

**SYNTHESIS AND CHARACTERIZATION OF METAL SULFIDE
AND ANTIMONIDE FOR QUASI-SOLID-STATE
DYE-SENSITIZED SOLAR CELLS**

CHANADE WICHASILP

**DOCTOR OF PHILOSOPHY
IN MATERIALS SCIENCE**

**THE GRADUATE SCHOOL
CHIANG MAI UNIVERSITY
SEPTEMBER 2011**

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**A THESIS SUBMITTED TO THE GRADUATE SCHOOL IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
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THIS THESIS HAS BEEN APPROVED
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