# Vacuum Technology, Thin Films, and Sputtering

An Introduction

R. V. STUART

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#### **PREFACE**

Vacuum technology is advancing and expanding so rapidly that a major difficulty for most companies in this field is finding qualified technicians needed for expansion and as replacements. The only recourse for most companies is to hire capable, though untrained, people and train them in-house. One of the problems in this course of action is that it repeatedly draws on the valuable time of experienced personnel to explain fundamental concepts to a trainee. Even then the trainee is usually at a disadvantage because not more than a glimmer of understanding generally is obtained the first time through, and there is seldom a second time through to provide any more help. Unfortunately there are no available books on vacuum technology written at the introductory level to help fill the void. A rather advanced amount of scientific and technical knowledge is required on the part of the reader to make any real use of presently available books. Even then, a person without experience in this field will generally struggle to find the help actually needed.

This book is written to provide an introduction to vacuum technology in general and the sputtering process in particular. It is