ACKNOWLEDGMENTS

This work was made possible with financial support from the National Science Foundation Integrative Graduate Education and Research Traineeship (IGERT) Fellowship for research in the Nanosciences and from the Vanderbilt Discovery Grant.

I am grateful to the following individuals for their contributions to my work: Professor James Dickerson, my advisor, who has guided my research the last four years and helped me become a better scientist; my PhD committee members—Professors Sokrates Pantelides, Bridget Rogers, and Sandra Rosenthal—who helped shape this work with their hard questions; my group members past and present—Sameer Mahajan, Suseela Somarajan, Dustin Kavich, John Rigueur, Alex Krejci, Weidong He, and Marcela Redigolo—whose talent and dedication have made my research stronger; and the staff of VINSE—Professor Tony Hmelo, Dr. Dmitry Koktysh, Dr. Robert Geil, Sarah Satterwhite, and René Colehour—who have helped my work run smoothly over the last five years.

I also thank my friends, with whom I have celebrated the high moments of doing research and who have helped me to get up from the low moments.

Finally, I thank my parents, who have enabled me to pursue my dreams.