

Acknowledgment

First of all, I would like to express my gratitude to Prof. K.-H. Rieder for the opportunity to work in his group and his encouragement and support.

I thank Prof. K. Horn for all the discussions about quasicrystals and his interest in my work. Moreover, I thank him for the opportunity to collaborate with him on photoemission studies of quasicrystals. His motivation during the beam-times at the Advanced Light Source was very encouraging. Finally, I am grateful that he accepted to be a co-referee of my thesis.

I thank Dr. Wolfgang Theis for supervising my work, his help throughout the three years, and for proof reading this manuscript. I am grateful that he always had time when urgent problems had to be solved.

I would like to thank Prof. Horn-von Hoegen for providing the opportunity to carry out the LEEM experiments in his group and Peter Kury for assisting in questions regarding the instrument. I thank them and the rest of the group in Essen for creating a pleasant environment during my stay.

I thank Dr. Hem Raj Sharma for the collaboration and discussions during his time as a Ph.D. student in our group. My thanks go to Dr. Stefan Fölsch and Dr. Andreas Riemann for introducing me to the SPA-LEED set-up and fruitful discussions. I would like to thank Prof. J. R. Manson for the interesting discussions during his stay in our group and especially for proof reading several chapters of this thesis. I also thank Leo Gross for his comments to several chapters in this manuscript. For creating a pleasant working atmosphere I would like to thank all members of the Rieder group and Angelika Scheffler for her help with administrative work and Christian Roth for technical support.

I want to thank Prof. R. D. Diehl for awaking my interest in quasicrystals and recommending Prof. Rieder's group for starting a Ph.D. My thanks go to Prof. Peter Gille and Dr. Philipp Ebert for providing the quasicrystal samples.

Last but not least, I want to express my deep gratitude to my parents and Ole for their encouragement and support in various aspects. Finally, I thank Ole for his help with programming and proof-reading this manuscript.

