in column 1 is less than zero, enter "0" in column 2.

CLAIMS AS AMENDED - PART II

(Column 1)	(Column 2)	(Column 3)	(Column 4)
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total (37 CFR 1.16(c))	16	Minus	20 =
Independent (37 CFR 1.16(b))	1	Minus	3 =
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(d))			

SMALL ENTITY

OR

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RATE	ADDITIONAL FEE
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(Column 1)	(Column 2)	(Column 3)	(Column 4)
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total (37 CFR 1.16(c))		Minus	** =
Independent (37 CFR 1.16(b))		Minus	*** =
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(d))			

RATE	ADDITIONAL FEE
X \$	=
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TOTAL ADD'L FEE	

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(Column 1)	(Column 2)	(Column 3)	(Column 4)
AMENDMENT C	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total (37 CFR 1.16(c))		Minus	** =
Independent (37 CFR 1.16(b))		Minus	*** =
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(d))			

RATE	ADDITIONAL FEE
X \$	=
X \$	=
+ \$	=
TOTAL ADD'L FEE	

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* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS: Michael Scalzi
Wade Meese

ART UNIT: 1744

SERIAL NO.: 11/423,749

CONF. NO.: 6408

FILED: 06/13/2006

FOR: METHOD FOR ACCELERATED DECHLORINATION OF MATTER

Gregory J. Gore
Attorney at Law
70 W. Oakland Avenue, Suite 316
Doylestown, PA 18901

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRELIMINARY AMENDMENT

Dear Sirs:

Prior to the first examination of the above-captioned patent application, please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (Cancelled)

Claim 2 (Cancelled)

Claim 3 (Cancelled)

Claim 4 (Cancelled)

Claim 5 (Cancelled)

Claim 6 (Cancelled)

Claim 7 (Cancelled)

Claim 8 (Cancelled)

Claim 9 (Cancelled)

Claim 10 (Cancelled)

Claim 11 (new)

A method for accelerated anaerobic dechlorination of subsoil matter, comprising the steps of:

supplying a mixture including a zero valent metal into soil pathways to biologically react with the dissolved chlorinated solvents in the groundwater; and

supplying an organic hydrogen donor into the soil pathways to produce dechlorinating conditions such that indigenous anaerobic bacteria biodegrade residual concentrations of chlorinated solvents.

Claim 12 (new) The method of claim 11 further including the step of supplying a

reducing agent into said soil pathways to remove oxygen from groundwater and soil moisture.

Claim 13 (new) The method of claim 11 wherein the steps of supplying said mixture and said organic hydrogen donor are carried out by placing an injection rod into the soil and then injecting them under pressure through an injection rod.

Claim 14 (new) The method of claim 13 further including the preliminary step of injecting a gas under pressure through said injection rod and into said soil to establish preferential delivery pathways therein.

Claim 15 (new) The method of claim 12 wherein said reducing agent is sodium sulfite.

Claim 16 (new) The method of claim 11 wherein said organic hydrogen donor further includes vitamins B2 and B12.

Claim 17 (new) The method of claim 11 wherein the mixture further includes nutrients.

Claim 18 (new) The method of claim 17 wherein said nutrients are organic ammonia and ortho-phosphate.

Claim 19 (new) The method of claim 11 wherein said organic hydrogen donor is from the group consisting of lactate, propionate, chitin, butyrate, acetate, sugars, glycerol tripolylactate, xylitol pentapolylactate, and sorbitol hexapolylactate.

Claim 20 (new) The method of claim 14 wherein said gas is from the group of nitrogen and carbon dioxide.

Claim 21 (new) The method of claim 11 wherein said mixture including a zero

valent metal is a colloidal suspension in a sodium sulfite solution.

Claim 22 (new) The method of claim 13 further including, after the step of injecting the organic hydrogen donor, an additional step of injecting into the soil a sodium sulfite and nutrient solution to provide for further in-situ mixing and penetration of anaerobic stimulating products.

Claim 23 (new) The method of claim 14 further including a final step of gas injection to clear said injection rod and fluid conduit lines connected thereto.

Claim 24 (new) The method of claim 11 wherein said metal is iron.

Claim 25 (new) The method of claim 11 wherein said metal is in a colloidal suspension.

Claim 26 (new) The method of claim 25 wherein the colloidal suspension includes a reducing agent.

Respectfully submitted,

/Gregory J Gore/

GREGORY J. GORE
Reg. No. 30,057
Attorney for Applicant
Ph. (215) 348-1442
Fax (215) 348-7643

DATE: October 3, 2006

Electronic Acknowledgement Receipt

EFS ID:	1232059
Application Number:	11423749
Confirmation Number:	6408
Title of Invention:	METHOD FOR ACCELERATED DECHLORINATION OF MATTER
First Named Inventor:	Michael Scalzi
Customer Number:	41599
Filer:	Gregory J. Gore/Melanie Rush
Filer Authorized By:	Gregory J. Gore
Attorney Docket Number:	SCALZI-METHOD
Receipt Date:	03-OCT-2006
Filing Date:	13-JUN-2006
Time Stamp:	10:14:03
Application Type:	Utility
International Application Number:	

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part	Pages
1	Preliminary Amendment	PreliminaryAmendment.pdf	67845	no	4

Warnings:	
Information:	
Total Files Size (in bytes):	67845
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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number		11423749
Filing Date		2006-06-13
First Named Inventor	Michael Scalzi	
Art Unit	1744	
Examiner Name		
Attorney Docket Number	SCALZI-METHOD	

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	4488850		1984-12-18	Wernimont	
	2	5264018		1993-11-23	Koenigsberg et al.	
	3	6238570		2001-05-29	Sivavec	
	4	6245235		2001-06-12	Perriello	
	5	6255551		2001-07-03	Shapiro et al.	
	6	6312605		2001-11-06	Kerfoot	
	7	6464864		2002-10-15	Sivavec	
	8	5277815		1994-01-11	Beeman	

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number		11423749
Filing Date		2006-06-13
First Named Inventor	Michael Scalzi	
Art Unit		1744
Examiner Name		
Attorney Docket Number		SCALZI-METHOD

	9	5602296		1997-02-11	Hughes et al.	
	10	5975798		1999-11-02	Liskowitz et al.	
	11	5833855		1998-11-10	Saunders	
	12	5411664		1995-05-02	Seech et al.	
	13	6068777		2000-05-30	Kimura et al.	
	14	6420594		2002-07-16	Farone et al.	
	15	6472198		2002-10-29	Semprini et al.	
	16	6265205		2001-07-24	Hitchens et al.	
	17	6303367		2001-10-16	Kataoka et al.	
	18	6344355		2002-02-05	Hince et al.	
	19	6150157		2000-11-21	Keasling et al.	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		11423749	
	Filing Date		2006-06-13	
	First Named Inventor	Michael Scalzi		
	Art Unit		1744	
	Examiner Name			
	Attorney Docket Number		SCALZI-METHOD	

	20	0494061		1893-03-21	Day	
	21	1929659		1933-10-10	Trumble et al.	
	22	2362674		1944-11-14	Spangler et al.	
	23	2421765		1947-06-10	Taylor	
	24	2424440		1947-07-22	Duffy	
	25	2617765		1952-11-11	Swarr	
	26	2966921		1961-01-03	Whiteman	
	27	3486297		1969-12-30	Eisinga et al.	
	28	3805819		1974-04-23	Etter	

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number		11423749
Filing Date		2006-06-13
First Named Inventor	Michael Scalzi	
Art Unit	1744	
Examiner Name		
Attorney Docket Number	SCALZI-METHOD	

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	1							☐

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
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EXAMINER SIGNATURE

Examiner Signature		Date Considered	
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¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	11423749
Filing Date	2006-06-13
First Named Inventor	Michael Scalzi
Art Unit	1744
Examiner Name	
Attorney Docket Number	SCALZI-METHOD

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☐ Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ None

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Gregory J Gore/	Date (YYYY-MM-DD)	2006-07-20
Name/Print	Gregory J. Gore	Registration Number	30,057

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt

EFS ID:	1121115
Application Number:	11423749
Confirmation Number:	6408
Title of Invention:	METHOD FOR ACCELERATED DECHLORINATION OF MATTER
First Named Inventor:	Michael Scalzi
Customer Number:	41599
Filer:	Gregory J. Gore/Melanie Rush
Filer Authorized By:	Gregory J. Gore
Attorney Docket Number:	SCALZI-METHOD
Receipt Date:	20-JUL-2006
Filing Date:	13-JUN-2006
Time Stamp:	15:12:56
Application Type:	Utility
International Application Number:	

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part	Pages
1	Information Disclosure Statement (IDS) Filed	US_IDS_Form__SB_08a.pdf	3591144	no	6

Warnings:	
Information:	
Total Files Size (in bytes):	3591144
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.	

1 METHOD FOR ACCELERATED DECHLORINATION OF MATTER

2
3 RELATED APPLICATION

4 This patent application is a continuation of co-pending patent application serial number
5 10/610,558 filed July 2, 2003 for “Method for Accelerated Dechlorination of Matter” which is
6 related to provisional patent application serial number 60/437,983 entitled “Method for
7 Accelerated Dechlorination of Matter” filed on January 6, 2003, priority from which is hereby
8 claimed.

9 FIELD OF THE INVENTION

10 The present invention relates to the combined and synergistic utilization of chemicals in
11 conjunction with the bio-mineralization processes of subsurface soil and groundwater pollutants.
12 More specifically, it relates to an accelerated dechlorination of subsurface matter by anaerobic
13 microorganisms in conjunction with oxygen scavengers, vitamins, nutrients, and zero valent
14 metals.

15 BACKGROUND OF THE INVENTION

16 Through the years, chlorinated solvents have had a large impact on several industries,
17 including pharmaceuticals, chemical processing, food extraction, dry cleaning, and metal
18 cleaning. With wide spread use and improper handling and storage, extensive soil and water
19 damage has occurred. Due to their toxicity, carcinogenicity, and persistence in the environment,
20 chlorinated solvents are listed by the United States Environmental Protection Agency as high
21 priority pollutants. If left untreated, chlorinated solvents may remain unchanged for a period of
22 fifty years or more. The most common chlorinated solvents used are methylene chloride,

1 tetrachloroethene, trichloroethene, carbon tetrachloride, chloroform, tetrachloroethane,
2 dichloroethene and vinyl chloride. Carbon tetrachloride is a systematic poison of the nervous
3 system, the intestinal tract, the liver, and the kidneys. Vinyl chloride and methylene chloride are
4 known carcinogens, and could also affect the nervous system, the respiratory system, the liver,
5 the blood, and the lymph system.

6 Chlorinated solvents are often found in separate phases mixtures commonly referred to as
7 dense nonaqueous-phase liquids (“DNAPLs”). DNAPLs are visible, denser-than-water, separate
8 oily phase materials in the subsurface whose migration is governed by gravity, buoyancy, and
9 capillary forces. Chlorinated solvents partition into the water phase to create a dissolved
10 contaminant plume when in contact with water, thus creating a long-term, continuing source of
11 contamination as the soluble constituents slowly dissolve into moving groundwater.

12 One common technique for treating contaminated matter is the “pump-and-treat” method
13 in which contaminated groundwater is pumped to the surface, cleaned chemically or by passing
14 the groundwater through a bioreactor, and then reinjected into the groundwater. This process is
15 carried out over a long period and various factors complicate the removal of these contaminants
16 from the environment. Also, they are very volatile, highly mobile, denser than water, and
17 generally found in the environment as mixtures of products with different degrees of
18 chlorination. The “pump-and-treat” method is therefore problematic.

19 The problems with the “pump-and-treat” method can be overcome with the use of
20 anaerobic microorganisms which have the capability to decompose a wide range of highly
21 chlorinated compounds. However, anaerobic microorganisms are at a disadvantage in that their
22 growth is slow when compared to that of aerobic organisms. In-situ they are at an even greater

disadvantage due to the partitioning of the targeted substrates into the soil matrix. There is therefore a need in the art to utilize the ability of anaerobic microorganisms to decompose chlorinated compounds which can be achieved at a faster rate.

SUMMARY OF THE INVENTION

The present invention achieves accelerated dechlorination of soil and water contaminated with chlorinated solvents by stimulating anaerobic microorganisms and thus increasing the rate of biological mineralization of the solvents. This is accomplished by a treatment process consisting of a colloidal suspension of metal powder, organic hydrogen donor such as glucose, sucrose, alcohols, propionates, lactates, acetates, chitin, polylactate esters, glycerol tripolylactate, xylitol pentapolylactate, and sorbitol hexapolylactate, chemical oxygen scavengers in solution with essential nutrients, and vitamin stimulants such as B2 and B12 delivered via interconnected pneumatic pumps and pressurized vessels driven by compressed gases N or CO₂ so as not to oxygenate an environment targeted for anaerobic processes. The treatment stimulates naturally occurring microorganisms while addressing dissolved phase target compounds via the surface action of the metal particles. The overall effect results in the breakdown of chlorinated solvents such as tetrachloroethene, trichloroethene, carbon tetrachloride and their daughter products. The incorporation of the B12 acts as both an enzymatic stimulus for the anaerobic action and a surface catalyst of the iron particle. Cobalt, the core element of the B12, enhances the surface oxidation of the metal further.

A closed delivery system is used to deliver the process utilizing a combination of gas and liquid delivery systems. All of the vessels are interconnected and valved, allowing for mixings, washings, filling, and discharge of materials via pressure vessels or mechanical pumping

1 systems. The system utilized allows for a variety of dissimilar compounds to be delivered via a
2 single injection line. Further, the switching between feed systems is accomplished without any
3 loss of pressure to the delivery line eliminating the common problems experienced from the
4 vacuum developed down-hole as pressure is released and reapplied. Lastly, the current system is
5 fully self-contained requiring no electrical supply. The only site utility requirement is an
6 available water source for slurry preparation.

7 One embodiment of the present invention is carried out in the following steps.

8 Step 1: Subsurface Pathway Development

9 Initially, a gas is delivered to the subsurface via the delivery system further described
10 herein. The gas is used so as not to introduce oxygen into an environment targeted for anaerobic
11 processes. Injection points are advanced via traditional direct push technology or may be
12 permanently installed injection wells. The gas is introduced at a maximum pressure of
13 approximately 175 psi such that delivery pathways and voids are established. Pathway
14 development is verified by observing a substantial pressure drop at the surface monitoring point.
15 Gas introduction is immediately halted once the pressure drop is observed.

16 Step 2: Sodium Sulfite, Nutrient and Micro Nutrient Injection

17 A solution of sodium sulfite and nutrients (nitrogen and ortho-phosphate) is immediately
18 injected into the subsurface pathways and voids that were developed during the gas injection
19 step. Sodium sulfite acts as an oxygen scavenger, iron reducer and sulfate source. As an oxygen
20 scavenger, the sodium sulfite prevents the oxidation of the later-injected ZVI by the dissolved
21 oxygen while promoting anaerobic conditions that are favorable for the biodegradation of the
22 CVOCs. Nutrients, injected as organic ammonia and ortho-phosphate, are required for the

1 maintenance of the microbial metabolic pathways, ATP/ADP synthesis and organelle
2 development. Further, the incorporation of the ortho phosphate inhibits acetogenesis, a
3 competing methanogenic reaction which consumes acetate and produces methane.

4 Step 3: Zero Valent Metal Injection

5 Immediately following the sodium sulfite/bioslurry solution injection, a colloidal
6 suspension of a metal powder is added to an additional quantity of the bioslurry solution and the
7 colloidal suspension is injected to reduce concentrations of dissolved-phase CVOCs while
8 providing for rapidly generated hydrogen, the evolution of hydroxides and as a result overall
9 microbial stimulation and biofilm formation.

10 Step 4: Anaerobic Hydrogen Source Injection

11 An anaerobic organic hydrogen source is injected immediately after the ZVI injection to
12 provide a slow release hydrogen source for the anaerobic dechlorination of the CVOCs. Vitamin
13 B12 and riboflavin B2 is mixed with the anaerobic stimulating hydrogen source to provide
14 essential micro enzymes at the anaerobic sites.

15 Step 5: Sodium Sulfite/Nutrient Injection

16 A second injection of the sulfite/nutrient mixture is then performed to clear the injection
17 lines and to provide for in-situ mixing and penetration of the anaerobic stimulating product.

18 Step 6: Post Liquid Injection – Gas Injection

19 Lastly, the injection lines are cleared of liquids by a second gas injection and all
20 injectants are forced into the created formation and upward into the vadose zone. Once the
21 injection cycle is complete, the injection point is temporarily capped to allow for the pressurized
22 subsurface to accept the injectants. Once back-pressure diminishes, the injection rods are

1 extracted. Injection boring locations are then sealed with bentonite or sand to prevent short-
2 circuiting from adjacent injection locations.

3 Other objects and advantages of the present invention will be readily apparent to those of
4 skill in the art from the following drawing and description of the preferred embodiment.

5 BRIEF DESCRIPTION OF THE DRAWINGS

6 The figure is an apparatus and flow diagram which describes an in-situ delivery system
7 of the present invention.

8 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

9 According to the preferred embodiment of the invention, the following process and
10 delivery system apparatus is employed. In order to keep an anaerobic environment, nitrogen or
11 carbon dioxide gas is used to propel all injectants into the subsurface. The gas is first injected
12 into the subsurface at a maximum pressure of approximately 175 pounds per square inch until a
13 significant pressure drop is observed at the injection pressure vessel. This process is referred to
14 as delivery pathway development with the intent of opening pathways into the subsurface for the
15 injections. These pathways are believed to be those more permeable pathways along which
16 chlorinated solvents are more likely to have migrated, both in the vadose and saturated zones.
17 Liquid and liquid-entrained injectants are then delivered with pressurized gas to the pathways
18 that are produced during the pathway development.

19 Chemical oxygen scavengers, reducing agents such as sodium sulfite, are then injected to
20 remove oxygen from groundwater and soil moisture immediately after pathway development in
21 the subsurface, facilitating the anaerobic conditions that are preferred for the reductive
22 dehalogenation of chlorinated solvents by indigenous bacteria. The resulting environment

contains a wide spectrum of inorganic, biochemical, and enzymatic redox systems. Along with the reducing agents, nutrients such as organic ammonia and ortho-phosphate are added to the injectants in order to support microbial activity.

In an anaerobic environment, zero valent metal is then injected as an additive to the reducing agent bioslurry mixture. Zero valent metals have a moderately low toxicity and a good reducing power so that it can rapidly reduce higher concentrations of dissolved phase chlorinated solvents when injected via direct chemical reactions. Zero valent metals will continue to react with dissolved chlorinated solvents in groundwater until it is completely oxidized by chlorinated solvents, oxygen, or other oxidants that contact residual concentrations of zero valent iron.

Under normal environmental conditions, zero valent metals are capable of being oxidized and reduced back and forth. The oxygen scavenger also promotes an anaerobic environment, stimulating the microorganisms.

With the addition of an electron donor source to provide hydrogen, the biodegradation process is initiated. An organic hydrogen donor such as a polylactate ester, glycerol tripolylactate, xylitol pentapoly lactate, or sorbitol hexapoly lactate, lactates, acetate, propionates, sugars, glucose, etc. is now injected with the intent of being cometabolized by indigenous anaerobic bacteria to produce dechlorinating conditions necessary for indigenous anaerobic bacteria to biodegrade residual concentrations of chlorinated solvents. This slow release process is controlled over time, maintaining a slow delivery of hydrogen at low concentrations which drives the anaerobic reductions. The volatile organic acid is then metabolized by indigenous bacteria to produce hydrogen, which can then be metabolized by chlorinated solvent degrading bacteria. Organic acids, hydrogen, nutrients, and bacteria then move with groundwater,

enhancing the attenuation of chlorinated solvents as they move through the aquifer over a period of months.

The above-described process is preferably carried out by an apparatus such as shown in the diagram of the figure. The direction of flow is indicated by arrows where appropriate. Not shown are conventional injection rods well-known in the art suitable for subsoil injections which are attached to an injection line in fluid communication with the discharge port **25**.

An embodiment of the inventive process begins by first filling the bioslurry tanks **LT1** and **LT2** and filling the feed tanks **T1** and **T2**. A source of gas such as nitrogen or carbon dioxide is connected to inlet **21** and a water supply is connected to liquid inlet **23**. Valves **V7** and **V8** are opened which engage an electric actuator to fill bioslurry tanks **LT1** and **LT2**. The micro-nutrients/sodium sulfate is then manually added to the bioslurry tanks **LT1** and **LT2** and allowed to mix. Valves **V7** and **V8** are closed along with disengaging the actuator when the bioslurry tanks are filled.

Next, a pre-mixed heated lactate including vitamins B2 and B12 is manually poured into feed tank **T1**. Valves **V5**, **V6**, **V4**, and **V3** are then opened. Next, pump **P2** is activated and tank **T2** is filled with an appropriate volume of the bioslurry. All valves are closed when finished. The tops are then secured on both feed tanks **T1** and **T2** and afterward valves **V10** and **V11** are opened to pressurize both feed tanks. After the injection rod has been properly placed at a selected location, the injection line is secured to discharge port **25** and valve **V9** is opened.

The injection process begins when valve **V1** is opened to create the injection pathways until a significant pressure drop is observed at the injection pressure vessel **31** which is filled with the source of compressed gas, preferably either nitrogen or carbon dioxide. Valve **V1** is

1 then closed and valve **V3** opened to introduce the bioslurry mixture into the subsurface pathways
2 from feed tank **T2**. Valve **V3** is closed when feed tank **T2** is empty.

3 Next, pump **P2** is once again activated and tank **T2** is filled with more of the bioslurry.
4 Zero valent metal is then manually added and mixed with the bioslurry in tank **T2**. This mixture
5 is then injected into the subsoil from tank **T2** in the same way as the previous injection of the
6 bioslurry mixture alone.

7 Now valve **V2** is opened to introduce the lactate mixture into the subsurface from tank
8 **T1** and is closed after the tank is empty. Valves **V4**, **V5**, and **V6** are then opened to directly
9 deliver bioslurry from tanks **LT1** and **LT2** into the subsurface. All valves are closed when the
10 desired amount of bioslurry has been injected. Finally, in order to cleanse the injection line of
11 the viscous polylactate ester or other organic hydrogen donors, more reducing agent slurry is
12 once again injected from tank **T2** having been transferred there from tanks **LT1** and **LT2** as
13 previously described. With the injections complete, a post injection line purge is performed by
14 opening valves **V9** and **V1** and injecting gas to clear the lines of any remaining reducing agents.
15 With the lines cleaned, the process is complete and the next injection location is prepared.

16 In accordance with the invention, a test was carried out and the following results
17 observed. A site known to be contained with chlorinated solvents was geologically mapped.
18 After determination of the subsurface contaminate concentrations, characteristics and the
19 direction of flow of groundwater, a series of injection points were drilled. Contaminate
20 concentrations of cis-1,2-DCE prior to the biodegradation process ranged from 6.6 ppb to 69
21 ppb. The initial concentration of VC ranged from 0.97 to 2 ppb. The initial concentration of
22 TCE ranged from 0.23 to 12.0 ppb.

1 After determining the levels of the contaminants, biodegradation was initiated and
2 maintained by the addition of iron powder, lactate, reducing agents, vitamin stimulants, and
3 delivered by compressed gases and results were observed after four months. Iron powder was
4 chosen for two primary reactions with chlorinated solvents, the first being the anaerobic iron
5 corrosion reaction in which water is disassociated to form hydrogen gas, and the direct
6 absorption of a chlorinated hydrocarbon onto the surface of the iron, followed by reductive
7 dehalogenation. Four mechanisms are at work during the reductive process. First, the zero
8 valent metals act as a reductant by supplying electrons directly from the metal surface to an
9 absorbed halogenated compound. Next, hydrogen gas is generated by the anaerobic corrosion of
10 the metallic iron by water. Third, metallic iron may act as a catalyst for the reaction of hydrogen
11 with the halogenated hydrocarbon using the hydrogen produced on the surface of the iron metal
12 as the result of anaerobic corrosion with water. Fourth, solubilized ferrous iron can also act as a
13 reductant, albeit at a rate at least an order of magnitude slower.

14 At the end of the four month process, microbial processes are strongly active as
15 demonstrated by the disappearance of tetrachloroethane, 1, 1-TCA, and dichloromethane. The
16 alkaline conditions over the four months would suggest that the chloride production observed is
17 primarily due to the microbial dechlorination process. The 4,600 ppb increase in chlorides
18 observed over the period suggest significant microbial activity. There appears to be no toxicity
19 issues in any of the areas on site and there has not been any microbial accumulation of
20 intermediates of the degradation pathways. As a by-product of the program, benzene has also
21 been addressed in those areas where it has been found in the groundwater samples.

1 Therefore the foregoing description of the invention demonstrates that it provides a
2 method for accelerated dechlorination of matter contaminated with chlorinated solvents utilizing
3 mechanisms associated with zero valent metal oxidation. It shows that with the combination of
4 organic acids, hydrogen donors, oxygen scavengers, nutrients and zero valent metal, when added
5 to matter contaminated with chlorinated solvents, can provide a reducing environment. Thus, the
6 compounds disclosed have shown great utility in aiding the destruction or inactivation of
7 chlorinated solvents. The invention also confirms that zero valent metal, when added with other
8 compounds which provide a source of electron donors, nutrients, and reducing agents, will
9 stimulate naturally occurring microorganisms while oxidizing dissolved phase target compounds
10 via the surface action of the iron particles resulting in the breakdown of chlorinated solvents.

11 It should be understood that there may be other modifications and changes to the present
12 invention that will be obvious to those of skill in the art from the foregoing description, however,
13 the present invention should be limited only by the following claims and their legal equivalents.

CLAIMS

1. A method for accelerated anaerobic dechlorination of subsoil matter, comprising:
placing an injection rod into a soil to be treated to carry injectants under pressure
to the soil;
injecting a gas under pressure through said injection rod and into said soil to
establish preferential horizontal delivery pathways therein;
injecting a reducing agent under pressure through said rod and said soil pathways
to remove oxygen from groundwater and soil moisture;
injecting a mixture under pressure including zero valent metal through said rod
and into said soil pathways to biologically react with the dissolved chlorinated solvents in the
groundwater; and
injecting an organic hydrogen donor under pressure through said rod into the soil
pathway to produce dechlorinating conditions such that indigenous anaerobic bacteria
biodegrade residual concentrations of chlorinated solvents.
2. The method of claim 1 wherein said reducing agent is sodium sulfite.
3. The method of claim 2 wherein said organic hydrogen donor mixture further
includes vitamins B2 and B12.
4. The method of claim 1 wherein the mixture further includes nutrients.
5. The method of claim 4 wherein said nutrients are organic ammonia and
ortho-phosphate.
6. The method of claim 5 wherein said organic hydrogen donor is from the group

1 consisting of lactate, propionate, chitin, butyrate, acetate, sugars, glycerol tripolylactate, xylitol
2 pentapolylactate, and sorbitol hexapolylactate.

3 7. The method of claim 6 wherein said gas is from the group of nitrogen and carbon
4 dioxide.

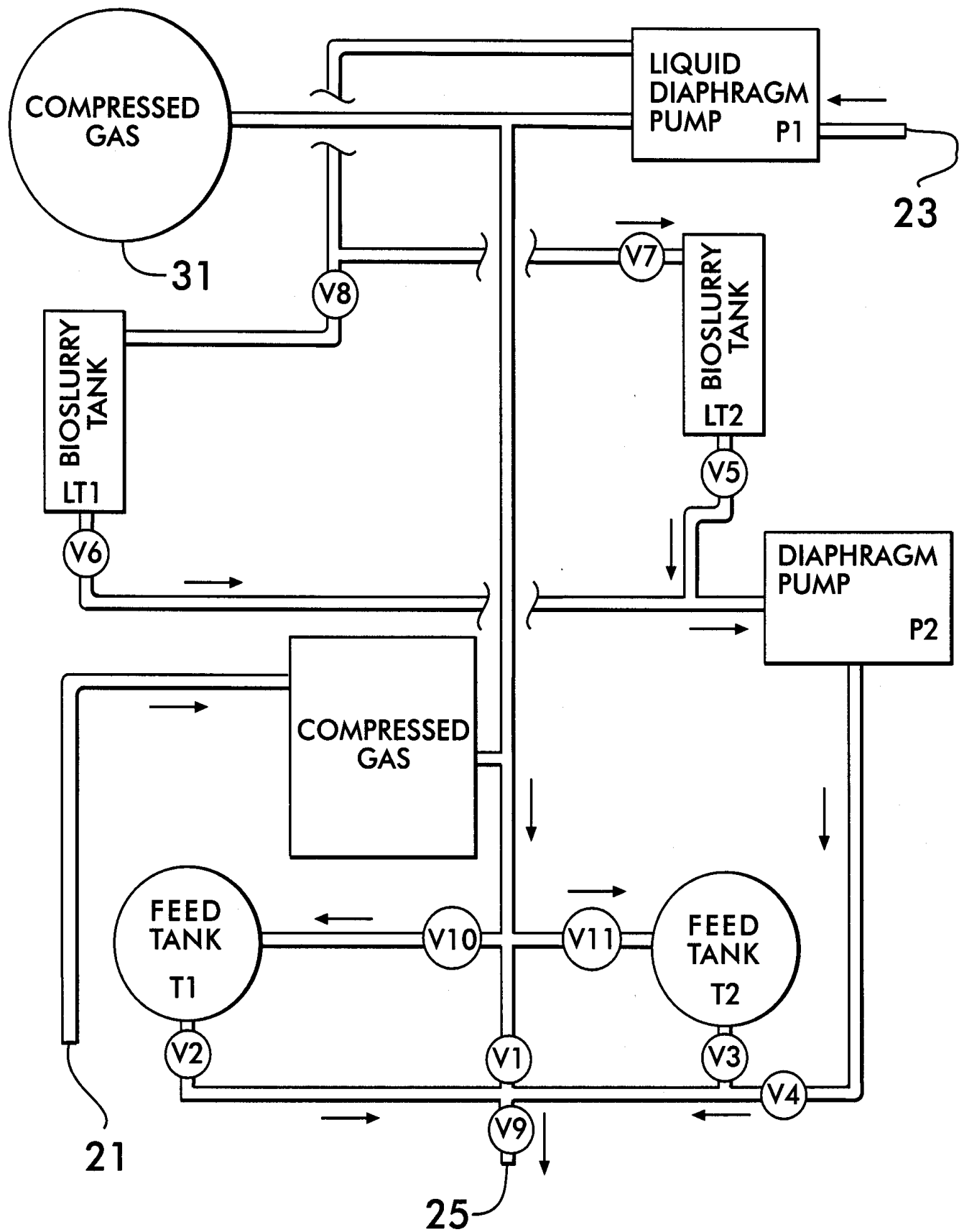
5 8. The method of claim 7 wherein said zero valent metal mixture is a colloidal
6 suspension in a sodium sulfite solution.

7 9. The method of claim 8 further including, after the step of injecting the organic
8 hydrogen donor, an additional step of injecting into the soil a sodium sulfite and nutrient solution
9 to provide for further in-situ mixing and penetration of anaerobic stimulating products.

10 10. The method of claim 9 further including a final step of gas injection to clear said
11 injection rod and fluid conduit lines connected thereto.

ABSTRACT

Accelerated dechlorination of soil and water contaminated with chlorinated solvents is achieved by stimulating anaerobic microorganisms and thus increasing the rate of biological mineralization of the solvents. This is accomplished by a treatment process consisting of colloidal suspension of metal powder, an organic hydrogen donor, chemical oxygen scavengers in solution with essential nutrients, and vitamin stimulants such as B2 and B12 delivered via compressed gases N or CO₂ so as not to oxygenate an environment targeted for anaerobic processes. The treatment stimulates naturally occurring microorganisms while oxidizing dissolved phase target compounds via the surface action of the iron particles resulting in the breakdown of chlorinated solvents such as tetrachloroethene, trichloroethene, carbon tetrachloride and their daughter products.



DECLARATION FOR PATENT APPLICATION

We, Michael Scalzi and Wade Meese, declare as follows:

Our residences, post office addresses and citizenships are as stated below next to our names.

We believe we are the original, first and sole inventors of the subject matter which is claimed and for which a patent is sought on the invention entitled

METHOD FOR ACCELERATED DECHLORINATION OF MATTER

the specification of which is attached hereto.

We hereby state that we have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

We acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, Paragraph 1.56(a).

Also, we hereby appoint GREGORY J. GORE, Reg. No. 30,057, of 70 W. Oakland Ave., Suite 316, Doylestown, Pennsylvania 18901, our attorney with full power of substitution and revocation, to prosecute this application, to make alterations and amendments therein, to receive the Letters Patent and to transact all business in the Patent and Trademark Office connected therewith.

Address all telephone calls to Gregory J. Gore, at telephone number (215) 348-1442.

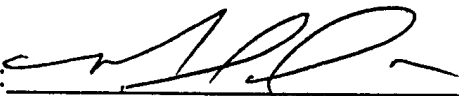
Address all correspondence to Gregory J. Gore, 70 W. Oakland Ave., Suite 316, Doylestown, Pennsylvania 18901.

We hereby claim the benefit under 35 U.S.C. 119E of United States Provisional Patent

Application Number 60/437,983 filed on January 6, 2003 titled "METHOD FOR
ACCELERATED DECHLORINATION OF MATTER."

We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issued thereon.

FULL NAME OF JOINT INVENTOR: Michael Scalzi

INVENTOR'S SIGNATURE:  DATE: 6-25-03

RESIDENCE: 3510 Concord Road
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POST OFFICE ADDRESS: 3510 Concord Road
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CITIZENSHIP: U.S.A.

FULL NAME OF JOINT INVENTOR: Wade Meese

INVENTOR'S SIGNATURE:  DATE: 6-25-03

RESIDENCE: 7891 Kirkby Court
Worthington, OH 43085

POST OFFICE ADDRESS: 7891 Kirkby Court
Worthington, OH 43085

CITIZENSHIP: U.S.A.

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	SCALZI-METHOD
		Application Number	
Title of Invention	METHOD FOR ACCELERATED DECHLORINATION OF MATTER		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2

- ☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Applicant Information:

Applicant 1						Remove	
Applicant Authority		☒ Inventor			☐ Legal Representative under 35 U.S.C. 117		☐ Party of Interest under 35 U.S.C. 118
Prefix	Given Name	Middle Name		Family Name		Suffix	
Mr.	Michael			Scalzi			
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service							
City	Doylestown	State/Province	PA	Country of Residence i		US	
Citizenship under 37 CFR 1.41(b) i		US					
Mailing Address of Applicant:							
Address 1		3510 Concord Road					
Address 2							
City	Doylestown		State/Province		PA		
Postal Code	18901		Country i	US			
Applicant 2						Remove	
Applicant Authority		☒ Inventor			☐ Legal Representative under 35 U.S.C. 117		☐ Party of Interest under 35 U.S.C. 118
Prefix	Given Name	Middle Name		Family Name		Suffix	
Mr.	Wade			Meese			
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service							
City	Worthington	State/Province	OH	Country of Residence i		US	
Citizenship under 37 CFR 1.41(b) i		US					
Mailing Address of Applicant:							
Address 1		7891 Kirkby Court					
Address 2							
City	Worthington		State/Province		OH		
Postal Code	43085		Country i	US			
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button.							
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Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

- ☐ An Address is being provided for the correspondence Information of this application.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	SCALZI-METHOD	
		Application Number		
Title of Invention	METHOD FOR ACCELERATED DECHLORINATION OF MATTER			
Customer Number	41599			
Email Address	ggore@goreiplaw.com		Add Email	Remove Email

Application Information:

Title of the Invention	METHOD FOR ACCELERATED DECHLORINATION OF MATTER			
Attorney Docket Number	SCALZI-METHOD	Small Entity Status Claimed		☒
Application Type	Nonprovisional			
Subject Matter	Utility			
Suggested Class (if any)		Sub Class (if any)		
Suggested Technology Center (if any)				
Total Number of Drawing Sheets (if any)	1	Suggested Figure for Publication (if any)		
Publication Information:				
☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)				
☐ Request Not to Publish. I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application has not been and will not be the subject of an application filed in another country, or under a multilateral agreement, that requires publication at eighteen months after filing.				

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Enter either Customer Number or complete the Representative Name section below. If both sections are completed the Customer Number will be used for the Representative Information during processing.			
Please Select One:	☒ Customer Number	☐ US Patent Practitioner	☐ US Representative (37 CFR 11.9)
Customer Number	41599		

Domestic Priority Information:

This section allows for the applicant to claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c). Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78(a)(2) or CFR 1.78(a)(4), and need not otherwise be made part of the specification.			
Prior Application Status	Pending	Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	Continuation of	10610558	2003-07-02
Additional Domestic Priority Data may be generated within this form by selecting the Add button.			Add

Foreign Priority Information:

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	SCALZI-METHOD
		Application Number	
Title of Invention	METHOD FOR ACCELERATED DECHLORINATION OF MATTER		

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).

			Remove
Application Number	Country ⁱ	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
			☒ Yes ☐ No
Additional Foreign Priority Data may be generated within this form by selecting the Add button.			Add

Assignee Information:

Providing this information in the application data sheet does not substitute for compliance with any requirement of part 3 of Title 37 of the CFR to have an assignment recorded in the Office.

Assignee 1			Remove
If the Assignee is an Organization check here. ☒			
Organization Name	Innovative Environmental Technologies, Inc.		
Mailing Address Information:			
Address 1	3510 Concord Road		
Address 2			
City	Doylestown	State/Province	PA
Country ⁱ	US	Postal Code	18901
Phone Number		Fax Number	
Email Address			
Additional Assignee Data may be generated within this form by selecting the Add button.			Add

Signature:

A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.

Signature	/Gregory J Gore/		Date (YYYY-MM-DD)	2006-06-13
First Name	Gregory	Last Name	Gore	Registration Number
			30057	

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	SCALZI-METHOD
First Inventor	Michael Scalzi
Title	METHOD FOR ACCELERATED DECHLORINATION
Express Mail Label No.	

APPLICATION ELEMENTS See MPEP chapter 600 concerning utility patent application contents.	ADDRESS TO: Commissioner for Patents P.O. Box 1450 Alexandria VA 22313-1450
---	---

1. ☐ Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original and a duplicate for fee processing)
2. ☒ Applicant claims small entity status.
See 37 CFR 1.27.
3. ☒ Specification [Total Pages 14]
Both the claims and abstract must start on a new page
(For information on the preferred arrangement, see MPEP 608.01(a))
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 1]
5. Oath or Declaration [Total Sheets 2]
 a. ☐ Newly executed (original or copy)
 b. ☒ A copy from a prior application (37 CFR 1.63(d))
 (for continuation/divisional with Box 18 completed)
 i. ☐ **DELETION OF INVENTOR(S)**
 Signed statement attached deleting inventor(s)
 name in the prior application, see 37 CFR
 1.63(d)(2) and 1.33(b).
 6. ☒ Application Data Sheet. See 37 CFR 1.76
 7. ☐ CD-ROM or CD-R in duplicate, large table or
 Computer Program (Appendix)
☐ Landscape Table on CD
 8. Nucleotide and/or Amino Acid Sequence Submission
 (if applicable, items a. - c. are required)
 a. ☐ Computer Readable Form (CRF)
 b. Specification Sequence Listing on:
 i. ☐ CD-ROM or CD-R (2 copies); or
 ii. ☐ Paper
 c. ☐ Statements verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

9. ☐ Assignment Papers (cover sheet & document(s))
 Name of Assignee _____
10. ☐ 37 CFR 3.73(b) Statement (when there is an assignee) ☐ Power of Attorney
11. ☐ English Translation Document (if applicable)
12. ☐ Information Disclosure Statement (PTO/SB/08 or PTO-1449)
☐ Copies of citations attached
13. ☐ Preliminary Amendment
14. ☐ Return Receipt Postcard (MPEP 503)
 (Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s)
 (if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122(b)(2)(B)(i).
 Applicant must attach form PTO/SB/35 or equivalent.
17. ☐ Other: _____

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:

☒ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: 10/610,558

Prior application information: Examiner Edward M. Johnson Art Unit: 1754

19. CORRESPONDENCE ADDRESS

☒ The address associated with Customer Number: 41599 OR ☐ Correspondence address below

Name					
Address					
City	State	Zip Code			
Country	Telephone	Email			

Signature		Date	<u>6/13/06</u>
Name (Print/Type)	Gregory J. Gore	Registration No. (Attorney/Agent)	30,057

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Electronic Patent Application Fee Transmittal

Application Number:				
Filing Date:				
Title of Invention:	METHOD FOR ACCELERATED DECHLORINATION OF MATTER			
First Named Inventor:	Michael Scalzi			
Filer:	Gregory J. Gore/Melanie Rush			
Attorney Docket Number:	SCALZI-METHOD			
Filed as Small Entity				
Utility Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	75	75
Utility Search Fee	2111	1	250	250
Utility Examination Fee	2311	1	100	100
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				425

Electronic Acknowledgement Receipt

EFS ID:	1076535
Application Number:	11423749
Confirmation Number:	6408
Title of Invention:	METHOD FOR ACCELERATED DECHLORINATION OF MATTER
First Named Inventor:	Michael Scalzi
Customer Number:	41599
Filer:	Gregory J. Gore/Melanie Rush
Filer Authorized By:	Gregory J. Gore
Attorney Docket Number:	SCALZI-METHOD
Receipt Date:	13-JUN-2006
Filing Date:	
Time Stamp:	12:15:44
Application Type:	Utility
International Application Number:	

Payment information:

Submitted with Payment	yes
Payment was successfully received in RAM	\$ 425
RAM confirmation Number	719
Deposit Account	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part	Pages
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1		PatentAppl.pdf	80920	yes	13
	Multipart Description				
	Doc Desc		Start	End	
	Specification		1	11	
	Claims		12	13	
Warnings:					
Information:					
2	Abstract	Abstract.pdf	34394	no	1
Warnings:					
Information:					
3	Drawings	Drawing.pdf	172243	no	1
Warnings:					
Information:					
4	Oath or Declaration filed	Declaration.pdf	544622	no	2
Warnings:					
Information:					
5	Application Data Sheet	US_ADS_Form_SB_14.pdf	2615507	no	4
Warnings:					
Information:					
6	Transmittal letter	Transmittal.pdf	537900	no	1
Warnings:					
Information:					
7	Fee Worksheet (PTO-875)	fee-info.pdf	8363	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			3993949		

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.