

**SYNTHESIS OF NIOBIUM-DOPED ZINC OXIDE NANOPARTICLES
BY FLAME SPRAY PYROLYSIS AND
THEIR APPLICATIONS**

VIRUNTACHAR KRUEFU

**DOCTOR OF PHILOSOPHY
IN NANOSCIENCE AND NANOTECHNOLOGY**

**THE GRADUATE SCHOOL
CHIANG MAI UNIVERSITY**

APRIL 2011

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**A THESIS SUBMITTED TO THE GRADUATE SCHOOL IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
IN NANOSCIENCE AND NANOTECHNOLOGY**

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THIS THESIS HAS BEEN APPROVED
TO BE A PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF DOCTOR OF PHILOSOPHY
IN NANOSCIENCE AND NANOTECHNOLOGY

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