Arabinda Ghosh

Technology of Polymer Packaging
In Memory of

My parents

and

The legendary
Professor Dr.-Ing. habil. h. c. Rudolf Heiss
1903–2009

(Director of the Fraunhofer Institute for
Food and Packaging Technology, Munich
1936–1975)
Since the first production of polyethylene on a large scale by ICI (Imperial Chemical Industries) in the 1930s, polymer materials, or as they are simply called, plastics, have been inevitable as successful packaging materials. Plastics protect all kinds of products like food, pharmaceuticals, cosmetics, medical products, and other nonfoods against deterioration. Although the amount of tissue material such as paper, paper board, and corrugated board used for packaging is a bit higher than polymers, polymers are inevitable for primary packaging. They fulfill all of the legislative regulations worldwide for direct contact with the product, particularly with food.

No other packaging material shows such a continuous and rapid development as does polymer packaging material. Scientists, experts, and technologists of the packaging sector are responsible for the development and application of tailor-made solutions. This book will contribute to the practical knowledge of specialists.

Besides basic and applied knowledge on technology, a number of valuable suggestions on critical cases are given in this book.

Finally, I hope this book will be a valuable help for the reader to solve technical problems and be a contribution to successful packaging development.

**Global Packaging Materials – a Breakdown**

- **34%** Plastics
- **10%** Glass
- **17%** Metal
- **36%** Paper
- **3%** Others

**Plastics Have the Highest Growth Rate among All Materials in the Packaging Sector**

BM: blow molding, IM: injection molding, TF: thermoforming, Roto: roto molding
Raj Datta, Haldia Petrochemicals, National Conference, IIP, Kolkata 2012
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