

NOTE: This disposition is nonprecedential.

**United States Court of Appeals  
for the Federal Circuit**

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**IN RE: THE PEN,**  
*Appellant*

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2023-2282

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Appeal from the United States Patent and Trademark  
Office, Patent Trial and Appeal Board in No. 16/104,878.

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Decided: June 12, 2024

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THE PEN, West Hollywood, CA, pro se.

MARY L. KELLY, Office of the Solicitor, United States  
Patent and Trademark Office, Alexandria, VA, for appellee  
Katherine K. Vidal. Also represented by KAKOLI  
CAPRIHAN, WILLIAM LAMARCA, AMY J. NELSON, FARHEENA  
YASMEEN RASHEED.

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Before MOORE, *Chief Judge*, TARANTO, *Circuit Judge*, and  
CECCHI, *District Judge*. \*

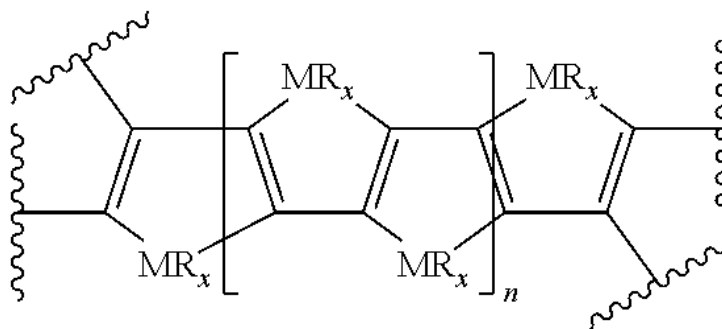
PER CURIAM.

The Pen (Pen) appeals a decision of the Patent Trial and Appeal Board (Board) affirming an Examiner's rejection of claims 1, 4–6, 10, and 13 of U.S. Patent Application No. 16/104,878 as unpatentable under 35 U.S.C § 112(a) for lack of enablement. We have jurisdiction under 28 U.S.C. § 1295(a)(4). For the reasons discussed below, *we affirm*.

#### BACKGROUND

The '878 Application is directed to metallole polymers with a polycyclic repeating unit backbone. Independent claim 1 is illustrative of claims at issue:

1. A polycyclic metallole heteroatom rich conductive long chain polymer comprised of the repeating unit in the brackets in either formula 2 below, where n is the number of repeating units, M is the heteroatom, R is any substituent, and x is the number of R substituents, depicted as



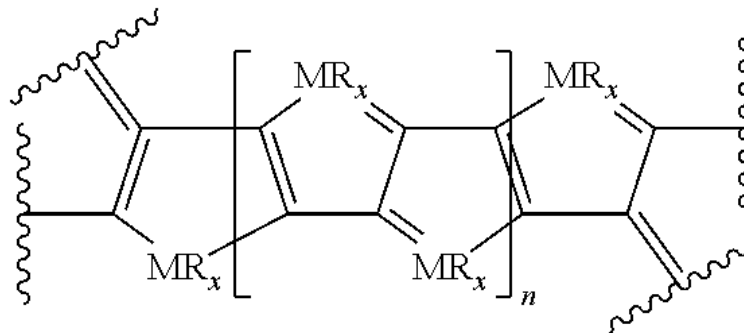

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\* Honorable Claire C. Cecchi, District Judge, United States District Court for the District of New Jersey, sitting by designation.

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or formula 4 below, where  $n$  is the number of repeating units,  $M$  is the heteroatom,  $R$  is any substituent, and  $x$  is the number of  $R$  substituents, depicted as



where there are more than eight repeating units, and where the metallole heteroatom is nitrogen.

J.A. 132–33.

The Examiner issued a final rejection for claims 1, 4–6, 10, and 13 of the '878 Application pursuant to 35 U.S.C. § 112(a) for failing to comply with the enablement requirement.<sup>1</sup> J.A. 142–43. The Examiner applied the enablement factors detailed in *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988), and discussed reasons why a skilled artisan would not be able to make and use the claimed invention without undue experimentation. J.A. 143–45. Specifically, the Examiner determined the claims were not enabled because “R” is not limited to any substituent “n” can be any number despite the closest prior art only achieving a length of 8 units and the amount of direction provided

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<sup>1</sup> Claims 2, 3, 7–9, 11, 12, 14, and 15 were withdrawn from consideration due to a requirement for election of species. J.A. 87, 141. Claim 5 was also rejected as indefinite, but that rejection was reversed by the Board and not at issue here. J.A. 9.

in the written description regarding material selection and synthetic routes was insufficient.

Pen appealed to the Board. The Board affirmed the Examiner's § 112(a) rejection. J.A. 9. In affirming, the Board noted the Examiner's *Wands* factor analysis and concluded the Examiner set forth a reasonable explanation why the full scope of the claims was not enabled and Pen failed to identify reversible error. *Id.* at 6–9. Pen timely appeals.

#### DISCUSSION

Whether a claim satisfies the enablement requirement is a question of law that may be based on underlying factual findings. *Medytox, Inc. v. Galderma S.A.*, 71 F.4th 990, 996 (Fed. Cir. 2023) (citing *Alcon Rsch. Ltd. v. Barr Lab'ys, Inc.*, 745 F.3d 1180, 1188, 1190 (Fed. Cir. 2014)). We review the Board's legal conclusions de novo and its factual findings for substantial evidence. *In re Kotzab*, 217 F.3d 1365, 1369 (Fed. Cir. 2000). “If the evidence in record will support several reasonable but contradictory conclusions, we will not find the Board's decision unsupported by substantial evidence simply because the Board chose one conclusion over another plausible alternative.” *In re Jolley*, 308 F.3d 1317, 1320 (Fed. Cir. 2002).

Section 112(a) sets forth the enablement requirement: “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.” 35 U.S.C. § 112(a). “If a patent claims an entire class of processes, machines, manufactures, or compositions of matter, the patent's specification must enable a person skilled in the art to make and use the entire class. In other words, the specification must enable the full scope of the

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invention as defined by the claims.” *Amgen Inc. v. Sanofi*, 143 S. Ct. 1243, 1254 (2023). In short, the more you claim, the more you must explain.

### I.

Pen argues the Board erred in relying on precedent not cited by the Examiner and asserts the '878 Application is factually distinguishable. We do not agree. The Board correctly cited case law from this Court and the Supreme Court in explaining the enablement requirement. J.A. 7, 8 (citing *Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1365 (Fed. Cir. 1997); *Amgen*, 143 S. Ct. at 1254). The Board also correctly set forth the evidentiary burdens for showing enablement in its citation to *In re Wright*, 999 F.2d 1557, 1561–62 (Fed. Cir. 1993). J.A. 7. Contrary to Pen's allegations, the Board did not analogize to the facts of any cases to present rejections beyond those addressed by the Examiner. The Board explained the law underlying the Examiner's rejection, which is not a new ground of rejection. *In re Biedermann*, 733 F.3d 329, 337 (Fed. Cir. 2013) (“A new ground of rejection, however, generally will not be found based on the Board ‘further explain[ing] the Examiner’s rejection’ or the Board’s thoroughness in responding to an applicant’s argument.” (alteration in original) (quoting *In re Jung*, 637 F.3d 1356, 1364–65 (Fed. Cir. 2011))).

Pen, however, in attempting to distinguish the cited cases, presents a new argument in this appeal. Pen alleges the “R” group claimed in the '878 Application has no effect on the purpose of the invention, conductivity. This is counterfactual, Pen argues, to the facts of *Amgen* and *Wright* because the structural variations in those cases would render the final product nonfunctional. Because Pen never made this argument below, it is forfeited. *In re Watts*, 354 F.3d 1362, 1367 (Fed. Cir. 2004) (“Just as it is important that the PTO in general be barred from raising new arguments on appeal to justify or support a decision of the Board, it is important that the applicant challenging a

decision not be permitted to raise arguments on appeal that were not presented to the Board.” (footnote omitted)).

## II.

Pen argues the Board erred in raising a new rejection based on the claimed polymer having no upper limit to the number of repeating units.<sup>2</sup> We do not agree. The Examiner specifically noted the prior art only supported an “n” of 8 conjugated units, whereas the ’878 Application claimed an “n” of more than 8, at least 50, and at least 1000. J.A. 143. Pen acknowledged this finding by the Examiner in his appeal brief to the Board. J.A. 156. The Examiner reiterated the same finding in the Examiner’s Answer to Pen’s appeal brief. *See, e.g.*, J.A. 181–82, 184. The Board did not raise this rejection for the first time. It properly considered the findings made by the Examiner.

## III.

Pen argues the Board erred in affirming the Examiner’s enablement analysis. We do not agree. The Examiner, in both the Final Rejection and the Examiner’s Answer, analyzed each *Wands* factor and concluded undue experimentation would be required to make and use the full scope of the claims of the ’878 Application. J.A. 143–45, 181–86.

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<sup>2</sup> Pen urges us to take judicial notice of the definition of “polymer.” According to Pen’s definition, polymers have no upper limit on repeating units and do not have a definite length. Pen Opening Br. at 9. We decline to take judicial notice as it is unnecessary to decide this case. Were we to accept Pen’s definition, it does not conflict with the position taken by the Examiner and the Board, that the polymer claimed has “no upper limit to the number of repeating units.” J.A. 8.

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The Board found no reversible error in the Examiner's determination that the breadth of the claims and the nature of the invention weighed against enablement because claim 1 claims a polymer comprising conjugated repeating units with a claimed number "n" of repeating units without pointing out the specific species of substituent "R," which could have indefinite number of species. J.A. 143. In response, Pen argues the "R" groups do not affect the synthesis of the claimed polymer and do not matter. This argument was not before the Board. Pen raises this argument for the first time on appeal, and it is therefore forfeited.<sup>3</sup> *In re Google Tech. Holdings LLC*, 980 F.3d 858, 863 (Fed. Cir. 2020).

The Board found no reversible error in the Examiner's determination that the state of the prior art weighed against enablement because no prior art supported enablement of the claimed polymer with the number of "n" repeating units claimed. Pen posits the Examiner's determination is illogical because it would require the invention to have already been invented. Pen misunderstands the Examiner's analysis. The Examiner did not require the invention to exist in order to weigh in favor of enablement, but instead focused on the gap between the prior art and the claimed invention. The prior art cited only achieved a polymer with an "n" of 8. Given the disparity between the prior art's "n" and the claimed "n," finding this factor weighed against enablement is supported by substantial evidence. J.A. 183 ("Therefore, the instant specification is insufficient, coupled with the information known in the art, to inform one of the ordinary skill in the

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<sup>3</sup> We note the Patent and Trademark Office's (PTO) argument on appeal regarding the "x" number of "R" groups was not made by the Examiner or the Board and is also forfeited. *See, e.g.*, PTO's Br. at 9.

art how to make and use the claimed invention without undue experimentation.”).

Pen argues there is reversible error because the Examiner found the specification is silent on starting materials. We do not agree. The Examiner did not find the specification “silent” on starting materials. Instead, the Examiner found the information provided by the specification is not sufficient to enable a skilled artisan to make the claimed invention. J.A. 144, 182. This does not present reversible error.

The Board found no reversible error in the Examiner’s determination that the predictability in the art weighed against enablement because no prior art in the field of producing conductive polymers made a suggestion to modify a polymer, or suggested a reasonable chance of success, to make the claimed polymer. J.A. 144. Pen posits a skilled artisan would not doubt the polymerization of pyrrole 3,4-diamine and amine substitution reactions. Pen made a similar argument in his Appeal Brief to the Board. J.A. 156–57. Pen, however, did not point to any information in the specification supporting the full scope of the claims—i.e. polymers with *any* “R” group and an “n” of more than 8, at least 50, or at least 1000. Pen points to the prior art reference Fukazawa as evidence his assertions are true, but as the Board, the Examiner, and Pen have noted, Fukazawa only achieved an “n” of 8. Below, Pen argued the reason Fukazawa only achieved an “n” of 8 is because it used a different synthesis strategy. J.A. 157. The Board did not address this argument. On this record, where two different conclusions could be drawn, the finding is supported by substantial evidence. *In re Jolley*, 308 F.3d at 1320.

For the last three factors, the amount of direction provided, existence of working examples, and quantity of experimentation needed, the Board did not find reversible error in the Examiner’s determination that one of ordinary



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skill in the art would not have the level of knowledge and skill to achieve the claimed invention, in light of the guidance in the specification, without undue experimentation. J.A. 144–45. Pen argues the specification provides sufficient guidance such that any experimentation would not be undue. Here and below, Pen argues the specification, including the references cited, gives the exact conditions known to polymerize related starting materials. J.A. 157; Pen Opening Br. at 19. The Board determined even if a limited number of “R” species and a certain number of repeating units “n” were enabled, Pen did not address the Examiner’s finding that the full scope of the claims was not enabled. Pen repeats the same arguments made below regarding the enablement of some embodiments, but this does not address the full scope of the claims. *See* Pen Opening Br. at 19; *see also* Pen Reply Br. at 2. To the extent Pen now argues on appeal the entire class is enabled because it shares a general quality, this argument is forfeited. *In re Google*, 980 F.3d at 863.

The Board did not find reversible error in the Examiner’s analysis of the amount of direction provided, existence of working examples, and quantity of experimentation needed. Pen argues there is reversible error in the Examiner’s analysis because it was boilerplate and included at least one sentence unrelated to the ’878 Application. The PTO agrees that the unrelated sentence was “less than exemplary,” but that there is nothing wrong with using standard language. PTO Br. at 22, 24. We agree and see no reversible error in the Board’s analysis.

Based on this record, the Board’s factual findings are supported by substantial evidence and we discern no legal error in its determination of lack of enablement for the claims of the ’878 Application.

#### CONCLUSION

We have considered Pen’s other arguments and find them unpersuasive. For the reasons set forth above, we

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affirm the Board's rejection of claims 1, 4–6, 10, and 13 under § 112(a) for lack of enablement.

**AFFIRMED**

COSTS

No costs.