

## **DETAILED CORRESPONDENCE**

### ***Notice of Pre-AIA or AIA Status***

1. The present application, filed on or after 16 March 2013, is being examined under the first inventor to file provisions of the AIA.

Claims 32-51 are pending.

### **REQUIREMENT FOR UNITY OF INVENTION**

2. As provided in 37 CFR 1.475(a), a national stage application shall relate to one invention only or to a group of inventions so linked as to form a single general inventive concept ("requirement of unity of invention"). Where a group of inventions is claimed in a national stage application, the requirement of unity of invention shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features. The expression "special technical features" shall mean those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art.

The determination whether a group of inventions is so linked as to form a single general inventive concept shall be made without regard to whether the inventions are claimed in separate claims or as alternatives within a single claim. See 37 CFR 1.475(e).

3. This application contains claims directed to more than one species of a generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

**A. The “energizing” species selected from:**

- (A1) energizing the dusty compound by heating  
(for example, see subject matter in claim 32); or
- (A2) energizing the dusty compound by heating  
(for example, see subject matter in claim 50).

**B. The “arrangement” species selected from:**

- (B1) transition metal and radioactive material are separated;  
(e.g., the transition metal is outside a closed container, and the radioactive material is in said closed container) (for example, see subject matter in claim 32); or
- (B2) radioactive material is close to or mixed with the dusty compound (for example, see subject matter in claim 50).

**C. The “dusty compound” species selected from:**

- (C1) Ni and Fe;
- (C2) Cu;
- (C3) graphite;
- (C4) Cr; or
- (C5) a single particular combination taken from any of (C1)-(C4).

4. Applicant is required, in a Reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The Reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, Applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise require all limitations of an allowed generic claim. Currently, no claim appears to be generic.

5. The groups of inventions/species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Each one of the Species A, B, and C lacks unity of invention because they do not share the same or corresponding technical feature. Each species differs in feature, structure, and/or characteristic. Nor do they result in the same end product. Furthermore, as the claims are best understood, each one of the Species A, B, and C lacks unity of invention because they do not share a special technical feature.

6. Applicant is advised that the Reply to this requirement to be complete must include both: (i) an election of a species/invention (*one from each of A-C*) to be examined even though the requirement may be traversed (37 CFR 1.143); and (ii) identification of the claims encompassing the elected species/invention.

The election of a species or invention may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the Reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, Applicant must indicate which of these claims are readable on the elected species or invention.

Should Applicant traverse on the ground that the inventions have unity of invention (37 CFR 1.475(a)), Applicant must provide reasons in support thereof. Applicant may submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. Where such evidence or admission is provided by Applicant, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

### ***Application Status Information***

7. 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>. For questions on access to the Private PAIR system, contact the Electronic Business

Art Unit: 3646

Center at 866-217-9197 (toll-free). For 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.

### ***Interview Information***

8. Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, Applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

### ***Contact Information***

9. Any inquiry concerning this communication should be directed to examiner Daniel Wasil whose telephone number is (571) 272-4654. The examiner can normally be reached on Monday-Thursday from 10:00-4:00 EST. The examiner's supervisor, SPE Jack Keith, can be reached at (571) 272-6878.

/DANIEL WASIL/  
Examiner, Art Unit 3646  
Reg. No. 45,303

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