

## Preface

This book is based on the lectures given by Professor R. K. Osborn in two consecutive graduate courses on the applications of quantum mechanics to problems encountered in nuclear engineering. The manuscript, mostly in his handwriting, had been completed and submitted to the publisher shortly before the author suddenly passed away in February 1987. We, his students and colleagues, decided to go ahead with the publication of the book on his behalf.

During the editing process, we have interfered with the content and style of the manuscript as little as possible. Professor Osborn's approach to teaching quantum mechanics to nuclear engineering students represents a novel point of view in that it introduces the necessary concepts and tools of quantum mechanics using the density matrix formalism, and illustrates their utility by considering only those problems that are relevant to nuclear engineering (in a broad sense). In this respect, this book is very different from, and complimentary to, the existing text books on quantum mechanics, both in approach and content.

We dedicate our efforts in the publication of this book to the memory of this great teacher.

1988

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