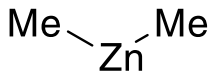
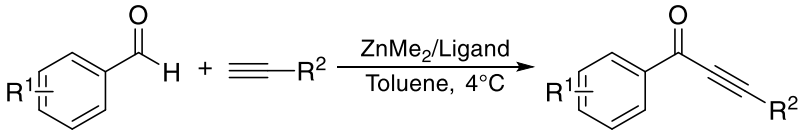
Catalog # 97-5061 Dimethylzinc, 99%



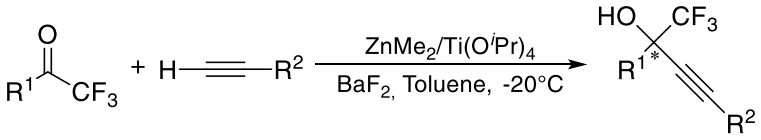
Catalysis Applications

Technical Notes:

1. Catalyst for the asymmetric alkynylation of unsaturated aldehydes.
2. Catalyst for the enantioselective alkynylation of trifluoromethyl ketones.
3. Catalyst for the highly enantioselective alkynylation of ketoimines to generate optically active quaternary propargyl amines.
4. Used in the Ni-catalyzed cross-coupling reaction for enantioselective construction of tertiary methyl-bearing stereocenters.
5. Catalyst for the Mannich-type reaction of 2,2,2-trifluorodiazoethane with imines to generate β-CF_3-amines.
6. Used in the Re-catalyzed phthalide synthesis from benzamides and aldehydes via C–H bond activation.
7. Used in the Ni-catalyzed conjunctive cross-coupling with a non-conjugated alkene and dimethylzinc using allyl electrophiles.
8. Catalyst for the direct alkylation of electron-deficient N-heteroarenes with 1,1-diborylalkanes.



Tech Note (1)
Ref. (1)



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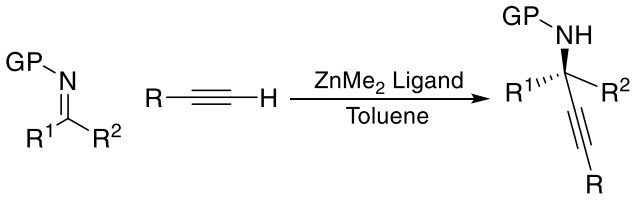
Ref. (2)



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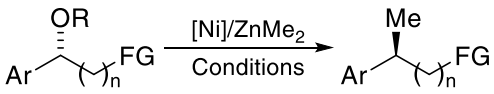

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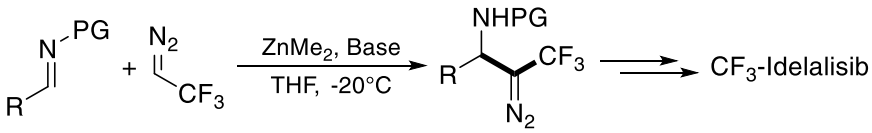

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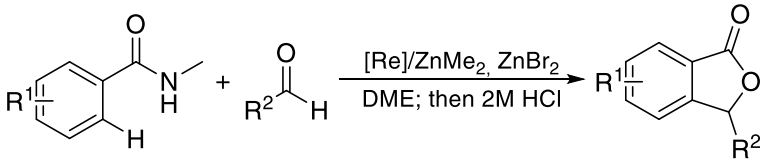

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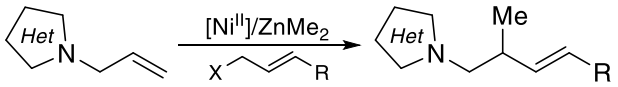
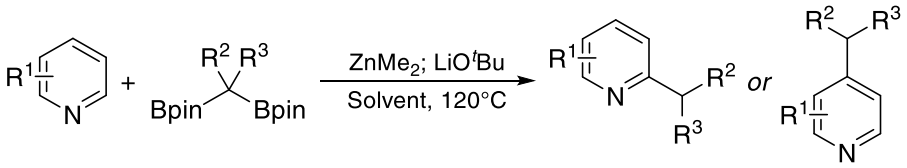


Tech Note (7)
Ref. (7)



Tech Note (8)
Ref. (8)

References:
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2. *Angew. Chem. Int. Ed.* **2011**, *50*, 3538.
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CVD/ALD Applications

Thermal Behavior:

- Melting point -42°C
- Boiling point 46°C
- Vapor pressure: 376 Torr/25 °C, table is available in [1]
- Decomposition in the vapor phase: >270°C [2]

Technical Notes:
1. ALD/CVD precursor for zinc thin film deposition.

Target Deposit	Deposition Technique	Delivery Temperature	Pressure	Co-reactants	Deposition Temperature	Ref.
ZnO	ALD PEALD PECVD	- -15°C -15°C	- 0.4 Torr 0.4 Torr	H_2O $^{PL}O_2$ $^{PL}O_2$	80-150°C 25-120°C 25-155°C	3-4 5 6
ZnS	ALD	-	-	H_2S	100-200°C	7
ZnSe	ALD	-	30 Torr	H_2Se	150-225°C	8
ZnO_xS_y	ALD	-	-	H_2O, H_2S	100-300°C	9
ZnS_xSe_y	ALD ALD	-8°C -	- 30 Torr	H_2S, H_2Se H_2S, H_2Se, H_2	150-225°C 175°C	10 11

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