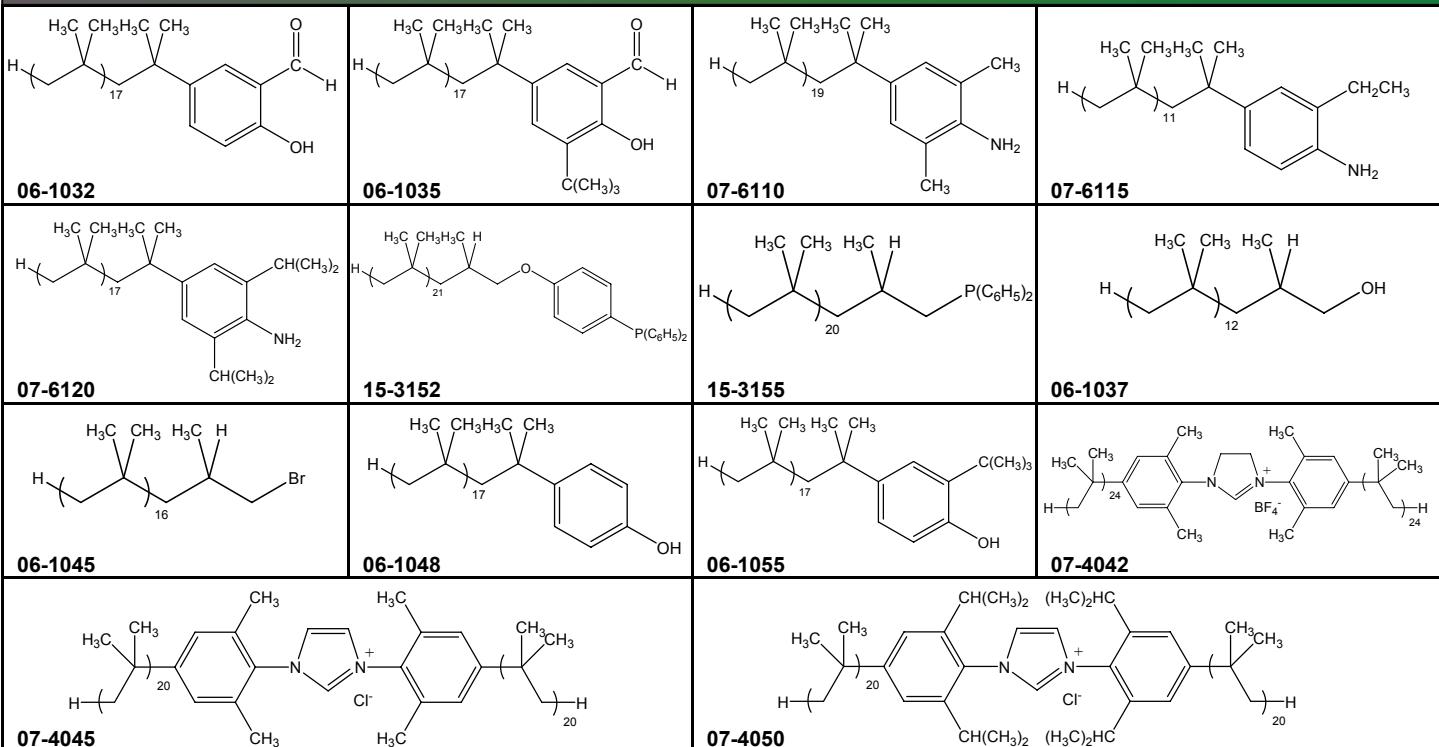


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Phase-selectively soluble polyisobutyl-bound ligands developed by Professor David Bergbreiter's group can be used to prepare versions of homogeneous transitional metal complexes and organocatalysts that can be recovered and recycled. The heptane solubility of the terminally vinyl-functionalized PIB-bound species is used to separate the catalyst, reagents, and/or byproducts from the polar phase-soluble product. Such separations can involve thermomorphic systems, latent biphasic systems or simple room temperature extractions.

The efficiency of the separation is usually high, but can be affected by the nature of the solvents used and the size or polarity of the catalyst or reagent bound to the PIB oligomer's terminus. Centrifugation can be used to facilitate the separation process, specifically to avoid the emulsions that can form in aqueous workups with some functionalized PIB oligomers.

The performance of these PIB-bound ligands has been effectively demonstrated by Bergbreiter's group in the ring-opening of epoxides, olefin metathesis, palladium cross-coupling, addition, allylic amination, polycarbonate polymerization and other reactions. Notably, incorporation of the ligands only affects the solubility, and not the reactivity of the supported catalysts.

06-1032	5-[Polyisobutyl(18)]-2-hydroxybenzaldehyde (50% in heptane/polyisobutylene) FW: 1132; yellow liq.	1g 5g
06-1035	5-[Polyisobutyl(18)]-2-hydroxy-3-(t-butyl)benzaldehyde (50% in heptane/polyisobutylene) FW: 1188.00; yellow liq.	1g 5g
07-6110	4-[Polyisobutyl(20)]-2,6-dimethylaniline (50% in heptane/polyisobutylene) FW: 1243; pale yellow liq.	1g 5g
07-6115	4-[Polyisobutyl(12)]-2-ethylaniline (50% in heptane/polyisobutylene) FW: 794; red-orange liq.	1g 5g
07-6120	4-[Polyisobutyl(18)]-2,6-di(i-propyl)aniline (50% in heptane/polyisobutylene) FW: 1187; yellow-orange liq.	1g 5g
15-3152	4-Diphenylphosphinophenyl{2-methyl-3-[polyisobutyl(21)]propyl}ether (50% in heptane/polyisobutylene) FW: 1513; colorless liq.	1g 5g
15-3155	{2-Methyl-3-[polyisobutyl(20)]propyl}diphenylphosphine (50% in heptane/polyisobutylene) FW: 1364; colorless liq.	1g 5g
06-1037	2-Methyl-3-[polyisobutyl(12)]propanol (50% in heptane/polyisobutylene) FW: 747; colorless liq.	1g 5g
06-1045	2-Methyl-3-[polyisobutyl(12)]propyl bromide (50% in heptane/polyisobutylene) FW: 1035; pale yellow liq.	1g 5g
06-1048	4-[Polyisobutyl(18)]phenol (50% in heptane/polyisobutylene) FW: 1104; pale yellow liq.	1g 5g

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Strem Chemicals, Inc.

7 Mulliken Way
Newburyport, MA 01950-4098
U.S.A.
Tel.: (978) 499-1600
Fax: (978) 465-3104
Email: info@strem.com
Pib_0112.doc

Strem Chemicals, Inc.

15, rue de l'Atome
Zone Industrielle
67800 BISCHHEIM France
Tel.: (33) 03 88 62 52 60
Fax: (33) 03 88 62 26 81
Email: info.europe@strem.com

Strem Chemicals, Inc.

Postfach 1215
77672 KEHL
Germany
Telefon: 0 78 51/ 7 58 79
Email: info.europe@strem.com

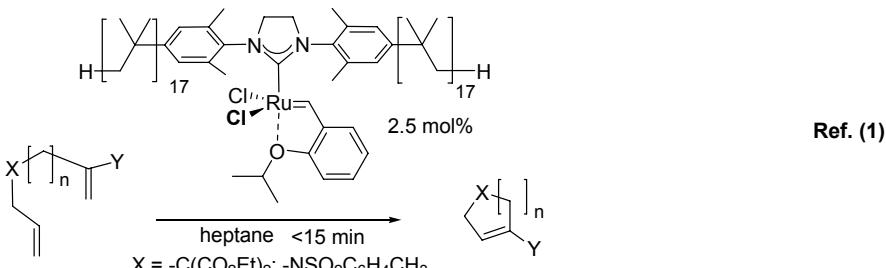
Strem Chemicals UK, Ltd.

41 Hills Road
Cambridge
England CB2 1NT
Tel.: 0845 643 7263
Fax: 01223 368021
Email: enquiries@strem.co.uk

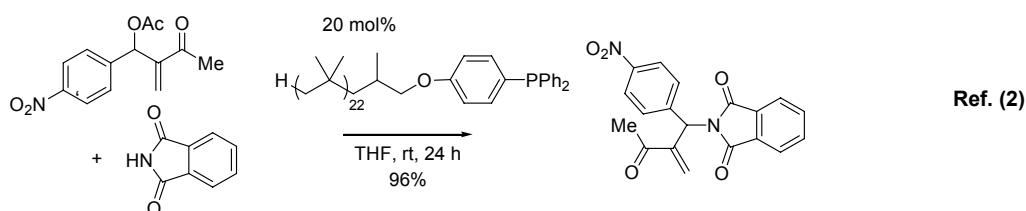
06-1055	4-[Polyisobutyl(18)]-2-(t-butyl)phenol (50% in heptane/polyisobutylene) FW: 1160; yellow liq.	1g 5g
07-4042	1,3-Bis{2,3-dimethyl-4-[polyisobutyl(24)]phenyl}-4,5-dihydroimidazolium tetrafluoroborate (50% in hexane/polyisobutylene) FW: 3059; yellow liq.	500mg
07-4045	1,3-Bis{2,3-dimethyl-4-[polyisobutyl(20)]phenyl}imidazolium chloride (50% in hexane/polyisobutylene) FW: 2557; orange liq.	500mg
07-4050	1,3-Bis{2,6-di-i-propyl-4-[polyisobutyl(20)]phenyl}imidazolium chloride (50% in hexane/polyisobutylene) (50% in hexane/polyisobutylene) FW: 2669; orange liq.	500mg

Technical Notes:

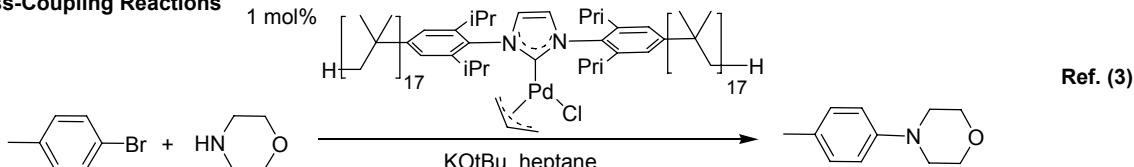
Ring Closing Metathesis



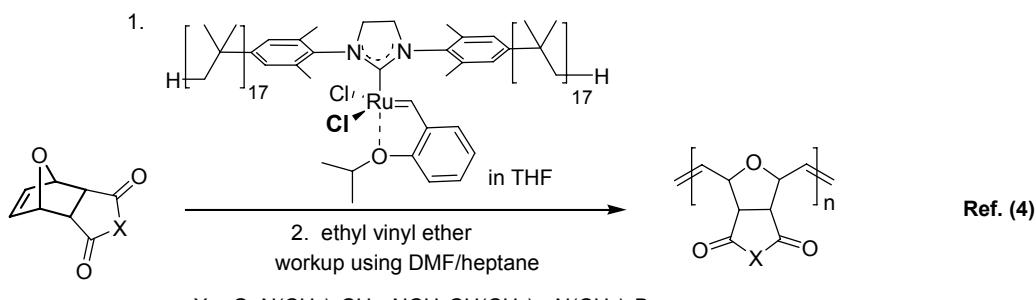
Addition and Allylic Amination Reactions



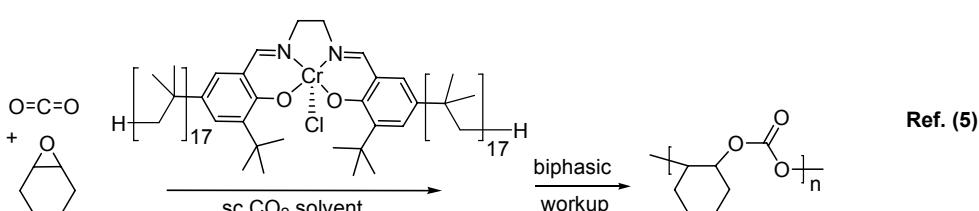
Palladium Cross-Coupling Reactions



Ring Opening Metathesis Polymerization (ROMP)



Polycarbonate polymerization



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Strem Chemicals, Inc.

7 Mulliken Way
Newburyport, MA 01950-4098
U.S.A.
Tel.: (978) 499-1600
Fax: (978) 465-3104
Email: info@strem.com
Pib_0112.doc

Strem Chemicals, Inc.

15, rue de l'Atome
Zone Industrielle
67800 BISCHHEIM France
Tel.: (33) 03 88 62 52 60
Fax: (33) 03 88 62 26 81
Email: info.europe@strem.com

Strem Chemicals, Inc.

Postfach 1215
77672 KEHL
Germany
Telefon: 0 78 51 / 7 58 79
Email: info.europe@strem.com

Strem Chemicals UK, Ltd.

41 Hills Road
Cambridge
England CB2 1NT
Tel.: 0845 643 7263
Fax: 01223 368021
Email: enquiries@strem.co.uk