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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
Row 1: 12/497,652, 07/04/2009, Glenn J. Leedy, 0907043DSA3L.US, 6944
Row 2: 30232, 7590, 08/27/2014, [EXAMINER: JOY, JEREMY J], [ART UNIT: 2896], [PAPER NUMBER: ]
Row 3: [MAIL DATE: 08/27/2014], [DELIVERY MODE: 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.

<b>Office Action Summary</b>	<b>Application No.</b> 12/497,652	<b>Applicant(s)</b> LEEDY, GLENN J.	
	<b>Examiner</b> JEREMY JOY	<b>Art Unit</b> 2896	<b>AIA (First Inventor to File) Status</b> No

-- 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 MONTHS 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 07/22/2014.  
 A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on \_\_\_\_\_.
- 2a)  This action is **FINAL**.                      2b)  This action is non-final.
- 3)  An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4)  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\***

- 5)  Claim(s) 1-12, 17-22, 26 and 35-99 is/are pending in the application.  
5a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 6)  Claim(s) \_\_\_\_\_ is/are allowed.
- 7)  Claim(s) 1-12, 17-22, 26, and 35-99 is/are rejected.
- 8)  Claim(s) \_\_\_\_\_ is/are objected to.
- 9)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

\* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see [http://www.uspto.gov/patents/init\\_events/pph/index.jsp](http://www.uspto.gov/patents/init_events/pph/index.jsp) or send an inquiry to [PPHfeedback@uspto.gov](mailto:PPHfeedback@uspto.gov).

**Application Papers**

- 10)  The specification is objected to by the Examiner.
- 11)  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).

**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).

**Certified copies:**

- 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)).

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

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892)
- 2)  Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 3)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 4)  Other: \_\_\_\_\_.

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

### ***Response to Arguments***

Applicant's arguments filed 07/22/2014 have been fully considered but they are not persuasive.

(i) In regards to the applicant's arguments that the rejection is unjustifiably speculative, the examiner respectfully disagrees. In particular, just because the applicant alleges that the flexibility of *Leedy's* circuit layers are related to conformance, does not mean that modifying *Bertin* with the low stress dielectric of *Leedy* would not be desired or lead to an improved device. The applicant defines that the flexibility of their device is based on a thin wafer and the inclusion of a low stress dielectric layer. Therefore including a low stress dielectric layer within the device as taught by *Bertin* would lead to a flexible device. Furthermore, *Leedy* specifically states that the inclusion of low stress dielectrics in devices provide advantages to lower the cost and complexity of circuit fabrication and will enhance the performance of the circuit operation. Lastly, rather than using the oxidation process of forming the insulation layers which could perhaps damage the device through the thermal processes, forming the dielectric as taught by *Leedy* is shown to be an alternative method that would not require the thermal process and would lead to a device that will have enhanced performance characteristics as taught.

(ii) In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In particular, as shown the rejection does most definitely identify motivation to combine the references within the references themselves (see above). Furthermore, it is common knowledge that insulation layers and more specifically silicon oxide layers maybe be formed from other methods than oxidation. *Leedy* teaches and shows a valid alternative as well as clearly lays out benefits for using said low stress silicon oxide layer in a similar device.

(iii) In regards to the applicant's arguments that *Bertin* does not teach forming dielectric layer through oxidation the examiner respectfully disagrees. In particular, *Bertin* clearly teaches that the dielectric layers are formed by oxidation (Col. 4, lines 30-40) and the applicant even admitted as such in the arguments filed on 04/05/2013 (Page 28). In said arguments, the applicant admitted that the oxide is formed of thermally grown oxide which is known to be high stress and 5 to 10 times the level of stress than the oxides taught in the applicant's specification. Therefore, the examiner's rational that said low stress dielectrics as taught by *Leedy* would lead to a dielectric with

much lower stress than the dielectric as taught by *Bertin* is accurate. And the examiner maintains that one would want a device with dielectrics of much lower stress for, at the very least, the reasons mentioned above.

(iv) In regards to the applicant's question on why a lower stress dielectric would be desirable in *Bertin*, the examiner responds by asking: why would one of ordinary skill and creativity in the art not look to known and available art to improve the device of *Bertin*? Since *Leedy* provided the motivation to include low stress dielectric as mentioned above why would one not look to said teachings of *Leedy* and modify the device of *Bertin* to improve it?

(v) In regards to the applicant's arguments that the CTE matching of *Leedy* is not required in *Bertin*, the examiner acknowledges that while this may be true it does not mean that it wouldn't be desirable. *Leedy* teaches that the CTE matching would help to minimize the extrinsic overall stress of the circuit layers. Since, *Bertin* teaches forming circuit layers why would one having ordinary skill in the art not modify *Bertin* with the teachings of *Leedy* to help minimize stress regardless of whether *Bertin* teaches free-standing circuit membranes.

(vi) In regards to the applicant's arguments that using the technique of *Leedy* rather than *Bertin* would not lower the cost or enhance the performance, the examiner respectfully disagrees. *Leedy* specifically states that using layers that are formed by the

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