

been designed keeping in view of the equipments and facilities usually available in laboratories of Indian Universities. They have been selected such that they are easy to perform and can be completed in four to seven hours. Each experiment is provided with a detailed procedure, along with the necessary theoretical background so that the student can understand and carry out without much difficulty. This type of treatment of the subject is unique and useful for a student who prepares for a viva voce examination.

This book describes detailed procedures for 100 experiments covering all aspects of Physical Chemistry. The experiments described are well within the budgetary limitations of Indian Universities. In addition, an almost equal number of related experiments have been suggested without describing their procedures in detail. Experiments with highly expensive and sophisticated equipments such as those involving NMR spectroscopy, IR spectroscopy, mass spectrometry and gas chromatography are excluded, since they are still considered as "research equipments" in our laboratories. However, experiments involving UV-visible spectrophotometer, polarograph, pH-

meter, potentiometer, conductivity bridge, polarimeter, magnetic balance, thermogravimetric balance, common GM counter, etc have been described. These equipments are easily available nowadays and are manufactured in India.

This book consists of 21 chapters, of which 19 chapters cover the experiments involving all branches of Physical Chemistry. The first two chapters are, however, of fundamental nature guiding the student in recording of the observed data systematically and in their treatment. In addition, appendix at the end of the book contains several useful tables with data relevant to the experiments described in the text.

Thus, with the concise background of the theory for each experiment, this book with its simple style and detailed discussion of the procedures, forms an ideal laboratory text for students of Indian Universities at the undergraduate and postgraduate levels.

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## NEWS

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### THE BIRTH OF EARTH AND ITS MOON

... Scientists "have samples of the original star dust from which our solar system was made. Microscopic packets of it were trapped within meteorites that accreted, or formed, out of the stellar dust shortly after the birth of the solar system some 4.6 billion years ago. Using techniques developed to analyze moon rocks, cosmochemists have examined several of these meteorites that have fallen to earth in recent years. They have found exotic isotopes that may well have been created in a nearby supernova explosion, the violent death throes of another star. These newly forged elements would then have been blasted toward a gathering cosmic cloud that would eventually give birth to our solar system. Planet Earth, suggests Robert Clayton [U. Chicago], may contain the star dust from ten or twenty vanished solar systems. ... Earth, like all moons and planets, was

struck countless times by other bodies pulled in by its gravitational tugs. When Earth was small, some of these were probably large enough to break our growing planet apart. Each time this happened, Earth reassembled, a bit bigger than before. ... Many scientists suspect that when Earth was only a few tens of millions of years old, an object perhaps as large as Mars struck our accreting planet at more than 35,000 kilometers an hour. The planet survived, although much vapor and molten rock were ejected into space. Some of the ejecta would have coalesced into the moon."

[(Rick Gore in *National Geographic* 167(1):4-51, Jan 85.) Reproduced with permission from Press Digest, *Current Contents*<sup>®</sup>, No. 14, April 8, 1985, p. 11. (Published by the Institute for Scientific Information<sup>®</sup>, Philadelphia, PA, USA.)]