



PREFACE

AN occasional visitor to the ordinary public lecture on chemistry, whose eyes have been dazzled by a display of fireworks, regards the subject as most interesting and fascinating, and supposes that the chemist's life is spent amid a continuous round of brilliant pyrotechnics. The student, whether at school or college, takes quite another view of the matter, and very frequently considers chemistry one of the most difficult subjects of his course. He meets a large number of new facts which unfortunately seem unconnected with ordinary daily life. The idea is soon formed that chemistry is a thing apart, that it forms a realm by itself, presided over by a special god or goddess, — a deity, alas, difficult to appease and propitiate, the secrets of whose kingdom are most grudgingly revealed.

Not only are new facts met with, but new theories are encountered, and the theories do not seem to arise from the facts. If any connection is regarded as existing between the two, the theories are supposed to be the more fundamental, the facts striving, if possible, to correspond with them. To many young students it would be matter of surprise that chemistry does not hang upon the atomic theory, that a number of the most brilliant and epoch-making discoveries were made without its assistance, that analyses were carried on and manufactures engaged in before the theory was enunciated, and that without the experimental basis provided by research, the atomic theory would be of no more value than the unfruit-