

PREFACE

Writing in the late 1930s, eminent historian Carter G. Woodson (1939) opined that historians rarely mentioned scientific and technical achievements except those in Asia or Europe. He asserted that the Chinese were recognized for inventing printing, gunpowder, and the mariner's compass, but the general public is not informed that Africans discovered and refined iron. Woodson pointed out that seldom is the public informed that the Benin and other Africans learned to cast artistic bronze figures from clay molds built over wax forms or that the San People knew enough chemistry to poison their arrows to kill game without spoiling the flesh of the animal.

Despite more than a century's presence among Ph.D. scientists, there have been few empirical studies that focus on the career experiences of African American Ph.D. scientists (Pearson, 1985; Williams, 1981; Young & Young, 1974). Even less is known about African American Ph.D. chemists (Ferguson, 1949; Geiser, 1935; *Industrial Trends*, 1949; Pearson, 1996; Young & Young, 1976). Besides general biographic accounts of the careers of a few well-known African American chemists (Haber, 1970; Klein, 1971), little is known about the majority of African Americans who earned their doctorates in chemistry after 1916 (Downing, 1938, 1939; Greene, 1946; Hawkins, 1982; Julian, 1969; Massie, 1982; Meier, 1982; Rawls, 1991). This book seeks to contribute to the literature on this segment of the American scientific community by providing insight into the factors that affect the careers of African American Ph.D. chemists.

This book is organized in seven major chapters. The first chapter addresses the historical presence of African Americans in the chemistry community. The second chapter discusses the demographic characteristics of the responding chemists. The third focuses on the interviewees' educational experiences. The fourth chapter discusses workforce-related issues. The fifth chapter discusses professional activities, while the sixth chapter focuses on racial attitudes. The final chapter discusses the implications of the findings for policy and research.

Completion of this book required the able assistance of many individuals whose contributions were of immense importance. In particular, I am indebted to the late Lloyd M. Cooke who first kindled my interest in the careers of African Americans who earned their doctorates in chemistry before the 1954 Brown decision.

I am grateful to the 44 men and women who consented to share their stories. Their experiences provide critical insight into efforts to understand the effects of race on scientific careers. I owe a great deal of gratitude to a number of individuals who have read various drafts of the manuscript, provided biographical, bibliographical and tabular materials, and expert advice. Among these are: Joan Burrelli and Susan T. Hill, Science Resources Statistics Division, National Science Foundation; Terry Russell, Association of Institutional Research; Daryl Chubin, AAAS; Beatriz C. Clewell, Urban Institute; Eleanor Babco, Commission on Professions on Scientific and Technology; Alison Williams, Princeton University; Sharon Haynie, Dupont; Henry Blount, Mathematics and Physical Sciences Directorate, National Science Foundation; and Marge Cavanaugh, Office of the Director, National Science Foundation.

A special mention of appreciation is due to former National Science Foundation Program Officers: Ronald Overmann and Edward Hackett (Science, Technology and Society) and current National Science Foundation Program Director, Larry E. Suter, Division of Research, Evaluation and Communication. To Henry Frierson, Jr., the series editor, I am especially indebted for his encouragement, support, and expert critiques throughout the completion of the book.

A vital part of this project involved undergraduate students. A number of former Wake Forest University undergraduate students made substantial contributions to the project. Among the students who contributed many hours of research, clerical, and technical assistance are: Jennifer Grishkin, Emily Hoban, Craig Ness, Tenika Rudisell, Omari Simmons, LaMaya Covington and Charles Goodman. At Georgia Tech, LaDonna Bowen, Denise Corum, Steven Henderson, Prakash Kumar and Nyema Mitchell played roles in reviewing and/or typing the manuscript. This publication was supported, in part, by grants from the National Science Foundation (SRB 9222547 and a supplemental award from REC/EHR). The project benefited enormously from the administrative assistance of Claudia Colhoun who transcribed the taped interviews and typed the drafts of the manuscript. Finally, I thank Cheryl B. Leggon for providing encouragement and a supportive environment throughout the duration of the project. I, of course, take full responsibility for any deficiencies in the final product.

Willie Pearson, Jr.