

## **Acknowledgments**

It is with a deep sense of gratitude that I acknowledge the guidance, encouragement and freedom given by Professor Dr. Phadungsak RATTANADECHO throughout the study. I would like to collectively thank my colleagues and friends – the Center of Excellence in Electromagnetic Energy Utilization in Engineering (CEEE), Thammasat University (Rangsit Campus).

I gratefully acknowledge the Thailand Research Fund (TRF), the Office of the Higher Education, Phranakhon Rajabhat University for supporting this research project under the contract No. MRG5580041.

In addition, this research is dedicated to a great scientist, researcher, philosopher and our guide and colleague, Professor Dr. Rustum Roy (July 3, 1924 – August 26, 2010), Evan Pugh Professor of the Solid State Emeritus. We will always remember Dr. Roy for his wide ranging intellectual pursuits including his pioneering contributions to advance the field of materials science.

Natt Makul

June, 2014