

**EFFECTS OF NAFION AND SOLVENTS ON MEMBRANE  
ELECTRODE ASSEMBLY COATING FOR PROTON  
EXCHANGE MEMBRANE FUEL CELL**



**DOCTOR OF PHILOSOPHY  
IN MECHANICAL ENGINEERING**

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**GRADUATE SCHOOL  
CHIANG MAI UNIVERSITY**

**JULY 2017**

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**A THESIS SUBMITTED TO CHIANG MAI UNIVERSITY IN PARTIAL  
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF  
DOCTOR OF PHILOSOPHY  
IN MECHANICAL ENGINEERING**

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KORAWAT WUTTIKID

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

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