



# **THESIS**

## **MOLECULAR DESIGN OF NANOSTRUCTURED CATALYSTS FOR INDUSTRIAL REACTIONS**

**SUPAWADEE NAMUANGRUK**

**GRADUATE SCHOOL, KASETSART UNIVERSITY**

**2007**

THESIS

MOLECULAR DESIGN OF NANOSTRUCTURED  
CATALYSTS FOR INDUSTRIAL REACTIONS

SUPAWADEE NAMUANGRUK

A Thesis Submitted in Partial Fulfillment of  
the Requirements for the Degree of  
Doctor of Philosophy (Chemistry)  
Graduate School, Kasetsart University

2007