

**EFFECTS OF IRON (III) OXIDE AND MANGANESE (IV) OXIDE ADDITION ON
ELECTRICAL PROPERTIES OF LEAD ZINC NIOBATE-
LEAD ZIRCONATE TITANATE CERAMICS**

ATHIPONG NGAMJARUROJANA

**DOCTOR OF PHILOSOPHY
IN MATERIALS SCIENCE**

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่

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**THE GRADUATE SCHOOL
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SEPTEMBER 2007

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**A THESIS SUBMITTED TO THE GRADUATE SCHOOL IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
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**THIS THESIS HAS BEEN APPROVED
TO BE A PARTIAL FULFILLMENT OF THE REQUIREMENTS
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IN MATERIALS SCIENCE**

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7 September 2007

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