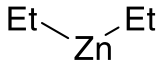
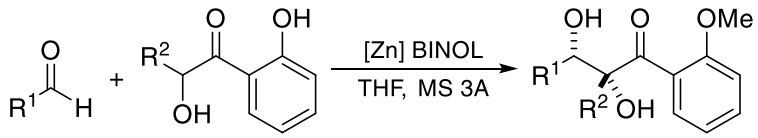
Catalog # 97-4525 Diethylzinc, elec. gr. (99.9998%-Zn) PURATREM



Catalysis Applications

Technical Notes:

1. Catalyst for direct asymmetric aldol reaction of hydroxyketones.
2. Catalyst for the intramolecular hydroamination of alkynyl sulfonamides and the related tandem cyclization/addition reaction.
3. Used in Cu-catalyzed regiodivergent 1,4-asymmetric conjugate addition.
4. Used in the Pd-catalyzed hydrocarboxylation of allenes with CO_2.
5. Used in Ni-catalyzed highly regio- and stereoselective *syn*-hydrocarboxylation of alkynes with carbon dioxide.
6. Catalyst for zinc mediated azide-alkyne ligation to 1,5- and 1,4,5-substituted 1,2,3-triazoles.
7. Used for borylation of aryl halides and for borylzincation of benzynes/terminal alkyne.
8. Used in enantio- and diastereodivergent Ir-co-catalyzed α-allylation of α-hydroxyketones.
9. Catalyst for the asymmetric aza-henry reaction of N-Boc imines and nitroalkanes under ambient conditions.
10. Catalyst used for the asymmetric synthesis of tetrahydrofuran spirooxindoles.



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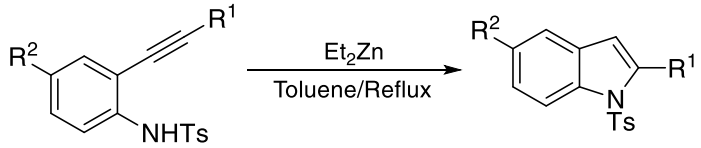

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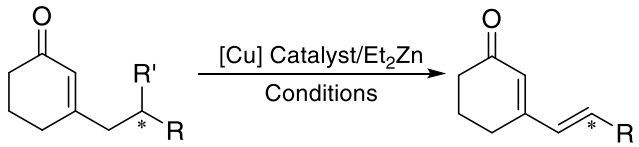

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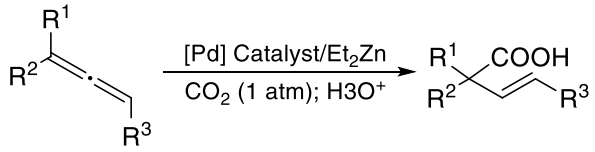

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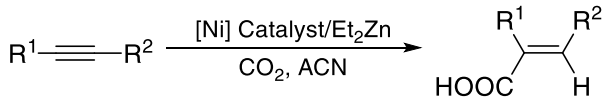

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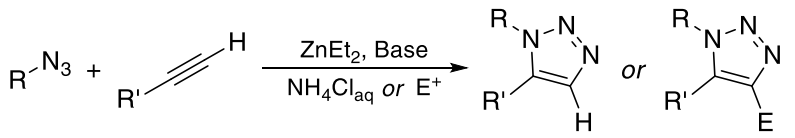

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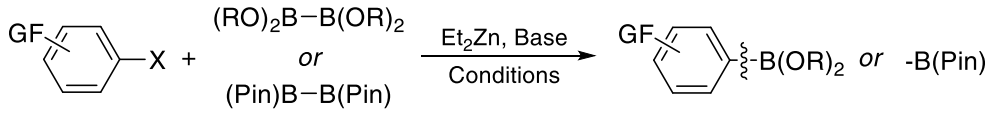

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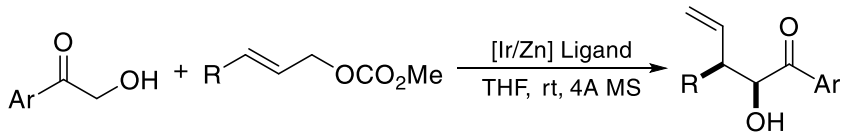

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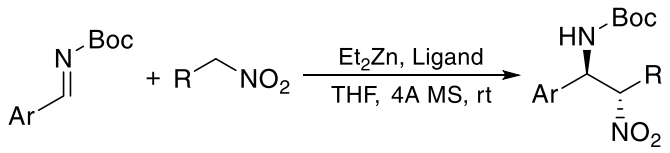

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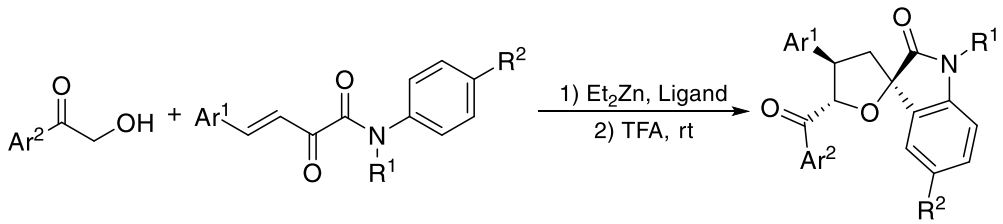

Tech Note (10)
Ref. (10)

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CVD/ALD Applications

Thermal Behavior:

- Melting point: -28°C
- Boiling point: 124°C
- Vapor pressure: ~16 Torr/25°C, table is in [1]
- Decomposition temperature: ~280°C [10]

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	40°C	10 Torr	H_2O	85°C	2
	ALD	RT	0.4 Torr	H_2O	60-300°C	3-4
	ALD	RT	-	H_2O/H_2O_2	100°C	5
	ALD	15°C	-	H_2O/O_3	170-300°C	6
	ALD	RT	AP	$H_2O/H_2O_2/O_2$	200°C	7
	ALD	RT	-	N_2O	600°C	8
	PEALD	RT	3 Torr	$^{PL}O_2$	100-200°C	9
ZnO:B	ALD	RT	-	$H_2O/B(O^iPr)_3$	150-240°C	10
ZnO:N	ALD	RT	-	NH_4OH	100-200°C	11
ZnO:H	ALD	RT	-	$H_2O/ {}^{PL}H_2$	200°C	12
ZnS	ALD	RT	-	$MeSNH_2 \rightarrow H_2S$	60°C-400°C	13
	ALD	RT	0.5 Torr	H_2S	150°C	14
	PEALD	RT	-	$^{PL}H_2S$	60-300°C	15
	ALD	RT	-	$HS(CH_2)_5SH$	150°C	16
Zn_3N_2	ALD	RT	-	NH_3	150-315°C	17
ZnF_2	ALD	RT	-	HF	1500°C	18

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