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12/736,193	09/16/2010	Andrea Rossi	1011-1203	2834
47888	7590	03/26/2014	EXAMINER	
HEDMAN & COSTIGAN, P.C. ONE ROCKEFELLER PLAZA, 11TH FLOOR NEW YORK, NY 10020			BURKE, SEAN P	
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**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.

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1. The present application is being examined under the pre-AIA first to invent provisions.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

2. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### ***Specification***

3. The specification is objected to as inoperable. Specifically, there is no evidence in the corpus of nuclear science to substantiate the claim that nickel will spontaneously ionize hydrogen gas and thereafter "absorb" the resulting proton. Note that the reaction  $^{58}\text{Ni}(p,\gamma)^{59}\text{Cu}$  is known and has been experimentally observed, it is in context of an accelerated proton beam into a nickel target. The element of acceleration is necessary in this matter – it is the only way for the proton to overcome the basic Coulomb repulsion between the proton and the nickel nuclei.

4. There is presently no peer-reviewed evidence to demonstrate the spontaneous fusion of nickel and protons. Additionally, one of ordinary skill in the art would be skeptical that the reaction could occur as claimed because no element overcomes the natural Coulomb repulsion between the interacting nuclei.

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5. Additionally, the Examiner notes that if the reaction occurred as claimed by the Applicant, it would also spontaneously occur in nature. This would lead to two important results: first, as a natural phenomenon, it would not be patentable subject matter second, the ambient supply of hydrogen would cause **any** sample of nickel to automatically undergo the reaction - a reaction which would produce damaging - and noticeable - gamma emissions. No such emissions have ever been observed.
6. Accordingly, the specification and all claims are found to be inoperable.

#### ***Claim Objections***

7. Claims 1 and 7 are objected to because of the following informalities: There is no such thing as a "hexothermic" reaction. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 101***

8. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claims 1-10 are rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility. The claims are rejected for the reasons disclosed above.

#### ***Claim Rejections - 35 USC § 112***

10. The following is a quotation of the first paragraph of 35 U.S.C. 112(a):

(a) IN GENERAL.—The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

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The following is a quotation of the first paragraph of pre-AIA 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11. Claims 1-10 rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, any claim that is inoperable is necessarily non-enabled. *In re Swartz*, 232 F.3d 862 (Fed. Cir. 2000).

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under pre-AIA 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**14. Claims 1 and 7 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Butler et al., "Radiative Proton Capture by Ni<sup>58</sup>, Ni<sup>60</sup>, and Co<sup>59</sup>."**

15. Notwithstanding the inoperability of the claimed device, the reaction itself is obvious over Butler. Note, the Butler device uses the more traditional method of nucleosynthesis which employs accelerating protons into a stationary target. However, even if the alleged reaction could occur, one of ordinary skill in the art would understand that the reaction would be subject varying the basic reaction parameters.

16. Accordingly, claims 1 and 7 are rejected as obvious over Butler.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SEAN P. BURKE whose telephone number is (571)270-5493. The examiner can normally be reached on Monday-Friday, 8:30 AM to 5:00 PM..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on (571) 262-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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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.

/S. P. B./  
Examiner, Art Unit 3646

/JACK W KEITH/  
Supervisory Patent Examiner, Art Unit 3646