

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CYTEK BIOSCIENCES, INC.,
Petitioner,

v.

BECKMAN COULTER, INC.,
Patent Owner.

U.S. Patent No. 12,174,106
Case No. PGR2025-00084

PATENT OWNER'S REQUEST FOR DISCRETIONARY DENIAL

TABLE OF CONTENTS

I.	Introduction.....	1
II.	Background.....	3
	A. Patent Owner Is a Known Innovator and Petitioner Is a Competitor.....	3
	B. The '106 Patent Claims Key Innovations.....	3
	C. The '106 Patent Underwent Substantive Examination.....	5
	D. The Parallel District Court Litigation Is Advanced.....	7
	E. Parallel Post-Grant Proceedings Have Been Denied.....	7
	F. Petitioner Is Taking Inconsistent Claim Construction Positions	8
III.	The Petition Should Be Discretionarily Denied.....	9
	A. The '106 Patent Is Not PGR-Eligible	9
	B. The PGR Should Be Denied Under 35 U.S.C. § 314(a).....	12
	C. Discretionary Denial Is Warranted Under 35 U.S.C. § 325(d).....	18
IV.	Conclusion	20

TABLE OF EXHIBITS

Exhibit	Description
EX2001	About Beckman Coulter (https://www.beckmancoulter.com/about-beckman-coulter/history-and-innovation)
EX2002	CytoFLEX Flow Cytometer (https://www.beckman.com/flow-cytometry/research-flow-cytometers/cytoflex)
EX2003	Beckman Coulter Patents (https://www.beckman.com/patents)
EX2004	Cytek Form S-1 Registration Statement (2021)
EX2005	Information Disclosure Statement for Application No. 15/817,237 to U.S. Patent No. 10,436,697 (May 7, 2019)
EX2006	Information Disclosure Statement for Application No. 15/942,430 to U.S. Patent No. 11,333,597 (June 17, 2021)
EX2007	Reserved
EX2008	Reserved
EX2009	Reserved
EX2010	Reserved
EX2011	Reserved
EX2012	Reserved

PGR2025-00084
 Patent No. 12,174,106
 Patent Owner's Request for Discretionary Denial

EX2013	Reserved
EX2014	U.S. Patent Pub. No. 2004/0165828 (“Capewell”)
EX2015	File History for U.S. Patent No. 9,746,412
EX2016	Reserved
EX2017	DocketNavigator, Time-to-Trial Statistics for District of Delaware (Sept. 2025)
EX2018	Reserved
EX2019	Reserved
EX2020	Reserved
EX2021	Assignment for U.S. Patent No. 8,922,778
EX2022	Assignment for U.S. Patent No. 8,605,283
EX2023	Reserved
EX2024	Request for <i>Ex Parte</i> Reexamination of U.S. Patent No. 10,330,582 B2 Under 35 U.S.C. §§ 302-307 and 37 C.F.R. § 1.510 <i>et seq.</i>
EX2025	Reserved
EX2026	Reserved
EX2027	Reserved
EX2028	Reserved

PGR2025-00084
Patent No. 12,174,106
Patent Owner's Request for Discretionary Denial

EX2029	Reserved
EX2030	U.S. Patent No. 10,330,582
EX2031	Reserved
EX2032	Reserved
EX2033	Reserved
EX2034	Order Denying Request for <i>Ex Parte</i> Reexamination, Application/Control Number: 90/015,441 (Oct. 6, 2025)
EX2035	Reserved
EX2036	Reserved
EX2037	Reserved
EX2038	Reserved
EX2039	Reserved
EX2040	112 Cytek's 35 U.S.C. § 112 Contentions – Exhibit A U.S. Patent No. 10,330,582, <i>Beckman Coulter, Inc. v. Cytek Biosciences, Inc.</i> , C.A. No. 24-945, (D. Del. October 22, 2025)
EX2041	Cytek's Election of Asserted Prior Art Grounds, C.A. No. 24-0945-CFC-EGT (D. Del. Oct. 22, 2025)
EX2042	Amended Scheduling Order, <i>Beckman Coulter, Inc. v. Cytek Biosciences, Inc.</i> , C.A. No. 24-945, D.I. 198 (D. Del. Nov. 5, 2025)
EX2043	U.S. Provisional Patent Application No. 61/715,819 (“5819 Prov.”)

I. Introduction

Patent Owner Beckman Coulter, Inc. (“Patent Owner” or “Beckman Coulter”) is a pioneer and innovator in flow cytometer technologies. In August 2024, Patent Owner commenced a patent infringement litigation in the District of Delaware against its direct competitor, Cytek Biosciences, Inc. (“Petitioner” or “Cytek”). On January 9, 2025, Patent Owner asserted U.S. Patent No. 12,174,106 (“’106 patent”) against Petitioner. In addition to the ’106 patent, Beckman Coulter has asserted three other patents in the same family in the parallel litigation. On October 1, 2025, Patent Owner narrowed its asserted claims, and no claims of the ’106 patent are presently being asserted in district court.

Petitioner filed an IPR against one of the asserted patents just before the statutory bar date. Petitioner also filed an ex parte reexamination request against another asserted patent shortly thereafter. Then, Petitioner waited another two months to file a post-grant (PGR) challenge against the ’106 patent, a pre-AIA patent, just before the statutory PGR deadline. Both Petitioner’s IPR petition and reexamination request have been denied. IPR2025-01319, Paper 13; EX2034. Institution should be denied here too.

As an initial matter, the USPTO has already made factual findings that would make this patent ineligible for PGR because it is not an AIA patent. Petitioner’s

primary basis for arguing the patent is PGR-eligible is a challenge to its priority date because “curved mirror” allegedly lacks support. *See* Pet. at 4-5, 14-23. However, on October 6, 2025, the USPTO, in denying Petitioner's request for reexamination of a patent in the same family, found that “curved mirror” “is clearly supported” by the specification. EX2034 at 4. Thus, this PGR should not proceed.

This PGR would be an inefficient use of USPTO resources because the '106 patent is not asserted in the district court. Further, by the time the USPTO would render a Final Written Decision, validity issues that are nearly identical to those presented in this PGR will have already been resolved at the district court's August 2026 jury trial. The claims of the three remaining patents, which are in the same family and have the same specification as the '106 patent, raise duplicative validity arguments. Indeed, Petitioner expressly incorporated its arguments from this PGR into its § 112 contentions against the remaining asserted patents in the district court. Petitioner has filed no stipulation for this PGR, and the stipulation provided in a different post-grant proceeding does not cover § 112 grounds or all prior art under §§ 102/103, failing to make this proceeding an efficient forum for Petitioner's challenges. It would be a waste of USPTO resources to review the validity of the '106 patent after the district court resolves the validity of the other asserted patents.

The factors set forth in *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11

(PTAB Mar. 20, 2020) along with additional guiding considerations, and 35 U.S.C. § 325(d), all support discretionarily denying institution.

II. Background

A. Patent Owner Is a Known Innovator and Petitioner Is a Competitor

Patent Owner has been a pioneer and innovator in flow cytometry and cell sorter technologies for over 40 years. EX2001. Flow cytometers analyze cells by channeling them through a beam of light and detecting the fluorescence of any dyes tagged to the cells. EX1001, 1:46-52. Patent Owner's groundbreaking technology revolutionized the industry with the first compact, high-performance flow cytometers utilizing small area detectors. EX2002. Several of Patent Owner's key innovations are reflected in the '106 patent, and Patent Owner marks its CytoFLEX Flow Cytometers and Sorters with the '106 patent. EX2003.

Petitioner sells competing flow cytometer products. EX2004 at 122-128 (“Our direct competitors include ... Beckman Coulter (Danaher Corporation).”). Since at least 2019, Petitioner has known about patents in the same family as the '106 patent. *See* EX2005 at 1; EX2006 at 2.

B. The '106 Patent Claims Key Innovations

The '106 patent was filed on December 22, 2021, and claims the benefit of applications filed on or after May 2012. It has the same priority claims and

specification as the patents asserted in the litigation: U.S. Patent Nos. 10,330,582 (“’582 patent”), 11,703,443 (“’443 patent”); and 12,174,107 (“’107 patent”).

These patents sought to enhance the performance of flow cytometers while making them more compact and easier to use. The ’106 patent describes innovative, compact wavelength division multiplexers (“WDMs”) that permit the use of powerful, millimeter-sized detectors never before used in flow cytometry, resulting in improved sample analysis and a smaller instrument footprint. EX1001, 44:9-67. By measuring differences between individual cells using high-quality detectors, the inventions enabled breakthrough biological research and cutting-edge diagnostics. *Id.* at 1:46-67, 44:9-67.

Flow cytometer detection systems present different challenges from WDMs in other fields. For example, unlike WDMs in optical communications, flow cytometers must detect light with a wide range of wavelengths of unknown and uncontrolled signal strength. *See* EX1016 at 2:20-64; EX1007 at 67, 151. Furthermore, in flow cytometry, light enters a detection system from a large optical fiber which produces a much larger light beam than produced in optical communications. EX1001, 45:1-23. This presents challenges in controlling the light beam over an extended distance and focusing the beam onto the detectors, as needed for effective detection. *Id.* at 44:47-67. The ’106 patent recognized and overcame

these challenges with its innovative designs for WDMs.

C. The '106 Patent Underwent Substantive Examination

The '106 patent issued on December 24, 2024 after three years of extensive and thorough prosecution. One of the references Petitioner relies on in Ground 2, Oostman (EX1005),¹ was a central focus. The Examiner rejected the claims as anticipated by Oostman and twice rejected them as obvious over Oostman. *See* EX1003 at 261-266, 305-312, 441-446. The Examiner had four interviews with Applicant discussing Oostman. *See* EX1003 at 316, 360-361, 414, 490. On September 11, 2024, the Examiner allowed the '106 patent claims, explaining:

The closest prior art reference of Oostman, JR. et al. (2003/0048539 A 1) discloses a flow cytometer.

However, Oostman, JR. fail to disclose, teach or suggest a collimating optical element that is separate from the collecting optical element and is arranged to receive the fluorescent light collected by the collecting optical element, the collimating optical element configured to collimate the fluorescent light, as claimed and as specified in the present application specification. This argument is persuasive. Therefore, the rejections are withdrawn.

¹ The published application (US2003/0048539) of U.S. Patent No. 6,683,314 was relied on during prosecution. *See* EX1003 at 261-266, 305-312, 441-446.

EX1003 at 527.

The Examiner verified that it considered two of Petitioner's other references, Goodman (Grounds I & II) and Frazier (Ground 2), as well:

A72	6542306	4/1/03	Goodman
A73	6572255	6/3/03	Husher
A74	6608682	8/19/03	Ortyn et al.
A75	6618143	9/9/03	Roche et al.
A76	6638481	10/28/03	Sklar et al.
A77	6647175	11/11/03	LoRegio et al.
A78	6683314	1/27/04	Oostman Jr. et al.
A79	6713019	3/30/04	Ozasa et al.
A80	6748133	6/8/04	Liu et al.
A81	6767188	7/27/04	Vrane et al.
A82	6768593	7/27/04	Jutamulia
A83	6788409	9/7/04	Goodwin
A84	6794671	9/21/04	Nicoli et al.
A85	6813017	11/2/04	Hoffman et al.
A86	6839367	1/4/05	Nagamatsu et al.
A87	6870679	3/22/05	Randall et al.
A88	6870976	3/22/05	Chen et al.

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EXAMINER: /ISTAKA O AKANBI/	DATE CONSIDERED: 02/10/2024
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A139	8284402	10/9/12	Frazier et al.
A140	8337096	12/25/12	Shen et al.
A141	8345237	1/1/13	Tsukii et al.
A142	8405048	3/26/13	Hayashi
A143	8432541	4/30/13	Rich
A144	8436371	5/7/13	Medendorp Jr., et al.
A145	8436993	5/7/13	Kaduchak et al.
A146	8488244	7/16/13	Li et al.
A147	8507279	8/13/13	Ball et al.
A148	20020081744	06/27/02	Chan et al.
A149	20020067895	06/06/02	Flanders
A150	20020141902	10/3/02	Ozasa et al.
A151	20030142720	7/31/03	Bradburn et al.
A152	20040031521	02/19/04	Vrane et al.
A153	20040218184	11/4/04	Joregenson et al.
A154	2004165828	08/26/04	Capewell et al.

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EX1003 at 231, 234 (annotated). The Examiner also considered U.S. Patent No. 7,505,131 (EX1045, "Roth-131"), which, like Chandler (Ground 1), was assigned to the Luminex Corporation. EX1003 at 233; *see infra* p. 20.

The '106 patent is a continuation in a family of patents that has also undergone thorough prosecution, including multiple prior-art rejections by multiple examiners. During prosecution of the '106 patent's grandparent application, in addition to considering Oostman, the Examiner also considered U.S. Patent Pub. No. 2004/0165828 ("Capewell") (EX2014), a reference from the optical communications field (like Goodman). EX2015 at 1070-1071. The Examiner combined Oostman's flow cytometer with Capewell's optical communications

WDM, alleging that the references were “[i]n a similar field of endeavor.” *Id.* Applicant made no amendments in response, explaining that “the fluorescence detection instrument, as taught by *Oostman*, and the optical communication system, as taught by *Capewell*, are actually different kinds of optical systems with different sizes of light sources,” and therefore obviousness was not established. *Id.* at 1107-1109. The Examiner found these arguments “persuasive.” *Id.* at 1132.

D. The Parallel District Court Litigation Is Advanced

Patent Owner filed the parallel litigation on August 15, 2024. A jury trial is scheduled for August 17, 2026, more than five months before the January 2027 projected Final Written Decision deadline. EX2042 at 2. As of October 1, 2025, no claims of the '106 patent are presently asserted against Petitioner in the district court. Paper 4 at 1. However, as discussed below, *infra* Section III.B, many of the same validity issues raised in this PGR will be addressed in the parallel litigation before the Board issues a Final Written Decision.

E. Parallel Post-Grant Proceedings Have Been Denied

The Director discretionarily denied the '443 patent IPR on November 20, 2025. *See* IPR2025-01319, Paper 13. Patent Owner's discretionary denial brief for the '443 patent IPR presented similar reasons as those here for discretionary denial, including that all six *Fintiv* factors favored denial, no material error warranted

USPTO intervention, the petition relied heavily on its expert, and that Section 325(d) separately warranted discretionary denial. *See generally id.*, Paper 9. Patent Owner also explained that Petitioner's *Sotera*-like stipulation was deficient. *Id.*, Paper 12.

The USPTO also denied Petitioner's request to reexamine the related '582 patent (EX2030) on October 6, 2025. EX2034. Petitioner argued that the patent claims reciting a "curved mirror" are not entitled to the '582 patent's November 26, 2014 filing date. This is the same argument made here as to why PGR is supposedly available for the '106 patent, and is Petitioner's basis for Ground 3. *Compare* EX2024 at 26-33 *with* Pet. at 14-23, 79-80. In the reexam, Petitioner also argued that the claims would have been obvious over Chandler and Goodman (Ground 1 here) and Oostman, Goodman and Frazier (Ground 2 here). *Compare* EX2024 at 75-150 *with* Pet. at 28-79.

On October 6, 2025, the USPTO denied Petitioner's reexamination request. *See* EX2034. The USPTO found that the '582 patent had support for the claimed "curved mirror," *id.* at 3-5, and that there were no substantial new questions of patentability, *id.* at 11-15.

F. Petitioner Is Taking Inconsistent Claim Construction Positions

In this proceeding, Petitioner accepts Patent Owner's construction for "collimating optical element," despite advocating in district court that "collimating

optical element” has a different function and is indefinite. *See* EX1002, ¶71; Pet. at 35, 41. Petitioner provides no explanation for its different construction other than “to streamline the Board’s consideration of the prior art.” Pet. at 35. This statement does not sufficiently “explain why different positions are warranted.” *Sun Pharms. Indus. v. Nivagen Pharms., Inc.*, IPR2025-00893, Paper 18, 3 (PTAB Sept. 19, 2025).

III. The Petition Should Be Discretionarily Denied

There are three separate and independent bases for why this PGR would not be an efficient use of USPTO resources. **First**, the USPTO has already made factual findings that demonstrate the ’106 patent is not PGR-eligible. **Second**, it would be an inefficient use of USPTO resources to review patent claims that are not presently asserted in district court, and for which the district court will resolve substantially the same validity challenges well before a Final Written Decision is due. **Third**, denial is warranted under 35 U.S.C. § 325(d) because the arguments in the petition were already extensively considered during prosecution.

A. The ’106 Patent Is Not PGR-Eligible

Petitioner argues that the ’106 patent is PGR eligible because its priority applications allegedly do not provide support for “curved mirror.” *See* Pet. at 14-23. According to Petitioner, for “curved mirror” to have support, the priority documents must disclose that either a convex or a concave mirror can be used. *Id.*

The USPTO has already rejected that very argument. As explained above, Petitioner filed a request for reexamination of the related '582 patent on August 9, 2025 where it argued that “curved mirror” as recited in the claims “necessarily include[s] convex mirrors” and that the '582 patent's parent applications did not provide written description support for convex mirrors. EX2024 at 26-33. The USPTO denied that request on October 6, 2025. EX2034. The USPTO found that when the claims are read as a whole, “curved mirror” must be a “concave mirror” “[b]ecause a ‘convex mirror’ is not capable of being ‘configured to reflect the portion of the collimated beam received from the optical element to produce the 1st image.’” *Id.* at 4; *see also id.* at 4-5. The USPTO therefore found support in the '582 patent for the claimed “curved mirror” because it discloses a “concave mirror.” *Id.* at 4.

Independent challenged claim 1 in the '106 patent similarly claims a WDM and states that the curved mirror must be “arranged to receive at least a portion of the fluorescent light...[and] configured to reflect the portion of the fluorescent light towards the first semiconductor detector.” EX1001, cl. 1. And independent challenged claim 13 requires the “at least one curved mirror” of the WDM must be part of a row that is “arranged and configured to sequentially reflect different color bands of the fluorescent light.” *Id.*, cl. 13. Accordingly, it is clear that the curved mirror must be concave.

A concave mirror is supported by the '106 patent and its priority applications, including at least provisional application 61/715,819 filed on October 18, 2012 (EX2043, "'5819 Prov.>"). *E.g., compare* EX1001, 5:1-5 ("In one embodiment of a WDM, the first optical element is a lens and the second element is a concave mirror, although it is apparent to those skilled in the art that other types of refractive and/or reflective optical components may also be used to achieve the same design goal.") *with* EX2043, [0008] (nearly identical); *compare also* EX1001, FIG. 25 *with* EX2043, FIG. 1.

Petitioner further contends that "the Challenged Claims lack written description for 'semiconductor detector' for the reasons provided in Ground 5." Pet. at 23. But the "semiconductor detector" limitation is also supported by the '106 patent and its priority applications, including at least to the '5819 Prov (EX2043). *E.g., compare* EX1001, 4:62-67 ("In particular, multiple colored bands present in the beam of light can be separated using dichroic filters located among the optical path with the separated light being tightly focused into small spots compatible with low noise semiconductor photodetectors.") *with* EX2043, [0007] (nearly identical); *compare also* EX1001, FIG. 25 *with* EX2043, FIG. 1.

Therefore, Petitioner's arguments as to PGR-eligibility fail. *See Fox Factory, Inc. v. SRAM, LLC*, PGR2016-00043, Paper No. 9, 13 (PTAB Apr. 3, 2017) (denying

institution where petitioner failed to show the claim was “not entitled to the filing date of the” priority application). Notably, the '106 patent was examined under the “pre-AIA first to invent provisions.” EX1003 at 261.

Instituting a PGR would run afoul of the related '582 patent's reexamination decision and would yield inconsistent results. *See Comcast Cable Communications, LLC v. Entropic Communications, LLC*, IPR2025-00183, Paper 11, 2 (PTAB June 25, 2025) (“[T]he presence of multiple parallel proceedings and the avoidance of inconsistent outcomes favors discretionary denial.”). Moreover, “it is not an efficient use of Office resources to revisit substantially similar subject matter that has already been considered in [a] parallel proceeding.” *Amneal Pharms., Inc. v. Nivagen Pharms., Inc.*, IPR2025-00731, Paper 15, 2 (PTAB Sept. 3, 2025).

B. The PGR Should Be Denied Under 35 U.S.C. § 314(a)

This PGR involves claims that are not presently asserted in the district court litigation after Patent Owner narrowed its claims on October 1, 2025. Paper 4 at 1. “It is an inefficient use of [USPTO] resources to review claims of a patent that will not be further addressed in the district court trial involving the parties.” *See Coretronic Corp v. Maxell, Ltd.*, IPR2025-00941, Paper No. 10, 3 (Sept. 26, 2025).

Nonetheless, a jury trial in the district court will resolve the same validity issues on a significantly earlier track. Trial is scheduled seven months before a Final

Written Decision is due here, and the median time-to-trial statistics in the District of Delaware also predict a trial several months earlier. *See* EX2017. “[A]ddressing all of the challenged patents in the district court proceeding would be the fastest and most efficient resolution of the Parties’ many disputes.” *Samsung Elecs. Co. v. VB Assets, LLC*, IPR2025-00870, Paper No. 11, 3 (PTAB Oct. 10, 2025).

A Stay Is Improbable. As explained in the ’443 patent IPR discretionary denial brief, a stay of the litigation is highly improbable given the advanced stages of the litigation and prejudice to Patent Owner. IPR2025-01319, Paper 7 at 9-10. The Director has already denied institution of the ’443 IPR. *See id.*, Paper 13.

Substantial Investment in the Litigation. Petitioner waited eight weeks after challenging the related ’443 patent to challenge the ’106 patent. Petitioner filed this PGR right before the deadline to do so. In the meantime, the parties and the district court have substantially invested in litigation; the parties already exchanged contentions, completed fact discovery, completed *Markman*, and the district court has issued *Markman* rulings. By the time an institution decision is due, expert discovery will have also closed, and trial will be only a few months away. Such meaningful investment, significant duplicative efforts, and risk of inconsistent decisions justifies discretionary denial of the PGR. *See Azurity Pharms., Inc. v. Heron Therapeutics, Inc.*, PGR2025-00035, Paper No. 11, 2 (PTAB Aug. 14, 2025)

(discretionary denial of PGR favored when it will “result[] in significant duplication of effort, additional expense for the parties, and a risk of inconsistent decisions” where litigation is in advanced stages).

Issues Significantly Overlap. The significant overlap between issues raised in the petition and in the district court favors denial. Although the '106 patent claims are not being asserted in district court, the same validity issues will still be addressed in the litigation. First, each of Petitioner's § 112 grounds are exactly the same as in the district court, as Petitioner confirmed in its invalidity contentions:

The term ‘curved mirror’ lacks written description support *for the same reasons set forth in Ground 3 of Cytek’s PGR petition in PGR2025-00084*, respectively, and *incorporated here in its entirety* (including associated exhibits). ... *the evidence and arguments apply with equal force* to the '582 patent claims....

The term “semiconductor detector” lacks full scope enablement and written description support *for the same reasons set forth in Grounds 4 and 5 of Cytek’s PGR petition in PGR2025-00084*, respectively, and *incorporated here in their entirety* (including associated exhibits). Grounds 4 and 5 are replicated below and would *apply with equal force* with respect to “semiconductor detector” for the '582 claims.

EX2040 at 3, 9-10, 19 (emphases added).

Second, Petitioner's grounds present the same or the substantially same art

and arguments as in the litigation, and Petitioner offers no stipulation for the '106 patent that would “address concerns of duplicative efforts and potentially conflicting decisions in view of a significantly earlier trial date in a co-pending case that is unlikely to be stayed.” *Phison Electronics Corp. v. Vervain, LLC*, PGR2025-00010, Paper No. 14, 3 (PTAB July 10, 2025). Petitioner's stipulation for the '107 patent does not help Petitioner here because it: (1) does not apply to invalidity grounds raised against the asserted '582 patent, (2) does not apply to the grounds in this PGR, and (3) does not offer the correct scope of estoppel that applies to a PGR. Since the stipulation is limited to the '107 patent, Petitioner can still raise any prior art, including the art duplicative to this PGR, against the '582 patent in the parallel litigation. This includes a combination largely duplicative with Ground 2, as it uses Oostman's application, Frazier, and Lemoff-864—an optical communications reference (EX1012)—which Cytek's expert alleges discloses a similar architecture to Goodman (*see* EX1002, ¶¶51-52). EX2041 at 1. Notably, the Director already denied institution of the '443 IPR after Petitioner offered the same deficient stipulation there. *See* IPR2025-01319, Paper 13.

Additionally, Petitioner still intends to raise seven invalidity combinations against the remaining asserted patents because these combinations incorporate product prior art without any printed publications used in the '107 PGR. These

combinations are based on three different systems (including a “Luminex System” that is cumulative of Chandler) in combination with Lemoff-864. EX2041 at 1-3; *see also* EX1002, ¶62 (describing Chandler as one of several references practiced by various Luminex systems). Petitioner also does not agree to forego any § 112 arguments in district court, which are raised here. Petitioner's deficient stipulation thus provides no efficiency in having USPTO review the '106 patent after the district court is poised to address the same validity issues.

The Petition Is Weak. For similar reasons as explained in the '443 patent IPR, the merits of this petition are weak at best. *See* IPR2025-01319, Paper 7 at 14-16. The Director has already denied institution of the '443 IPR. *See id.*, Paper 13. Here too, this petition proposes combining references from the different fields of optical communications (Goodman) and flow cytometry (Oostman, Chandler, and Frazier), and impermissibly relies on the '106 patent to provide a motivation for the combination (Pet. at 29). The petition also provides no evidence why a skilled artisan would combine Goodman and Chandler, relying on unsupported speculation about each system's comparative “footprint” or cost. Pet. at 28-29. For combining Goodman and Oostman, Petitioner says even less (*id.* at 60-61), and fails to explain why a skilled artisan would add a zig-zag pattern from Goodman to a reference that already contemplated that pattern, but indicated it was not preferred (*see* EX1005 at

7:32-36).

Petitioner's written description Grounds are similarly weak. As discussed above in Section III.A, Petitioner's Ground 3 relies on a reading of "curved mirror" that was already rejected in another USPTO Proceeding. EX2034 at 4-5. And for Grounds 4-5, Petitioner's arguments that "semiconductor detectors" lack enablement and written description rely on an assertion that one type of disclosed semiconductor detector (carbon nanotube detectors) was not sold commercially. Pet. at 80-85. However, a skilled artisan would have had plenty of avenues to acquire carbon nanotube detectors beyond commercial vendors, as they were being generated and used in life science fluorescence detection in research laboratories, as even Petitioner acknowledges. See Pet. at 83. Similarly, Petitioner arguments are premised on the notion that there were challenges in effectively "integrating carbon nanotube detectors into the claimed flow cytometers" (*id.* at 85) but enablement does not require that a skilled artisan "make and use a perfected, commercially viable embodiment absent a claim limitation to that effect." *CFMT, Inc. v. Yieldup Intern. Corp.*, 349 F.3d 1333, 1338 (Fed. Cir. 2003).

Other Considerations: Expert Reliance. Discretionary denial is warranted because the petition backfills fundamental gaps in the prior art through unsupported

statements from Dr. Ilkov.² For example, the petition's argument that Chandler's branched configuration is suboptimal "where more color separation per light source was desired" (Pet. at 29), is based on Dr. Ilkov's say-so (EX1002, ¶ 111). Additionally, Dr. Ilkov's unsupported statements (*e.g.*, EX1002, ¶¶ 115, 167) are the sole basis for the petition's argument that a skilled artisan would have replaced key fluorescence detection components in Oostman's or Chandler's flow cytometers with Goodman's WDM from another field (Pet. at 30-31, 61). In the '443 IPR, Petitioner recognized its extensive reliance on expert testimony for similar arguments, responding only that its expert "can rely on his general knowledge" to support a motivation to combine. IPR2025-01319, Paper 9 at 15-16. But that general knowledge must be supported by evidence. *See Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1362 (Fed. Cir. 2016) ("'[C]ommon sense'—whether to supply a motivation to combine or a missing limitation—cannot be used as a wholesale substitute for reasoned analysis and evidentiary support.").

C. Discretionary Denial Is Warranted Under 35 U.S.C. § 325(d)

1. The USPTO Already Considered the Same or Substantially the Same Prior Art and Arguments

The petition should also be denied because Oostman, Goodman, and Frazier

² Notably, Dr. Ilkov has patents assigned to Petitioner, *e.g.*, EX2021, EX2022.

are “the same prior art ... previously [] presented to the Office,” and Chandler is “substantially the same.” 35 U.S.C. § 325(d). As explained above (pp. 5-7), Oostman, Goodman, and Frazier were considered during prosecution of the '106 patent, as well as in related patents. *See ADT v. Vivint*, IPR2022-00612, Paper 8, 21-23 (PTAB Aug. 22, 2022). Similarly, Chandler—a patent assigned to Luminex Corporation—is cumulative of a later Luminex reference already disclosed during prosecution, Roth-131 (EX1045).³ *See* EX1003 at 233. Like Chandler, Roth-131 describes a system for fluorescent separation utilizing avalanche photodiodes. EX1045, cl. 8, 3:25-29, 7:64-67. Petitioner's expert, Dr. Ilkov, identifies Roth-131 as embodied in Luminex products and does not identify any special feature of Chandler compared to Roth-131. EX1002, ¶62. The fact that Luminex sold fluorescent detection systems using APDs was not a secret, as the '106 specification expressly discloses this. EX1001, 47:39-43. Therefore, the USPTO evaluated patentability of the claims over the Luminex prior art. Additionally, examiners have already considered the petition's § 112 arguments for “curved mirror.” *See supra*

³ Chandler is cumulative of Frazier, considered during prosecution (EX1003 at 234), which Petitioner relies on as a “Fluorescence Detection Instrument” with detectors including “photo avalanche detectors.” Pet. at 28.

pp. 8, 9-10.

2. No material error warrants USPTO intervention

Here, prosecution was thorough and there was no material error that warrants USPTO intervention at the advanced stage of litigation. *See TankLogix, LLC v. SitePro, Inc.*, IPR2025-00761, Paper 10, 2-3 (PTAB Sept. 3, 2025) (discretionary denial where petitioner's assertions were "insufficient to demonstrate material error by the Office"). Tellingly, Petitioner omits *any* discussion of the '106 patent's prosecution history, ignoring that Oostman was a central focus during examination, and that the Examiner signed and *verified* that they considered Goodman, Oostman, and Frazier (and a cumulative Luminex reference) during the '106 patent's prosecution. EX1003 at 231, 233, 234; *supra* p. 6.

The petition's discussion of the prosecution of a foreign counterpart, EP24151670 (Pet. at 1-2), does not inform written description or priority requirements of the USPTO given that "theories and laws of patentability vary from country to country, as do examination practices." *AIA Eng'g v. Magotteaux Int'l*, 657 F.3d 1264, 1279 (Fed. Cir. 2011). The Director should deny institution.

IV. Conclusion

Patent Owner requests that the Director discretionarily deny institution.

PGR2025-00084
Patent No. 12,174,106
Patent Owner's Request for Discretionary Denial

Respectfully submitted,

Dated: November 24, 2025

/Alexis R. Cohen/
Alexis R. Cohen
Registration No. 76,998

Counsel for Patent Owner

CERTIFICATE OF SERVICE

I hereby certify that on November 24, 2025, I caused a true and correct copy of the following materials:

- Patent Owner's Request for Discretionary Denial
- Exhibit List
- Exhibits for Patent Owner's Request for Discretionary Denial
(EX2001-2006, 2014-2015, 2017, 2021-2022, 2024, 2030, 2034, 2040-
EX2043)

to be served on Petitioner via electronic mail to:

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