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OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314			PARSONS, THOMAS H	
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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* MARIANNE CHAMI and LIONEL PICARD

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Appeal 2019-000972  
Application 13/818,191  
Technology Center 1700

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Before MONTÉ T. SQUIRE, MERRELL C. CASHION, JR., and  
JANE E. INGLESE, *Administrative Patent Judges*.

SQUIRE, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>

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<sup>1</sup> In this Decision, we refer to the Specification filed Feb. 21, 2013 (“Spec.”); Final Office Action dated July 1, 2016 (“Final Act.”); Advisory Action dated Nov. 28, 2016 (“Adv. Act.”); Appeal Brief filed Apr. 26, 2017 (“Appeal Br.”); Examiner’s Answer dated Sept. 22, 2017 (“Ans.”); and Reply Brief filed Nov. 16, 2018 (“Reply Br.”).

Appellant<sup>2</sup> appeals under 35 U.S.C. § 134(a) from the Examiner's decision finally rejecting claims 17–32, which are all of the claims pending in this application.<sup>3</sup> We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

*The Claimed Subject Matter*

Appellant's disclosure relates to a bipolar lithium electrochemical battery including a bipolar element, and a casing encapsulating the bipolar element. Spec. 7; Abstract. Claim 17 is illustrative of the claimed subject matter on appeal and is reproduced below from the Claims Appendix to the Appeal Brief:

17. A lithium bipolar electrochemical battery comprising:  
at least one bipolar element; and  
a casing encapsulating the bipolar element;

wherein the casing comprises a composite material, including a matrix and ***at least one porous reinforcement having interconnected openings***, the matrix of which including at least one hardened polymer interspersed throughout said openings such that the hardened polymer impregnates the at least one porous reinforcement, wherein the at least one porous reinforcement completely surrounds all sides of the bipolar element such that the at least one porous reinforcement and the at least one hardened polymer interspersed throughout said openings encase the bipolar element and ***apply a pressure to***

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<sup>2</sup> We use the word “Appellant” to refer to “Applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies “COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES” as the real party in interest. Appeal Br. 1.

<sup>3</sup> Claims 1–16 are canceled. Appeal Br. 7.

*either side of the bipolar element sufficient to maintain a contact between constituents of the bipolar element.*

Appeal Br. 7 (Claims Appendix).

### *The References*

The Examiner relies on the following prior art references as evidence in rejecting the claims on appeal:

Fukuzawa et al. (“Fukuzawa”)	US 7,318,979 B2	Jan. 15, 2008
Kazuya (“JP ’154”)	JP2000106154 (A)	Apr. 11, 2000
Nakamura (“JP ’659”) <sup>4</sup>	JP2008027659 (A)	Feb. 7, 2008
Lee (“KR ’413”)	KR 10-2007-0089413	Mar. 9, 2009

### *The Rejections*

On appeal, the Examiner maintains (Ans. 2) the following rejections:

1. Claims 17–29 are rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over JP ’659 in view of JP ’154, and further in view of KR ’413 (“Rejection 1”). Final Act. 2.

2. Claims 30–32 are rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over JP ’659 in view of JP ’154, and further in view of KR ’413, as applied to claim 17 above, and further in view of Fukuzawa (“Rejection 2”). Final Act. 9.

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<sup>4</sup> In rejecting the claims on appeal, the Examiner relies on and cites to Nakamura, US 2009/0197161 A1, published Aug. 6, 2009 (“Nakamura”) as the English translation of the JP ’659 reference. *See* Final Act. 2.

## OPINION

Having considered the respective positions advanced by the Examiner and Appellant in light of this appeal record, we affirm the Examiner's rejections based on the fact-finding and reasoning set forth in the Answer, Advisory Action, and Final Office Action, which we adopt as our own. We add the following primarily for emphasis.

### *Rejection 1*

Appellant argues claims 17 and 24 as a group and does not present separate argument for the patentability of any of the remaining claims subject to the Examiner's rejections. Appeal Br. 3, 6. We select claim 17 as representative and remaining claims 18–29 stand or fall with claim 17. 37 C.F.R. § 41.37(c)(1)(iv).

The Examiner determines the combination of JP '659, JP '154, and KR '413 suggests a lithium bipolar electrochemical battery satisfying all of the limitations of claim 17 and concludes the combination would have rendered the claim obvious. Final Act. 2–4. On the record before us, we find that a preponderance of the evidence and sound technical reasoning support the Examiner's analysis and determination that the combination of JP '659, JP '154, and KR '413 suggests a lithium bipolar electrochemical battery satisfying all of the limitations of claim 17, and conclusion that the combination would have rendered the claim obvious. JP '659, Figs. 1–6; Nakamura, Figs. 1–6, ¶¶ 15, 16, 37, 41, 45, 15–45; JP '154, Figs. 1–3, ¶¶ 6, 9–31, 37–42, 48, 67; KR '413, Abstract, 3:36–4:2, 4:14–16, 5:3–6.

Appellant argues that the Examiner's rejection of claim 17 should be reversed because the cited art does not teach or suggest “at least one porous reinforcement having interconnected openings,” as recited in the claim.

Appeal Br. 3–6; Reply Br. 1–4. In particular, Appellant contends that although KR '413 discloses a battery case with a body that includes a fiber reinforced composite material, there is no discussion in the reference, or reasoning provided by the Examiner in the rejection, “to explain how mixing of simple fibers in the resin provides the porous reinforcement as claimed.” Appeal Br. 4. Appellant contends that, in contrast to the claimed invention, KR '413 merely discloses installation of a “prepreg” and Appellant’s Specification does not equate a prepreg to the “porous reinforcement having interconnected openings” element of the claim. *Id.* at 4–5; *see also* Reply Br. 3 (asserting “that the term ‘prepreg’ is not used in the claim”).

We do not find Appellant’s argument persuasive of reversible error in the Examiner’s determination of obviousness. Contrary to what Appellant argues (Appeal Br. 4–5; Reply Br. 3), we find a preponderance of the evidence supports the Examiner’s finding that the cited art teaches or suggests “at least one porous reinforcement having interconnected openings,” as recited in the claim. As the Examiner finds (Ans. 3; Final Act. 3–4), KR '413 explicitly discloses a battery casing comprising a “fibre reinforced composite,” including a carbon fibre mixed with a polymer resin. KR '413, Abstract (“The carbon fiber . . . and polymer resin are mixed and the fibre reinforced composite is formed.”), 3:36–4:2, 4:14–16, 5:3–6.

As the Examiner further finds (Ans. 3), KR '413 discloses that the fibre reinforced composite may be a “prepreg,” i.e., reinforcing composite material impregnated with a resin (KR '413, Abstract, 3:36–4:2, 4:14–16, 5:3–6), which is consistent with Appellant’s disclosure in the Specification regarding the claimed composite material. *See* Spec. 8:9–10 (disclosing “at least one hardened polymer impregnating the porous reinforcement”), 9:16–

26 (disclosing the “reinforcement according to the invention may contain . . . carbon fibres” and “is preferably a fibre-based material”), 10:21–29 (disclosing “impregnation polymer(s) which are suitable in the context of the invention”), 12:20–23 (disclosing “at least one porous reinforcement impregnated by at least one polymer”).

Appellant’s arguments are not persuasive of reversible error in the Examiner’s factual-findings and analysis in this regard because they are conclusory and unsupported by persuasive evidence in the record. Attorney argument is not evidence. *In re De Blauwe*, 736 F.2d 699, 705 (Fed. Cir. 1984).

Appellant’s contentions that “the term ‘prepreg’ is not used in the claim” (Reply Br. 3) and the Specification does not equate a prepreg to the “porous reinforcement having interconnected openings” element of the claim (Appeal Br. 4–5) are not persuasive because a “specific limitation need not be disclosed *in haec verba* in the reference.” *In re Bode*, 550 F.2d 656, 660 (1977); *see also In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990) (explaining that there is no *ipsissimis verbis* test for determining whether a reference discloses a claim element, i.e., identity of terminology is not required).

Next, Appellant argues the Examiner’s rejection should be reversed because the cited art does not teach or suggest the “apply a pressure to either side of the bipolar element sufficient to maintain a contact between constituents of the bipolar element” recitation of the claim. Appeal Br. 5. In particular, Appellant asserts that

[n]one of the cited references discuss a structure in which the reinforcing member provides pressure to maintain contact between constituents of the bipolar element . . .

[and] [t]he Final Action does not adequately explain how this feature is disclosed in the references.

*Id.* at 5; *see also* Reply Br. 4 (asserting the Examiner “ignores the role of this claimed structure in applying pressure to reduce separation failures” and “amounts to an inherency argument of the prior art structure without any reasoning”).

Appellant’s contentions in this regard are equally unpersuasive because they, too, are conclusory. *De Blauwe*, 736 F.2d 699, 705; *cf. also In re Lovin*, 652 F.3d 1349, 1356-57 (Fed. Cir. 2011) (holding that a “naked assertion” that the references fail to disclose or suggest a claim limitation is not an argument in support of separate patentability).

Moreover, based on the fact-finding and reasoning provided by the Examiner at pages 4–5 of the Answer and pages 3–4 of the Final Office Action, we find a preponderance of the evidence supports the Examiner’s finding that the cited art suggests the “apply a pressure to either side of the bipolar element sufficient to maintain a contact between constituents of the bipolar element” recitation of the claim. In particular, as the Examiner finds (Final Act. 3), JP ’154 discloses a battery casing comprising a composite material that completely surrounds all sides of a battery element, encases the battery element, and applies a pressure to either side of the battery element to maintain contact between constituents of the battery element. JP ’154, Abstract, Figs. 1–3, ¶¶ 9–31, 37–42, 48.

As the Examiner further finds and explains (Final Act. 3), one of ordinary skill in the art would have had reason to modify JP ’659’s battery casing with the casing of JP ’154 to provide a battery case that does not have bulging and to prevent the battery’s characteristics from being impaired by maintaining the adhesion between a totally-solid battery element and an

armor body. *See* JP '154, Abstract (disclosing that “joining of the interface between the electrodes and the solid electrolyte can be maintained”), ¶ 6 (disclosing the casing “does not have bulging of a cell case . . . and the adhesion of a totally-solid battery element and an armor body are maintained” and “provid[es] the cell by which a battery characteristic is not impaired”), ¶ 67 (“There is not bulging at the time of obturation of a cell or deformation.”). *See also* *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 420 (2007) (explaining that any need or problem known in the art can provide a reason for combining the elements in the manner claimed).

Appellant fails to direct us to persuasive evidence or provide an adequate technical explanation to establish why the Examiner’s articulated reasoning lacks a rational underpinning or is otherwise based on some other reversible error. Appellant’s mere disagreement as to the Examiner’s factual findings and reasoning for combining the references, without more, is insufficient to establish reversible error. *Cf. SmithKline Beecham Corp. v. Apotex Corp.*, 439 F.3d 1312, 1320 (Fed. Cir. 2006) (“[M]ere statements of disagreement . . . as to the existence of factual disputes do not amount to a developed argument.”).

Accordingly, we affirm the Examiner’s rejection of claims 17–29 under 35 U.S.C. § 103(a) as obvious over the combination of JP '659, JP '154, and KR '413.

### *Rejection 2*

Appellant does not present any new or additional substantive arguments in response to the Examiner’s rejection of claims 30–32 under 35 U.S.C. § 103(a) as obvious over the combination of JP '659, JP '154,

KR '413, and Fukuzawa, which we refer to above as Rejection 2. *See* Appeal Br. 3–6; Reply Br. 1–4.

Accordingly, based on the findings and technical reasoning provided by the Examiner and for principally the same reasons discussed above for affirming Rejection 1, we affirm Rejection 2.

### CONCLUSION

In summary:

<b>Claim(s) Rejected</b>	<b>Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
17–29	§ 103(a) JP '659, JP '154, KR '413	17–29	
30–32	§ 103(a) JP '659, JP '154, KR '413, Fukuzawa	30–32	
<b>Overall Outcome</b>		17–32	

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1).

AFFIRMED