



The Chinese University of Hong Kong
Non-confidential Abstract of Technology Disclosure

Title:

**Linked Cyclopentadienyl-Dicarbollide Complexes of Titanium,
Zirconium and Hafnium**

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Inventor(s):

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Patent Status:

US Patent Allowed

Non-confidential abstract:

Derivatives of novel carbon bridged cyclopentadienyl-dicarbollide complexes of titanium, zirconium and hafnium display a very high activity as ethylene polymerization catalysts in the absence of a cocatalyst.

This invention relates to novel group 4 metallocene catalysts bearing linked cyclopentadienyl-dicarbollide ligands. They are very active single component catalysts for olefin polymerization. The activity is 4.64×10^6 g of PE/(mol of Zr atom h) in the absence of any cocatalyst, which is comparable to conventional metallocenes upon activation with a large excess MAO. The advantage of our catalysts is single component (without cocatalyst), high activity, and high thermal stability. There is a possibility for these catalysts to be used in chemical industry without alteration of existing plant.

For further queries, please contact:

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