

Organotin Compounds

Stille Coupling is a versatile C-C bond forming reaction between stannanes and halides or pseudohalides, with very few limitations on the R-groups. Many of the compounds listed below have been extensively cited in the scientific literature; following are just a few examples of their use.

The Japanese research group lead by Yamanaka, have utilized cis-1-ethoxy-2-(tri-n-butylstannyl)-ethylene (H51258) in the palladium-catalyzed cross-coupling reaction of aryl bromides and its utilization for a series of construction of condensed heteroaromatics.^{1,2} Hibino and co-workers have used the same material in the total synthesis of Carazostatin and Hyellazole³, Carbazquinocins B-F.⁴

Stille-type cross-coupling procedures are utilized in order to prepare a variety of functionalized 2,2'-bipyridines and 2,2':6',2''-terpyridines using such compounds as 4-methyl-2-(tri-n-butylstannyl)pyridine (H51472) or 5-methyl-2-(tri-n-butylstannyl)pyridine (H51377), 6-methyl-2-(tri-n-butylstannyl)pyridine (H51567).^{5,6}

Alterman and co-workers prepared analogues of Angiotensin II, an important bio-active peptide of the renin-angiotensin system, using 2-(tri-n-butylstannyl)thiazole (H51090), to study the effects the structure-activity of this class of compounds.⁷ Whereas, the thiazole 4-(tri-n-butylstannyl)thiazole (H51457) has been employed in the total synthesis of Epothilone E and other analogues, compounds which have attracted widespread interest in both biological and chemical arenas, due to their potent cytotoxicity.⁸

¹T. Sakamoto, Y. Kondo, A. Yasuhara and H. Yamanaka, *Heterocycles*, 1990, **31**, 219.

²T. Sakamoto, Y. Kondo, A. Yasuhara and H. Yamanaka, *Tetrahedron*, 1991, **47**, 1877.

³T. Choshi, T. Sada, H. Fujimoto, C. Nagayama, E. Sugino and S. Hibino, *Tet. Lett.*, 1996, **37**, 2593.

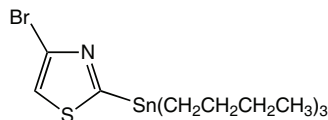
⁴T. Choshi, T. Sada, H. Fujimoto, C. Nagayama, E. Sugino and S. Hibino, *J. Org. Chem.*, 1997, **62**, 2535.

⁵M. Heller, and U. S. Schubert, Ulrich S., *J. Org. Chem.*, 2002, **67**, 8269.

⁶U. S. Schubert, C. Eschbaumer and M. Heller, *Org. Lett.*, 2000, **2**, 3373.

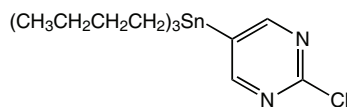
⁷A. K. Mahalingam, et al., *Bioorg. & Med. Chem.*, 2010, **18**, 4570.

⁸K. C. Nicolaou, et al., *Bioorg. & Med. Chem.*, 1999, **7**, 665.



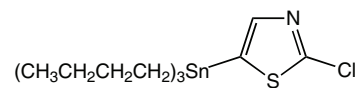
H51501

4-Bromo-2-(tri-n-butylstannyl)thiazole,
97%
[173978-98-8]



H51512

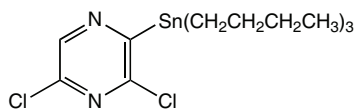
2-Chloro-5-(tri-n-butylstannyl)pyrimidine,
95%
[155191-68-7]



H51537

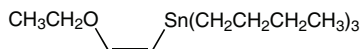
2-Chloro-5-(tri-n-butylstannyl)thiazole,
95%
[889672-73-5]

Organotin Compounds



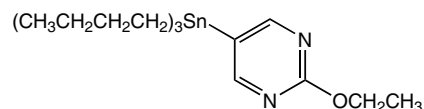
H51295

2,6-Dichloro-3-(tri-n-butylstannyl)-
pyrazine, 96%
[446285-70-7]



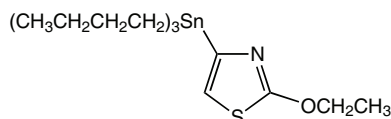
H51258

cis-1-Ethoxy-2-(tri-n-butylstannyl)-
ethylene, 94%
[64724-29-4]



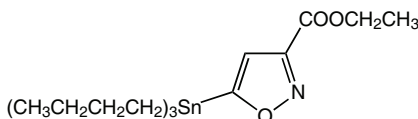
H51500

2-Ethoxy-5-(tri-n-butylstannyl)pyrimidine
[1025746-10-4]



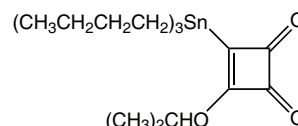
H51505

2-Ethoxy-4-(tri-n-butylstannyl)thiazole,
96%
[240816-28-8]



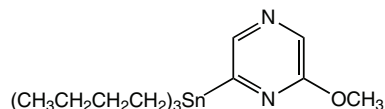
H51434

Ethyl 5-(tri-n-butylstannyl)isoxazole-
3-carboxylate, 96%
[126085-91-4]



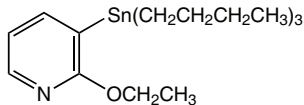
H51488

3-Isopropoxy-4-(tri-n-butylstannyl)-3-cy-
clobutene-1,2-dione, 97%
[129034-70-4]



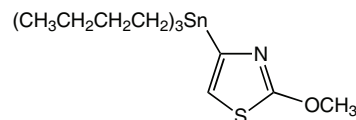
H51528

2-Methoxy-6-(tri-n-butylstannyl)pyrazine,
95%
[1105511-66-7]



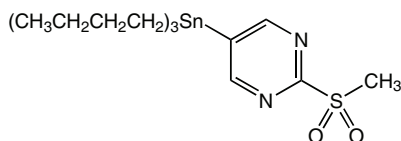
H51462

2-Methoxy-3-(tri-n-butylstannyl)pyridine,
95%
[223418-74-4]



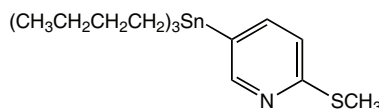
H51493

2-Methoxy-4-(tri-n-butylstannyl)thiazole,
96%
[927391-09-1]



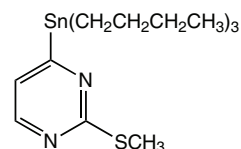
H51574

2-Methylsulfonyl-5-(tri-n-butylstannyl)
pyrimidine, 96%
[122476-85-1]



H51508

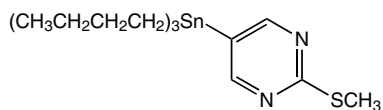
2-Methylthio-5-(tri-n-butylstannyl)-
pyridine, 95%
[611168-64-0]



H51465

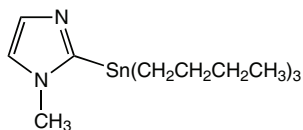
2-Methylthio-4-(tri-n-butylstannyl)
pyrimidine, 96%
[123061-49-4]

Organotin Compounds



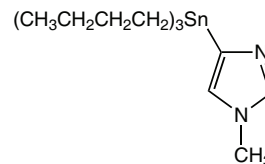
H51477

2-Methylthio-5-(tri-n-butylstannyl)
pyrimidine, 96%
[120717-37-5]



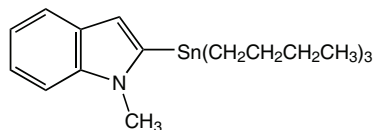
H51523

1-Methyl-2-(tri-n-butylstannyl)imidazole,
90+%
[105494-69-7]



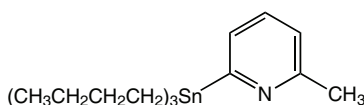
H51405

1-Methyl-5-(tri-n-butylstannyl)imidazole,
90+%
[147716-03-8]



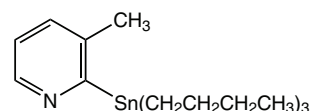
H51515

1-Methyl-2-(tri-n-butylstannyl)indole,
96%
[157427-46-8]



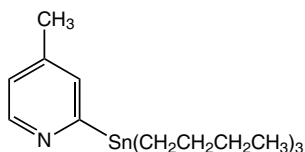
H51567

2-Methyl-6-(tri-n-butylstannyl)pyridine,
96%
[259807-95-9]



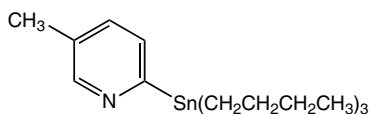
H51540

3-Methyl-2-(tri-n-butylstannyl)pyridine,
96%
[259807-97-1]



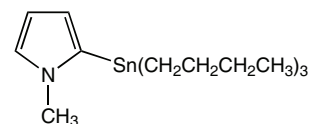
H51472

4-Methyl-2-(tri-n-butylstannyl)pyridine,
96%
[301652-23-3]



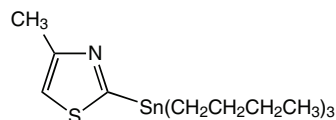
H51377

5-Methyl-2-(tri-n-butylstannyl)pyridine,
96%
[189195-41-3]



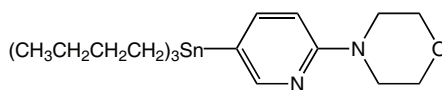
H51438

1-Methyl-2-(tri-n-butylstannyl)pyrrole
[118486-97-8]



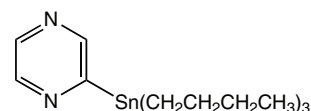
H51531

5-Methyl-2-(tri-n-butylstannyl)thiazole,
90+%
[848613-91-2]



H51545

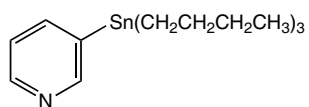
2-(4-Morpholinyl)-5-(tri-n-butylstannyl)
pyridine
[223556-07-8]



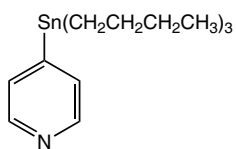
H51370

2-(Tri-n-butylstannyl)pyrazine, 95%
[205371-27-3]

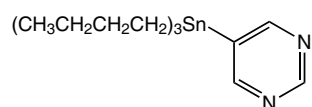
Organotin Compounds



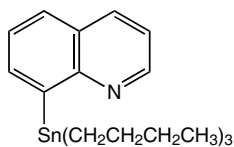
H51268
3-(Tri-n-butylstannyl)pyridine, 97%
[59020-10-9]



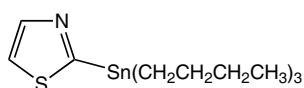
H51435
4-(Tri-n-butylstannyl)pyridine, 96%
[124252-41-1]



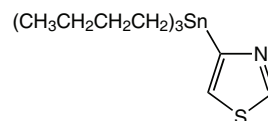
H51458
5-(Tri-n-butylstannyl)pyrimidine, 96%
[144173-85-3]



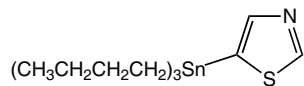
H51471
8-(Tri-n-butylstannyl)quinoline
[478282-21-2]



H51090
2-(Tri-n-butylstannyl)thiazole, 96%
[121359-48-6]



H51457
4-(Tri-n-butylstannyl)thiazole, 95%
[173979-01-6]



H51455
5-(Tri-n-butylstannyl)thiazole, 96%
[157025-33-7]