

DEDICATION (致谢)

兹将本论文献给我的家人：母亲，父亲，哥哥，嫂子，和伴侣。感谢你们给予我的爱，支持，和奉献。

Translation from Chinese:

This dissertation is dedicated to my immediate family members: my mom, dad, brother, sister-in-law, and spouse. Thank you for all of your love, support, and sacrifice throughout my life.

BIOGRAPHY

Paul Chin was born on November 30, 1979 in Hong Kong en route to the United States. Twenty-one days later he transitioned to the United States of America with his mother. He spent the first nine years of his life in Flushing, New York, and the latter nine years of his childhood in Burlington, Massachusetts. Paul was a part-time Chinese restaurant front desk worker, part-time hospital volunteer, part-time actor in crazy high school videos, but a full-time wise-cracking Bostonian.

After graduating with his high school diploma in 1997 from Burlington High School, he attended Cornell University for his undergraduate degree in Ithaca, New York. He volunteered substantially in his fraternity, Alpha Phi Omega, was active in the AIChE student chapter, and co-oped at Air Products and Chemicals, Inc. He graduated with his Bachelors of Science in Chemical Engineering in May 2001.

In August 2001, he enrolled as a graduate student in the chemical engineering department at North Carolina State University in Raleigh, North Carolina. He was heavily involved in graduate life, from vice president of the chemical engineering graduate student association to graduate recruiting captain. He obtained his Masters of Science (thesis) in June 2004, focusing on structured platinum/iron catalytic supports for PEM fuel cell applications. He was co-advised by Drs. George W. Roberts and James J. Spivey. His doctoral research, under the direction of Dr. David F. Ollis, focused on experimental and kinetic modeling of titanium dioxide thin films as a photocatalyst for environmental remediation. After graduation, he will pursue an industrial career in Boston, Massachusetts, or be drafted as a short stop for the Pawtucket Red Sox.

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