

EXHIBIT 903-D

***Inpria Corporation v. Lam Research Corp.*, Case No. 1-22-cv-01359-CJB
Exhibit 903-D – Invalidity Claim Chart for U.S. Patent No. 11,673,903**

WO patent publication No. 2019023797 (“Odedra ’797”) effectively filed on **August 2, 2017**. Odedra ’797 is prior art under post-AIA 35 U.S.C. §102(a)(2) because it names another inventor and was effectively filed on **August 2, 2017**, which is before the ’903 patent’s earliest possible priority date of **April 11, 2018**. None of the exceptions under 35 U.S.C. §102(b)(2) apply. First, the subject matter disclosed in Odedra ’797 was not “obtained directly or indirectly from the inventor or a joint inventor.” 35 U.S.C. §102(b)(2)(A). Second, there is no evidence that any joint inventor “publicly disclosed” the subject matter of the patent application before it was filed. §102(b)(2)(B). Third, Odedra ’797 is owned by Seastar chemicals Inc which is not the same owner of the ’903 patent. §102(b)(2)(C).

Hanssgen, D., et al. “Synthesis of the First Mono-t-Butyltin Element Compounds,” J. Organometallic Chemistry 293 (1985): 191-195 (“Hanssgen”) published on September 24, 1985. Hanssgen is prior art under post-AIA 35 U.S.C. §102(a)(1) because it published on September 24, 1985, which is before the ’903 patent’s earliest possible priority date of April 11, 2018.

Odedra ’797 renders Asserted Claims 1-4, 6-9 of the ’903 patent obvious alone, in combination with the general knowledge of a person of ordinary skill in the art, and/or in combination with Hassgen as set forth in this chart. In addition to the citations set forth in the charts below, Defendant further incorporates by reference, as if fully set forth in, the arguments, evidence, and statements set forth in IPR2025-00267.

With respect to the obviousness of the asserted claims under 35 U.S.C. § 103, one or more of the principles enumerated by the United States Supreme Court in *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007) apply, including: (a) combining various claimed elements known in the prior art according to known methods to yield a predictable result; (b) making a simple substitution of one or more known elements for another to obtain a predictable result; (c) using a known technique to improve a similar device or method in the same way; (d) applying a known technique to a known device or method ready for improvement to yield a predictable result; (e) choosing from a finite number of identified, predictable solutions with a reasonable expectation of success or, in other words, the solution was one which was “obvious to try”; (f) a known work in one field of endeavor prompting variations of it for use either in the same field or a different field based on given design incentives or other market forces in which the variations were predictable to one of ordinary skill in the art; and/or (g) a teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill in the art to modify the prior art reference or to combine the teachings of various prior art references to arrive at the claimed invention. It would have been obvious to a person of ordinary skill in the art to combine Odedra ’797 with the general knowledge of a person of ordinary skill in the art, and/or one or more of the references identified in accordance with the principles and rationales set forth above.

Beyond the specific motivations identified in the cited references, motivation to modify and combine particular references comes from: (a) the nature of the problem being solved; (b) the teachings of the prior art; (c) the knowledge of persons of ordinary skill in the art; (d) the fact that the references address the same or similar technical issues as the '903 patent; and (e) considerations of efficiency, effectiveness, convenience, cost-savings, and accessibility to combine the various teachings.

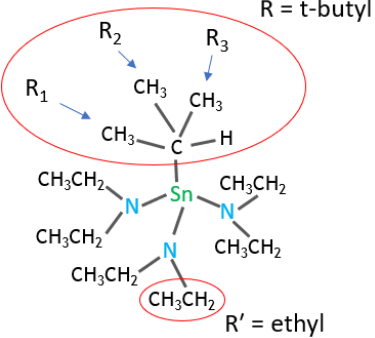
This claim chart is meant to illustrate one example of how the asserted claims are invalid for obviousness. By not discussing portions of a reference in the claim chart below, Defendant does not waive its right to rely on these portions of the reference. Instead, Defendant expressly reserves the right to rely on any and all portions of the cited references. These contentions are not an admission by Defendant that any accused materials are covered by or infringe the asserted claims of the '903 patent, particularly after the claims are construed by the Court. These contentions are not an admission by Defendant as to the proper scope of any asserted claim, the proper construction of any term in any asserted claim, or whether particular elements may be construed at all, or instead, are indefinite. Defendant reserves the right to modify, amend, or supplement these contentions as additional information becomes available during the course of this action and in view of any applicable claim construction order from the Court.

'903 Patent Claims	Disclosure of Prior Art
Claim 1	
[1p] A high purity liquid composition comprising: a monoalkyl tin triamide compound represented by the chemical formula $\text{RSn}(\text{NR}'_2)_3$ and	Odedra '797, alone, in combination with the general knowledge of a person of ordinary skill in the art, and/or in combination with the other references identified, discloses and/or suggests this claim limitation. Odedra '797 discloses a high purity liquid composition having a monoalkyl tin triamide compound represented by the chemical formula $\text{RSn}(\text{NR}'_2)_3$. Odedra '797 discloses “compounds useful for the deposition of high purity tin oxide. Also disclosed are methods for the deposition of tin oxide films using such compounds. Such films demonstrate high conformality, high etch selectivity and are optically transparent.” Odedra '797 discloses “organometallic compounds of Formula I,” as “Rx-Sn-A_{4-x},” “wherein A is selected from the group consisting of (YaR'z)...; Y is selected from ...N, O, S, and P;” “each R' group is independently selected from the group consisting of an alkyl, acyl or aryl group having from 1 to 10 carbon atoms;” “each R group is independently selected from the group consisting of an alkyl or aryl group having from 1 to 10 carbon atoms;” x is an integer from 0 to 4;” “a is an integer from 0 to 1;” and “.....z is 2 when Y is N or P.” <i>Id.</i> ¶ 0013. Odedra '797 further disclosed “[c]ompounds of Formula I include those in which R is an alkyl group and A is an NR'_2 group, and wherein R' is an alkyl group. Preferred compounds are those in which R and R' represent different alkyl groups.” <i>Id.</i> ¶ 0065. Therefore, when x is 1, Odedra '797's formula I is represented by the chemical formula $\text{RSn}(\text{NR}'_2)_3$ and falls within the scope of claim 1. Odedra '797 also discloses that “[t]he invention also relates to the deposition of tin oxide using compounds of the invention. The use of compounds of Formula I in the methods disclosed herein allows for chemical vapour deposition (CVD) and atomic layer deposition (ALD) of tin oxide at a low temperature, and produces films consisting of high purity tin oxide having low metallic impurities, low alpha emission characteristics, and >99% step coverage (i.e. high conformality) over device features and topography.”

'903 Patent Claims	Disclosure of Prior Art
	Hanssgen discloses “t-Butyl-tris(diethylamino)stannane,” referred to as “compound (I),” i.e., $\text{tBuSn}(\text{NEt}_2)_3$, that was obtained “by Sn-alkylation of tetrakis(diethylamino)stannane with lithium-t-butyl.” <i>Id.</i>, Summary, p. 192. Hanssgen provides a detailed description of the reactions employed for synthesizing (I) and further explains that “analytically pure I can be obtained by fractiona[l] distillation of the benzene phase[.]” describing the distilled compound as “oil” (i.e., a liquid). <i>Id.</i>, p. 192, 194. $\text{tBuSn}(\text{NEt}_2)_3$ is a compound represented by the chemical formula $\text{RSn}(\text{NR}'_2)_3$ where R is t-butyl (i.e., monoalkyl), and where each R' is ethyl of the three diethylamido groups (i.e., triamide). A person of ordinary skill in the art would have been motivated to combine the teachings of Odedra '797 regarding the need for the deposition of high purity tin oxide with the disclosure of Hanssgen that provides a detailed description of the reactions employed for synthesizing (I) and further explains that “analytically pure I can be obtained by fractiona[l] distillation of the benzene phase[.]” with a reasonable expectation of success (“Odedra '797/Hanssgen”). The references are in the same field of art and directed to the same types of organotin compounds, a person of ordinary skill in the art would have been motivated to look and would have naturally looked to Hanssgen to make a high purity organotin compound that fits formula I as disclosed by Odedra '797 that Odedra '797 teaches is desirable and achievable.
[1a] no more than 0.5 mole % dialkyltin compounds as an impurity relative to the total tin amount,	Odedra '797, alone, and/or in combination with the general knowledge of a person of ordinary skill in the art, and/or in combination with the other references identified, discloses and/or suggests this claim limitation. Odedra '797 discloses and/or suggests “no more than 0.5 mole % dialkyltin compounds as an impurity relative to the total tin amount.” Odedra '797 discloses “[t]he use of compounds of Formula I in the methods disclosed herein allows for chemical vapour deposition (CVD) and atomic layer deposition (ALD) of tin oxide at a low temperature, and produces films consisting of high purity tin oxide having low metallic impurities,…” <i>Id.</i> ¶ 0014.

'903 Patent Claims	Disclosure of Prior Art
	Odedra '797 further teaches "The invention also relates to the purification of compounds of Formula I by multistage distillation. Such purification yields so-called "ultra-pure" compounds having much lower levels of metallic impurities compared to compounds purified by conventional means." <i>Id.</i> ¶ 0015, which a person of ordinary skill in the art would have understood to mean no or negligible impurity. Odedra '797 also teaches "Multistage distillation may be carried out in the form of packed columns, stage distillation columns employing trays, multiple distillation columns, or other types of multistage distillation." <i>Id.</i> A person of ordinary skill in the art would have had a reasonable expectation of success at increasing the purity of the organotin compound to the extent further purification was necessary to obtain the purity that Odedra '797 teaches is desirable and achievable.
[1b] wherein R is a hydrocarbyl group with 1-31 carbon atoms, and	Odedra '797, alone, and/or in combination with the general knowledge of a person of ordinary skill in the art, and/or in combination with the other references identified, discloses and/or suggests this claim limitation. Odedra '797 discloses that R is a hydrocarbyl group with 1-31 carbon atoms. Odedra '797 discloses "each R group is independently selected from the group consisting of an alkyl or aryl group having from 1 to 10 carbon atoms;" <i>Id.</i> ¶ 0013, which falls within the scope of claim 1. tBuSn(NEt₂)₃ is a compound represented by the chemical formula RSn(NR'₂)₃ where R is t-butyl (4 carbon atoms). Hanssger, p. 192.
[1c] wherein R' is a hydrocarbyl group with 1-10 carbon atoms.	Odedra '797, alone, and/or in combination with the general knowledge of a person of ordinary skill in the art, and/or in combination with the other references identified, discloses and/or suggests this claim limitation. Odedra '797 discloses that R' is a hydrocarbyl group with 1-10 carbon atoms.

'903 Patent Claims	Disclosure of Prior Art
	Odedra '797 discloses "each R' group is independently selected from the group consisting of an alkyl, acyl or aryl group having from 1 to 10 carbon atoms;" <i>Id.</i> ¶ 0013, which falls within the scope of claim 1. tBuSn(NEt₂)₃ is a compound represented by the chemical formula RSn(NR'₂)₃ where each R' is ethyl (2 carbon atoms). Hanssgen, p. 192.
Claim 2 The composition of claim 1 wherein R is a branched alkyl ligand represented by R¹R²R³C--, where R¹ and R² are independently an alkyl group with 1-10 carbon atoms, and R³ is hydrogen or an alkyl group with 1-10 carbon atoms.	Odedra '797, alone, and/or in combination with the general knowledge of a person of ordinary skill in the art, and/or in combination with the other references identified, discloses and/or suggests this claim limitation. Odedra '797 discloses and/or suggests "R is a branched alkyl ligand represented by R¹R²R³C--, where R¹ and R² are independently an alkyl group with 1-10 carbon atoms, and R³ is hydrogen or an alkyl group with 1-10 carbon atoms." Odedra '797 discloses "each R group is independently selected from the group consisting of an alkyl or aryl group having from 1 to 10 carbon atoms;" <i>Id.</i> ¶ 0013, which can be a branched alkyl ligand represented by R¹R²R³C--, where R¹ and R² are independently an alkyl group with 1-10 carbon atoms, and R³ is hydrogen or an alkyl group with 1-10 carbon atoms. Hanssgen discloses synthesis of tBuSn(NEt₂)₃, that is a compound represented by the chemical formula RSn(NR'₂)₃ where R is a branched alkyl ligand represented by R¹R²R³C—, where R¹, R² and R³ are methyl (1 carbon atom). <i>Id.</i> p. 192.

'903 Patent Claims	Disclosure of Prior Art
	 R = t-butyl R' = ethyl
Claim 3	
The composition of claim 1 wherein R comprises methyl (CH₃—), ethyl (CH₃CH₂—), isopropyl (CH₃CH₂CH₂—), tert-butyl ((CH₃)₃C—), tert-amyl (CH₃CH₂(CH₃)₂C—), sec-butyl (CH₃(CH₃CH₂)CH—), neopentyl (CH₃)₃CCH₂—, cyclohexyl, cyclopentyl, cyclobutyl, or cyclopropyl.	Odedra '797, alone, and/or in combination with the general knowledge of a person of ordinary skill in the art, and/or in combination with the other references identified, discloses and/or suggests this claim limitation. Odedra '797 discloses and/or suggests that R includes methyl (CH₃—), ethyl (CH₃CH₂—), isopropyl (CH₃CH₂CH₂—), tert-butyl ((CH₃)₃C—), tert-amyl (CH₃CH₂(CH₃)₂C—), sec-butyl (CH₃(CH₃CH₂)CH—), neopentyl (CH₃)₃CCH₂—, cyclohexyl, cyclopentyl, cyclobutyl, or cyclopropyl. Odedra '797 discloses “each R group is independently selected from the group consisting of an alkyl or aryl group having from 1 to 10 carbon atoms;” <i>Id.</i> ¶ 0013, which includes methyl (CH₃—), ethyl (CH₃CH₂—), isopropyl (CH₃CH₂CH₂—), tert-butyl ((CH₃)₃C—), tert-amyl (CH₃CH₂(CH₃)₂C—), sec-butyl (CH₃(CH₃CH₂)CH—), neopentyl (CH₃)₃CCH₂—, cyclohexyl, cyclopentyl, cyclobutyl, or cyclopropyl. Hanssgen discloses synthesis of tBuSn(NEt₂)₃, that is a compound represented by the chemical formula RSn(NR'₂)₃ where R comprises tert-butyl ((CH₃)₃C—). <i>Id.</i> p. 192.
Claim 4	

'903 Patent Claims	Disclosure of Prior Art
The composition of claim 1 wherein R' comprises a methyl group, ethyl group, isopropyl group, or t-butyl group.	Odedra '797, alone, and/or in combination with the general knowledge of a person of ordinary skill in the art, and/or in combination with the other references identified, discloses and/or suggests this claim limitation. Odedra '797 discloses and/or suggests that "R' comprises a methyl group, ethyl group, isopropyl group, or t-butyl group." Odedra '797 discloses "each R' group is independently selected from the group consisting of an alkyl, acyl or aryl group having from 1 to 10 carbon atoms;" <i>Id.</i> ¶ 0013, which includes a methyl group, ethyl group, isopropyl group, or t-butyl group. Hanssgen discloses synthesis of $\text{tBuSn}(\text{NEt}_2)_3$ is a compound represented by the chemical formula $\text{RSn}(\text{NR}'_2)_3$ where R' comprises an ethyl group.
Claim 6	
The composition of claim 1 comprising essentially no dialkyltin compounds as measured with an approximate 0.1 mole % detection limit.	Odedra '797, alone, and/or in combination with the general knowledge of a person of ordinary skill in the art, and/or in combination with the other references identified, discloses and/or suggests this claim limitation. Odedra '797 discloses and/or suggests the composition "comprising essentially no dialkyltin compounds as measured with an approximate 0.1 mole % detection limit." Odedra '797 discloses "The use of compounds of Formula I in the methods disclosed herein allows for chemical vapour deposition (CVD) and atomic layer deposition (ALD) of tin oxide at a low temperature, and produces films consisting of high purity tin oxide having low metallic impurities,..." <i>Id.</i> ¶ 0014. Odedra '797 further teaches "The invention also relates to the purification of compounds of Formula I by multistage distillation. Such purification yields so-called "ultra-pure" compounds having much lower levels of metallic impurities compared to compounds purified by conventional means." <i>Id.</i> ¶ 0015, which a person of ordinary skill in the art would have understood to mean no or negligible impurity.

'903 Patent Claims	Disclosure of Prior Art
	Odedra '797 also teaches "Multistage distillation may be carried out in the form of packed columns, stage distillation columns employing trays, multiple distillation columns, or other types of multistage distillation." <i>Id.</i> Hanssgen discloses synthesis of "analytically pure" $\text{tBuSn}(\text{NEt}_2)_3$ and indicates that the equation does not proceed to generate any dialkyl tin compound, <i>Id.</i> p. 192, so a person of ordinary skill in the art would have understood no or negligible dialkyltin impurity is present in the compound. A person of ordinary skill in the art would have had a reasonable expectation of success at increasing the purity of the organotin compound to the extent further purification was necessary to obtain the purity that Odedra '797 teaches is desirable and achievable.
Claim 7	
A solution comprising the composition of claim 1 and an organic solvent.	Odedra '797, alone, and/or in combination with the general knowledge of a person of ordinary skill in the art, and/or in combination with the other references identified, discloses and/or suggests this claim limitation. Odedra '797 discloses "organometallic compounds of Formula I," as "Rx-Sn-A_{4-x}," "wherein A is selected from the group consisting of (YAR'z)...; Y is selected from ...N, O, S, and P;" "each R' group is independently selected from the group consisting of an alkyl, acyl or aryl group having from 1 to 10 carbon atoms;" "each R group is independently selected from the group consisting of an alkyl or aryl group having from 1 to 10 carbon atoms;" x is an integer from 0 to 4;" "a is an integer from 0 to 1;" and ".....z is 2 when Y is N or P." <i>Id.</i> ¶ 0013. Odedra '797 further disclosed "Compounds of Formula I include those in which R is an alkyl group and A is an NR'_2 group, and wherein R' is an alkyl group. Preferred compounds are those in which R and R' represent different alkyl groups." <i>Id.</i> ¶ 0065. Therefore, when x is 1, Odedra '797's formula I is represented by the chemical formula $\text{RSn}(\text{NR}'_2)_3$ and falls within the scope of claim 1.

'903 Patent Claims	Disclosure of Prior Art
	Hanssgen discloses a “solution of 3.93 g (10 mmol) [Compound] I in 20 ml dichloromethane;” compound (I) is $\text{tBuSn}(\text{NEt}_2)_3$ and meets every limitation of claim 1. <i>Id.</i> p. 194. Dichloromethane is an organic solvent. Hanssgen further teaches that t-butanol, which is an alcohol and an organic solvent, is added to the solution. <i>Id.</i> p. 194. The references are all in the same field of art, directed to the same type of organotin compound with the same generic chemical formula I. A person of ordinary skill in the art would have understood that the high purity compound of formula I of Odedra '797 would easily dissolve in an organic solvent, like the dichloromethane and t-butanol, as disclosed in Hanssgen, to create the claimed solution with predictable results.
Claim 8	
The solution of claim 7 having a concentration from about 0.005M to about 0.5M and wherein the solvent comprises an alcohol.	Odedra '797, alone, and/or in combination with the general knowledge of a person of ordinary skill in the art, and/or in combination with the other references identified, discloses and/or suggests this claim limitation. Hanssgen discloses the solution having a concentration from about 0.005M to about 0.5M and wherein the solvent comprises an alcohol. Hanssgen teaches t-butanol, an alcohol solvent, added to the solution including compound (I), so a person of ordinary skill in the art would have understood the solvent comprises an alcohol. <i>Id.</i> p. 194. Hanssgen teaches a solution concentration within the range from about 0.005M to about 0.5M. Hanssgen discloses a “solution of 3.93 g (10 mmol) [Compound] I in 20 ml dichloromethane.” <i>Id.</i> The molar concentration of Compound I in 20 ml dichloromethane is about 0.5 M (i.e., 10 mmol/20 ml= 0.5 mol/l). After additional solvent, i.e., 2.2 g (30 mmol) t-butanol, was added to the solution, the molar concentration decreased slightly, i.e., slightly lower than about 0.5M, which is within the claimed range of about 0.005M to about 0.5M. A person of ordinary skill in the art would have

'903 Patent Claims	Disclosure of Prior Art
	understood that the high purity compound of formula I of Odedra '797 could be easily dissolved in an organic solvent comprising an alcohol, t-butanol, at a concentration from about 0.005 M to about 0.5M, as disclosed in Hanssgen to create the claimed solution with predictable results.
Claim 9	
The solution of claim 7 wherein R comprises methyl (CH₃—), ethyl (CH₃CH₂—), isopropyl (CH₃CH₂CH₂—), tert-butyl ((CH₃)₃C—), tert-amyl (CH₃CH₂(CH₃)₂C—), sec-butyl (CH₃(CH₃CH₂)CH—), neopentyl (CH₃)₃CCH₂—, cyclohexyl, cyclopentyl, cyclobutyl, or cyclopropyl, and wherein R' comprises a methyl group, ethyl group, isopropyl group, t-butyl group, or t-amyl group.	Odedra '797, alone, and/or in combination with the general knowledge of a person of ordinary skill in the art, and/or in combination with the other references identified, discloses and/or suggests this claim limitation. Odedra '797 discloses and/or suggests that wherein R comprises methyl (CH₃—), ethyl (CH₃CH₂—), isopropyl (CH₃CH₂CH₂—), tert-butyl ((CH₃)₃C—), tert-amyl (CH₃CH₂(CH₃)₂C—), sec-butyl (CH₃(CH₃CH₂)CH—), neopentyl (CH₃)₃CCH₂—, cyclohexyl, cyclopentyl, cyclobutyl, or cyclopropyl, and wherein R' comprises a methyl group, ethyl group, isopropyl group, t-butyl group, or t-amyl group. Odedra '797 discloses “each R group is independently selected from the group consisting of an alkyl or aryl group having from 1 to 10 carbon atoms;” <i>Id.</i> ¶ 0013, which includes methyl (CH₃—), ethyl (CH₃CH₂—), isopropyl (CH₃CH₂CH₂—), tert-butyl ((CH₃)₃C—), tert-amyl (CH₃CH₂(CH₃)₂C—), sec-butyl (CH₃(CH₃CH₂)CH—), neopentyl (CH₃)₃CCH₂—, cyclohexyl, cyclopentyl, cyclobutyl, or cyclopropyl, and Odedra '797 discloses “each R' group is independently selected from the group consisting of an alkyl, acyl or aryl group having from 1 to 10 carbon atoms;” <i>Id.</i> ¶ 0013, which includes a methyl group, ethyl group, isopropyl group, or t-butyl group. Hanssgen teaches the synthesis of tBuSn(NEt₂)₃ that is a compound represented by the chemical formula RSn(NR'₂)₃ where R comprises tert-butyl ((CH₃)₃C—) and R' comprises an ethyl group.