

EXHIBIT 903-F

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

U.S. Patent Publication No. 2016/0116839 (“Meyers ’839”) published on **April 28, 2016**, before the ’903 patent’s earliest priority date of **April 11, 2018**. Meyers ’839 is therefore prior art to the ’903 patent under AIA 35 U.S.C. 102(a)(1).

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**.

Lorberth, Jörg. “Cleavage of the tin-nitrogen bond: (dialkylamino) stannanes and their reactions with alkylating agents,” J. Organometallic Chemistry 16 (1969): 235-248 (“Lorberth”) published in **February 1969**. Lorberth is prior art under post-AIA 35 U.S.C. §102(a)(1) because it published in **February 1969**, which is before the ’903 patent’s earliest possible priority date of **April 11, 2018**.

Othen, David George. Studies in the Organonitrogen Chemistry of Tin and Neighbouring Elements, April 1977, University of Durham (“Othen”), published in **April 1977**. Othen is prior art under post-AIA 35 U.S.C. §102(a)(1) because it published in **April 1977**, which is before the ’903 patent’s earliest possible priority date of **April 11, 2018**.

Pereyre, Michel et al. Tin in Organic Synthesis. Butterworth & Co. (1987) (“Pereyre”) published in **1987**. Pereyre is prior art under post-AIA 35 U.S.C. §102(a)(1) because it published in **1987**, which is before the ’903 patent’s earliest possible priority date of **April 11, 2018**.

Meyers ’839 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 the other references identified in Defendant’s Invalidity Contentions, including 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 Meyers ’839 with the general knowledge of a person of ordinary skill in the art, and/or one or more of the references identified in Defendant’s Invalidity Contentions 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	Meyers '839, 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. Meyers '839 discloses a high purity liquid composition having a monoalkyl tin triamide compound represented by the chemical formula $\text{RSn}(\text{NR}'_2)_3$. Meyers '839 discloses a liquid t-butyl tris(diethylamido)tin composition. Meyers '839 ¶ 0124: "This example describes the preparation of a hydrolysate precursor solution from t-butyl tris(diethylamido)tin." <i>Id.</i> ¶ 0125: "A hydrolysate oxide hydroxide product with the nominal formula $\text{t-BuSnO}_{(3/2-x/2)}(\text{OH})_x$, (where $0 < x < 3$) (1) was prepared from t-butyl tris(diethylamido)tin (2), which was synthesized according to the method reported in Hanssgen, D.; Puff, H.; Beckerman, N. <i>Journal of Organometallic Chemistry</i>, 293, 1985, 191-195, which is incorporated herein by reference. A gas-tight syringe was used to steadily ($\sim 125 \mu\text{L/s}$) add 4.4 g of t-butyl tris(diethylamido)tin to 150 mL of DI H_2O (18MΩ), forming an immediate precipitate that was allowed to stand for 5 minutes. The resulting slurry was stirred for 30 minutes and then suction filtered through no. 1 filter paper (Whatman). The resulting solid was rinsed 3 times with 50-mL portions of DI H_2O. Solids retained after filtration and rinsing were dried under vacuum (~ 5 torr) for 8 h at room temperature to yield 1.9 g of powdered solid of hydrolysate 1." t-butyl tris(diethylamido)tin ($\text{tBuSn}(\text{NEt}_2)_3$) has the formula $\text{RSn}(\text{NR}'_2)_3$, where R = t-butyl (tBu) and each R' = ethyl (Et). Example 1 discloses that "[a] gas-tight syringe was used to steadily ($\sim 125 \mu\text{L/s}$) add 4.4 g of t-butyl tris(diethylamido)tin to 150 mL of DI H_2O (18MΩ) forming an immediate precipitate that was allowed to stand for 5 minutes." That $\text{tBuSn}(\text{NEt}_2)_3$ was added at a rate of $125 \mu\text{L/s}$ indicates that it was a liquid composition prior to being added to water. Meyers '839 also discloses a liquid tris(dimethylamido)tin, ($\text{i-PrSn}(\text{NMe}_2)_3$) composition.

'903 Patent Claims	Disclosure of Prior Art
	<i>Id.</i> ¶ 0150: “A water-reactive precursor, isopropyl tris(dimethylamido)tin, (i-PrSn(NMe₂)₃), was synthesized under inert atmosphere and subsequently hydrolysed by two methods using 1) atmospheric moisture and 2) liquid H₂O, to form an i-PrSnO_(3/2-x/2)(OH)_x hydrolysate.” <i>Id.</i> ¶ 0151: “Under argon, a 1 L Schlenk-adapted round bottom flask was charged with LiNMe₂ (81.75 g, 1.6 mol, Sigma-Aldrich) and anhydrous hexanes (700 mL, Sigma-Aldrich) to form a slurry. A large stir bar was added and the vessel sealed. An addition funnel under positive argon pressure was charged with i-PrSnCl₃, (134.3 g, 0.5 mol, Gelest) via syringe and attached to the reaction flask. The flask was cooled to –78° C. and the i-PrSnCl₃ added dropwise over a period of 2 hours. The reaction was allowed to come to room temperature overnight while stirring, and the solid precipitates allowed to settle. After settling, the reaction solution was filtered under positive argon pressure through an in-line cannula filter. The solvent was removed under vacuum and the residue distilled under reduced pressure (50-52° C., 1.4 mmHg) to give a pale yellow liquid (110 g, 75% yield). ¹H and ¹¹⁹Sn NMR spectra of the distillate in a C₆D₆ solvent collected on a Bruker DPX-400 (400 MHz, BBO probe) spectrometer are shown in FIGS. 22 and 23, respectively. Observed ¹H resonances, as shown in FIG. 22, (s, 2.82 ppm, —N(CH₃)₂; d 1.26 ppm, —CH₃; m, 1.60 ppm, —CH) match the predicted spectra for i-PrSn(NMe₂)₃. The primary ¹¹⁹Sn resonance, as shown in FIG. 23, at –65.4 ppm is consistent with a major product with a single tin environment, with a chemical shift comparable to reported monoalkyltin amido compounds.” i-PrSn(NMe₂)₃ is represented by the formula RSn(NR'₂)₃, where R = isopropyl (i-Pr) and each R' = methyl (Me). i-PrSn(NMe₂)₃ in Example 7 is a liquid composition. <i>Id.</i> ¶ 0151 (“the residue distilled under reduced pressure (50-52° C., 1.4 mmHg) to give a pale yellow liquid (110 g, 75% yield).”) <i>See also</i> Lorberth at 2¹: “The aminostannanes represent colorless to light yellow liquids, which can be distilled in pure form without decomposition [only (XIX) and (XX) are crystalline] and can be dissolved in benzene as monomers.” <i>Id.</i>

¹ References to specific locations of Lorberth use the page number of the English-language version of Lorberth.

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	Table 1 Physical data and yields of (dialkylamino)stannanes $R_{4-n}Sn(NR'_2)_n$ $CH_3 = Me$, $C_2H_5 = Et$, $n-C_4H_9 = Bu$, $C_6H_5 = Ph$. <table><tr><th>Compound</th><th>Mol. weight</th><th>Color</th><th>Bp ($^{\circ}C/mm$) (mp, $^{\circ}C$)</th><th>Yield (%)</th></tr><tr><td>(I) Me_3SnNMe_2</td><td>208</td><td>farbl.</td><td>128/720</td><td>70</td></tr><tr><td>(II) Me_3SnNEt_2</td><td>236</td><td>farbl.</td><td>45/1</td><td>75</td></tr><tr><td>(III) $Me_2Sn(NMe_2)_2$</td><td>237</td><td>farbl.</td><td>147-150/720</td><td>50-60</td></tr><tr><td>(IV) $Me_2Sn(NEt_2)_2$</td><td>293</td><td>farbl.</td><td>65/1</td><td>70</td></tr><tr><td>(V) $MeSn(NMe_2)_3$</td><td>266</td><td>farbl.</td><td>45-50/1</td><td>30-40</td></tr><tr><td>(VI) $MeSn(NEt_2)_3$</td><td>350</td><td>farbl.</td><td>96/0.1</td><td>20</td></tr><tr><td>(VII) Et_3SnNMe_2</td><td>250</td><td>farbl.</td><td>55-57/4</td><td>70-80</td></tr><tr><td>(VIII) Et_3SnNEt_2</td><td>278</td><td>farbl.</td><td>76/0.1</td><td>70-80</td></tr><tr><td>(IX) $Et_2Sn(NMe_2)_2$</td><td>265</td><td>farbl.</td><td>67-69/5</td><td>60</td></tr><tr><td>(X) $Et_2Sn(NEt_2)_2$</td><td>321</td><td>farbl.</td><td>77/0.1</td><td>60-65</td></tr><tr><td>(XI) $EtSn(NMe_2)_3$</td><td>280</td><td>farbl.</td><td>51-53/1</td><td>30-35</td></tr><tr><td>(XII) $EtSn(NEt_2)_3$</td><td>364</td><td>farbl.</td><td>76/0.1</td><td>20</td></tr><tr><td>(XIII) Bu_3SnNMe_2</td><td>319</td><td>farbl.</td><td>86/0.1</td><td>80-85</td></tr><tr><td>(XIV) Bu_3SnNEt_2</td><td>362</td><td>farbl.</td><td>96/0.1</td><td>80-85</td></tr><tr><td>(XV) $Bu_2Sn(NMe_2)_2$</td><td>321</td><td>farbl.</td><td>65/0.1</td><td>60-65</td></tr><tr><td>(XVI) $Bu_2Sn(NEt_2)_2$</td><td>377</td><td>farbl.</td><td>98/0.1</td><td>70</td></tr><tr><td>(XVII) $BuSn(NMe_2)_3$</td><td>308</td><td>farbl.</td><td>60-65/0.1</td><td>55</td></tr><tr><td>(XVIII) $BuSn(NEt_2)_3$</td><td>392</td><td>farbl.</td><td>96/0.1</td><td>30-35</td></tr><tr><td>(XIX) Ph_3SnNMe_2</td><td>394</td><td>farbl.</td><td>(65-68)</td><td>80</td></tr><tr><td>(XX) Ph_3SnNEt_2</td><td>422</td><td>hellg.</td><td>(40)</td><td>30-40</td></tr><tr><td>(XXI) $Ph_2Sn(NMe_2)_2$</td><td>361</td><td>farbl.</td><td>128/0.1</td><td>30</td></tr><tr><td>(XXII) $Ph_2Sn(NEt_2)_2$</td><td>417</td><td>hellg.</td><td>150-160/0.1</td><td>20</td></tr><tr><td>(XXIII) $PhSn(NMe_2)_3$</td><td>328</td><td>farbl.</td><td>95-100/0.1</td><td>40-50</td></tr><tr><td>(XXIV) $PhSn(NEt_2)_3$</td><td>412</td><td>hellg.</td><td>130-135/0.1</td><td>30-40</td></tr><tr><td>(XXV) $Sn(NMe_2)_4$</td><td>295</td><td>farbl.</td><td>53-55/0.1</td><td>40-50</td></tr><tr><td>(XXVI) $Sn(NEt_2)_4$</td><td>407</td><td>hellg.</td><td>110/0.1</td><td>30-50</td></tr></table> farbl. = colorless; hellg. = light-yellow See also Othen at 25: "One of the most widely used methods for the preparation of aminotin compounds is transmetallation, usually by the reaction of a tin tetrahalide or organotin halide with a lithium dialkylamide (Eqn.1.6.). A wide range of organotin dialkylamides have been prepared in this fashion." (internal references omitted)	Compound	Mol. weight	Color	Bp ($^{\circ}C/mm$) (mp, $^{\circ}C$)	Yield (%)	(I) Me_3SnNMe_2	208	farbl.	128/720	70	(II) Me_3SnNEt_2	236	farbl.	45/1	75	(III) $Me_2Sn(NMe_2)_2$	237	farbl.	147-150/720	50-60	(IV) $Me_2Sn(NEt_2)_2$	293	farbl.	65/1	70	(V) $MeSn(NMe_2)_3$	266	farbl.	45-50/1	30-40	(VI) $MeSn(NEt_2)_3$	350	farbl.	96/0.1	20	(VII) Et_3SnNMe_2	250	farbl.	55-57/4	70-80	(VIII) Et_3SnNEt_2	278	farbl.	76/0.1	70-80	(IX) $Et_2Sn(NMe_2)_2$	265	farbl.	67-69/5	60	(X) $Et_2Sn(NEt_2)_2$	321	farbl.	77/0.1	60-65	(XI) $EtSn(NMe_2)_3$	280	farbl.	51-53/1	30-35	(XII) $EtSn(NEt_2)_3$	364	farbl.	76/0.1	20	(XIII) Bu_3SnNMe_2	319	farbl.	86/0.1	80-85	(XIV) Bu_3SnNEt_2	362	farbl.	96/0.1	80-85	(XV) $Bu_2Sn(NMe_2)_2$	321	farbl.	65/0.1	60-65	(XVI) $Bu_2Sn(NEt_2)_2$	377	farbl.	98/0.1	70	(XVII) $BuSn(NMe_2)_3$	308	farbl.	60-65/0.1	55	(XVIII) $BuSn(NEt_2)_3$	392	farbl.	96/0.1	30-35	(XIX) Ph_3SnNMe_2	394	farbl.	(65-68)	80	(XX) Ph_3SnNEt_2	422	hellg.	(40)	30-40	(XXI) $Ph_2Sn(NMe_2)_2$	361	farbl.	128/0.1	30	(XXII) $Ph_2Sn(NEt_2)_2$	417	hellg.	150-160/0.1	20	(XXIII) $PhSn(NMe_2)_3$	328	farbl.	95-100/0.1	40-50	(XXIV) $PhSn(NEt_2)_3$	412	hellg.	130-135/0.1	30-40	(XXV) $Sn(NMe_2)_4$	295	farbl.	53-55/0.1	40-50	(XXVI) $Sn(NEt_2)_4$	407	hellg.	110/0.1	30-50
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'903 Patent Claims	Disclosure of Prior Art
	<i>Id.</i> $R_{4-n}SnX_n + nLiNR'R'' \longrightarrow nLiX + R_{4-n}Sn(NR'R'')_n \quad 1.6$ <i>See also</i> Pereyre at 13: "2.1.6 Organotin amines. These compound are variously reported as amminostannanes, stannylamines, stannazanes, tin amines or tin amides. The principal method of production involves the attack of a strong nitrogen nucleophile at a tin centre (Scheme 2.18)." $R_n^1SnCl_{4-n} \xrightarrow{R_2^2NLi} R_n^1Sn(NR_2^2)_{4-n}$ Scheme 2.18
[1a] no more than 0.5 mole % dialkyltin compounds as an impurity relative to the total tin amount,	Meyers '839, 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. Meyers '839, together with conventional methods and general knowledge in the art, discloses and/or suggests the high purity liquid composition having no more than 0.5 mole % dialkyltin compounds as an impurity relative to the total tin amount. Example 1 of Meyers '839 synthesized t-butyl tris(diethylamido)tin according to the method reported in Hanssgen, D.; Puff, H.; Beckerman, N. <i>Journal of Organometallic Chemistry</i>, 293, 1985, 191-195. During prosecution of the '903 patent, Inpria submitted an inventor declaration purportedly showing that using the Hanssgen method results in tBuSn(NEt₂)₃ composition having "approximately 2% dialkyltin triamide, tBu₂Sn(NEt₂)₂."

'903 Patent Claims	Disclosure of Prior Art
	'903 Patent Prosecution History, 1-19-2021 Declaration at paragraph 8: "In-house experiments following the method of Hanssgen (HANSSGEN ET AL., "Synthesis of the First Mono-t-butyltin Element Connections", Organometallic Chemistry, 293: 191-195 (1985)) were conducted under my direction. The experiments considered the reaction of tBuLi with Sn(NEt₂)₄ in diethyl ether. The reaction product was purified using standard fractional distillation, as described by Hanssgen, to selectively isolate the major product, tBuSn(NEt₂)₃. The post-distillation product was subjected to ¹¹⁹Sn NMR analysis. The post-distillation product had an average of approximately 2% dialkyltin triamide, tBu₂Sn(NEt₂)₂. A person of ordinary skill in the art would have been motivated with a reasonable expectation of success to use fractional distillation to further purify Meyers '839's i-PrSn(NMe₂)₃ and tBuSn(NEt₂)₃ to obtain a composition having no more than 0.5 mole % dialkyltin compounds as an impurity relative to the total tin amount. As explained in the '903 patent itself, "[t]he synthesized monoalkyl tin amides and monoalkyl tin alkoxides can be further purified by fractional distillation to effectively reduce polyalkyl contaminants below levels that may already be relatively low from the direct synthesis." '903 patent at 4:67-5:2; 9:39-41 ("The monoalkyl tin triamides produced using the methods described above or other methods not explicitly described herein can be further purified using fractional distillation. ... A suitable fractional distillation column can be used with a volume suitable for the process, and these are commercially available."). Indeed, Example 8 of the '903 patent uses conventional "fractional distillation to purify t-BuSn(NMe₂)₃ by its separation from a mixture of ... t-BuSn(NMe₂)₃ containing ~3.27% t-BuSn(NMe₂)₂." Following conventional fractional distillation, "no NMR signals for t-Bu₂Sn(NMe₂)₂" were detected. It would have been a matter of routine optimization for a person of ordinary skill in the art to use conventional fractional distillation to reduce the amount of dialkyltin compounds in the i-PrSn(NMe₂)₃ and tBuSn(NEt₂)₃ compositions disclosed in Meyers '839 no more than 0.5 mole % relative to the total tin amount.
[1b] wherein R is a hydrocarbyl group with 1-31 carbon atoms, and	Meyers '839, 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.

'903 Patent Claims	Disclosure of Prior Art
	Meyers '839 discloses and/or suggests that R is a hydrocarbyl group with 1-31 carbon atoms. i-PrSn(NMe₂)₃ is a compound represented by the chemical formula RSn(NR'₂)₃ where R is isopropyl (3 carbons). tBuSn(NEt₂)₃ is a compound represented by the chemical formula RSn(NR'₂)₃ where R is t-butyl (4 carbons).
[1c] wherein R' is a hydrocarbyl group with 1-10 carbon atoms.	Meyers '839, 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. Meyers '839 discloses and/or suggests that R' is a hydrocarbyl group with 1-10 carbon atoms. i-PrSn(NMe₂)₃ is a compound represented by the chemical formula RSn(NR'₂)₃ where each R' is methyl (1 carbon). tBuSn(NEt₂)₃ is a compound represented by the chemical formula RSn(NR'₂)₃ where each R' is ethyl (2 carbons).
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.	Meyers '839, 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. Meyers '839 discloses and/or suggests that 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. i-PrSn(NMe₂)₃ is a compound represented by the chemical formula RSn(NR'₂)₃ where R is a branched alkyl ligand represented by R¹R²R³C—, where R¹ and R² are methyl (1 carbon), and R³ is hydrogen.

'903 Patent Claims	Disclosure of Prior Art
	R = i-propyl R' = methyl tBuSn(NEt₂)₃ 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). R = t-butyl R' = ethyl
Claim 3	
The composition of claim 1 wherein R comprises methyl (CH₃—), ethyl (CH₃CH₂—), isopropyl (CH₃CH₂CH—), tert-butyl ((CH₃)₃C—), tert-amyl (CH₃CH₂(CH₃)₂C—), sec-	Meyers '839, 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. Meyers '839 discloses and/or suggests that R includes methyl (CH₃—), ethyl (CH₃CH₂—), isopropyl (CH₃CH₂CH—), tert-butyl ((CH₃)₃C—), tert-amyl (CH₃CH₂(CH₃)₂C—), sec-butyl

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butyl ($\text{CH}_3(\text{CH}_2\text{CH}_2)\text{CH}-$), neopentyl ($(\text{CH}_3)_3\text{CCH}_2-$), cyclohexyl, cyclopentyl, cyclobutyl, or cyclopropyl.	($\text{CH}_3(\text{CH}_2\text{CH}_2)\text{CH}-$), neopentyl ($(\text{CH}_3)_3\text{CCH}_2-$), cyclohexyl, cyclopentyl, cyclobutyl, or cyclopropyl. i-PrSn(NMe₂)₃ is a compound represented by the chemical formula $\text{RSn}(\text{NR}'_2)_3$ where R comprises isopropyl ($\text{CH}_3\text{CH}_2\text{CH}-$). tBuSn(NEt₂)₃ is a compound represented by the chemical formula $\text{RSn}(\text{NR}'_2)_3$ where R comprises tert-butyl ($(\text{CH}_3)_3\text{C}-$).
Claim 4	
The composition of claim 1 wherein R' comprises a methyl group, ethyl group, isopropyl group, or t-butyl group.	Meyers '839, 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. i-PrSn(NMe₂)₃ is a compound represented by the chemical formula $\text{RSn}(\text{NR}'_2)_3$ where R' comprises a methyl group. tBuSn(NEt₂)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.	Meyers '839, 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. A person of ordinary skill in the art would have been motivated with a reasonable expectation of success to use fractional distillation to further purify Meyers '839's i-PrSn(NMe₂)₃ and tBuSn(NEt₂)₃ to obtain a composition having no more than 0.1 mole % dialkyltin compounds as an impurity relative to the total tin amount. As explained in the '903 patent itself, "[t]he synthesized monoalkyl tin amides and monoalkyl tin alkoxides can be further purified by fractional distillation to effectively reduce polyalkyl contaminants below levels that may already be relatively low from the direct synthesis." '903 patent at 4:67-5:2; 9:39-41 ("The monoalkyl tin triamides produced using the methods described above or other methods not explicitly described herein can be further purified using fractional

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	distillation. ... A suitable fractional distillation column can be used with a volume suitable for the process, and these are commercially available.”). Indeed, Example 8 of the '903 patent uses conventional “fractional distillation to purify t-BuSn(NMe₂)₃ by its separation from a mixture of ... t-BuSn(NMe₂)₃ containing ~3.27% t-BuSn(NMe₂)₂.” Following conventional fractional distillation, “no NMR signals for t-Bu₂Sn(NMe₂)₂” was detected. It would have been a matter of routine optimization for a person of ordinary skill in the art to use conventional fractional distillation to reduce the amount of dialkyltin compounds in the i-PrSn(NMe₂)₃ and tBuSn(NEt₂)₃ compositions disclosed in Meyers '839 to no more than 0.1 mole % relative to the total tin amount.
Claim 7	
A solution comprising the composition of claim 1 and an organic solvent.	Meyers '839, 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. Meyers '839 discloses a composition of iPrSn(NMe₂)₃ in hexanes, which is an organic solvent. Meyers '839 ¶ 0153: A gas-tight syringe was used to add 23.4 g (79.6 mmol) of i-propyl tris(dimethylamido)tin, (i-PrSn(NMe₂)₃) to 150 mL of n-hexanes (HPLC Grade, >99.5% Hexanes, >95% n-Hexane).” <i>See also id.</i> ¶ 0089: “In general, the desired hydolysate compounds can be dissolved in an organic solvent, e.g., alcohols, esters or combinations thereof. In particular, suitable solvents include, for example, aromatic compounds (e.g., xylenes, toluene), ethers (anisole, tetrahydrofuran), esters (propylene glycol monomethyl ether acetate, ethyl acetate, ethyl lactate), alcohols (e.g., 4-methyl-2-propanol, 1-butanol, methanol, isopropyl alcohol, 1-propanol,), ketones (e.g., methyl ethyl ketone), mixtures thereof, and the like.”
Claim 8	
The solution of claim 7 having a concentration from about 0.005M to about 0.5M and wherein	Meyers '839, 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.

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the solvent comprises an alcohol.	Meyers '839, together with general knowledge in the art, discloses and/or suggests the solution having a concentration from about 0.005M to about 0.5M and wherein the solvent comprises an alcohol. Meyers '839 ¶ 0153: A gas-tight syringe was used to add 23.4 g (79.6 mmol) of i-propyl tris(dimethylamido)tin, (i-PrSn(NMe₂)₃) to 150 mL of n-hexanes (HPLC Grade, >99.5% Hexanes, >95% n-Hexane)." 79.6 mmol of i-propyl tris(dimethylamido)tin, (i-PrSn(NMe₂)₃) in 150 mL of n-hexanes equals a concentration of 0.53M, which is "about 0.5M." It would have been routine for a person of ordinary skill in the art to substitute hexanes for an alcohol. <i>See, e.g.:</i> Meyers '839 ¶ 0089: "In general, the desired hydolysate compounds can be dissolved in an organic solvent, e.g., alcohols, esters or combinations thereof. In particular, suitable solvents include, for example, aromatic compounds (e.g., xylenes, toluene), ethers (anisole, tetrahydrofuran), esters (propylene glycol monomethyl ether acetate, ethyl acetate, ethyl lactate), alcohols (e.g., 4-methyl-2-propanol, 1-butanol, methanol, isopropyl alcohol, 1-propanol,), ketones (e.g., methyl ethyl ketone), mixtures thereof, and the like."
Claim 9	
The solution of claim 7 wherein R comprises methyl (CH ₃ —), ethyl (CH ₃ CH ₂ —), isopropyl (CH ₃ CH ₂ CH—), tert-butyl ((CH ₃) ₃ C—), tert-amyl (CH ₃ CH ₂ (CH ₃) ₂ C—), sec-butyl (CH ₃ (CH ₃ CH ₂)CH—), neopentyl (CH ₃) ₃ CCH ₂ —, cyclohexyl, cyclopentyl, cyclobutyl, or cyclopropyl,	Meyers '839, 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. Meyers '839 discloses and/or suggests that wherein R includes methyl (CH₃—), ethyl (CH₃CH₂—), isopropyl (CH₃CH₂CH—), 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' includes a methyl group, ethyl group, isopropyl group, t-butyl group, or t-amyl group

'903 Patent Claims	Disclosure of Prior Art
and wherein R' comprises a methyl group, ethyl group, isopropyl group, t-butyl group, or t-amyl group.	i-PrSn(NMe₂)₃ is a compound represented by the chemical formula RSn(NR'₂)₃ where R comprises isopropyl (CH₃CH₂CH₂—). tBuSn(NEt₂)₃ is a compound represented by the chemical formula RSn(NR'₂)₃ where R comprises tert-butyl ((CH₃)₃C—).