



Handbook of Industrial Drying

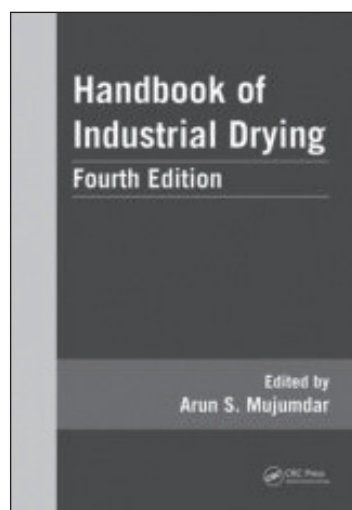
Fourth Edition

Editor : Arun S. Mujumdar **Publisher** : CRC Press
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An expanded version of fourth edition "Handbook of Industrial Drying" was released after 25 years of successive editions (first edition was published in 1987). This is a contributed book edited by world renowned drying Guru Prof Arun Mujumdar. This edition contains 16 additional new chapters as compared to its previous edition. The book maintains the simple but high quality of presentations and illustrations to satisfy both the learners and experts in the field.

In the past couple of decades the focus was more on the new process development in drying. Currently, 'quality' has become the priority rather than developing new drying systems. However, the importance of fundamentals on drying remains the same. This edition still continues to integrate drying fundamentals, design of dryers and drying technology of wide range of products (both biological and non-biological materials), with particular focus on product quality.

The book is divided into four main sections covering all aspects of science, technology and engineering of drying. The first section of the book has five chapters which cover the principles and mechanism of drying including basic calculations, modelling and simulations. The second section contains 18 chapters each covering one typical type of dryer. The type of the drying systems incorporated in this section are indirect drying, spray drying, drum drying, freeze drying, rotary drying, fluidized bed drying, microwave and dielectric drying, infrared drying, superheated drying, solar drying, superheated steam drying, impingement drying, flash drying, pulsed combustion drying etc. The third section comprises of 28 chapters which are dedicated to the drying of spe-



cific materials ranging from food to waste sludge. Among food materials it includes drying of grain, seafood, fruits and vegetables, herbal medicine, tea, potato etc. In the case of pharmaceutical materials, this section includes drying of enzymes and protein. The book also includes drying technologies for ceramics, coal, nano-size particles, peat and bio-fuels, pulp and papers, fibrous materials, biomass, timber/wood and polymers. The fourth section constitutes 13 chapters. It is dedicated to other important aspects of the dryer system and drying operations, such as controls, software for

dryer calculations, methods to improve energy efficiency, life time assessment, cost-estimation methods, emission control, and potential hazards, safety issues and dryer design. Other miscellaneous processes that involve drying have also been included, such as crystallisation and drying of crystals, solid-liquid separation pre-treatment prior to drying, supercritical fluid assisted drying, heat pump drying, and dehydration during frying of foods.

To my knowledge, all contributors of the book are internationally well recognised researcher and industry experts. The book carries a large wealth of information. Thus, I recommend the "Handbook of Industrial Drying" to anyone who is associated with dryers or drying of materials: such as teachers, technologists, researchers, production managers and design and manufacturing engineers. As the book has covered every possible subject in relation to drying of wide variety of materials, there is no other single comparable book in the field of drying.

In summary, this book is indeed the 'bible' of drying.