

**EFFECTS OF MICROSTRUCTURE DESIGN ON PROPERTIES
OF BARIUM CALCIUM ZIRCONATE TITANATE-BASED
COMPOUND**

PIYAPORN JAIMEEWONG

**DOCTOR OF PHILOSOPHY
IN MATERIALS SCIENCE**

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**GRADUATE SCHOOL
CHIANG MAI UNIVERSITY
JULY 2017**

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**A THESIS SUBMITTED TO CHIANGMAI UNIVERSITY IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
IN MATERIALS SCIENCE**

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THIS THESIS HAS BEEN APPROVED TO BE A PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
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IN MATERIALS SCIENCE

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26 July 2017

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The seal of Chiang Mai University is a circular emblem. In the center is an elephant standing and facing left, with a traditional Thai torch (phra phung) above its head. The text "CHANG MAI UNIVERSITY 1964" is written in a circle around the elephant. Thai script is also present in the upper part of the seal.

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