Packaging for Nonthermal Processing of Food

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Packaging for Nonthermal Processing of Food
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Cover image: E-beam unit for packaged frozen meats (left) and pulsed UV/light emission for liquid foods (right).

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During 2005 IFT (Institute of Food Technologists) Annual Meeting (July 15–20, 2005, New Orleans, Louisiana, USA), Food Packaging Division and Nonthermal Processing Division co-sponsored two symposia under the titles of “Advances in Packaging Technology Required for Implementation on Novel Food Processes” and “Active Packaging for Nonthermal Processing.” I was privileged to host these symposia as a Chair-elect of Food Packaging Division with Dr. James Yuan who was the Chair of Nonthermal Processing Division. Both symposia were successful as they provided valuable opportunities for general participants and invited speakers to share their scientific interests and practical experiences. I recognized instantly that the papers of these symposia were valuable and should be published to provide current information in a stable and concrete form. I thank IFT for accepting my proposal to contribute a book to the IFT Press Series.

Nonthermally processed food products have unique quality parameters compared to conventional food products processed by thermal treatment. Some of these new quality parameters might not be essential for the thermal processes because they were new parameters which used not to be considered for conventional thermal processes. Therefore, nonthermal processes have new requirements of processing and packaging to protect the quality of nonthermally processed foods. The conventional packaging design and materials should be changed accordingly for nonthermally processed foods. Critical protective barrier properties of packaging materials must remain to prevent chemical, physical, or microbial degradation of the contents after nonthermal processing. This book discusses the need to understand the details of process, product, and packaging material interactively for the selection of commercial products that are ready for extended shelf life and consumer testing. In addition, the critical role of
information carried by packaging materials is discussed to make a new product produced by a novel process attractive to consumers.

This book could not be possible without the contribution of the chapter authors. My special thanks goes to IFT staff and Blackwell Publishing staff for initiating and completing the publication processes.

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