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Special Issue Reprint

## Optimization of Non-thermal Technology in Food Processing

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Consumers have increasingly sought fresh-like, convenient foods without any chemical residues to protect against pests and pathogenic microorganisms. Even minimal heat treatments, such as standard pasteurization, are no longer popular because it is generally believed that heating reduces the content of healthy food components such as vitamins and antioxidants. This has served as the motivation for the development of new, gentle food processing technologies, which are highlighted in this Special Issue. The aim of this Special Issue is to present the latest research on cutting-edge, gentle food processing technologies, including high-pressure processing (HPP), pulsed electric field (PEF) processing, high-pressure homogenization (HPH), ultraviolet (UV) light processing and cold plasma processing (CPP). The applications of these technologies are presented across different food materials, alongside methods for optimizing process parameters. Showcasing new technologies and their advantages/disadvantages can motivate readers to apply them in practice. Many of the above-mentioned technologies have already been introduced into industrial practice, but applications are still limited. It is clear that scaling up from laboratory to full commercial scale brings a number of challenges, including legislative ones. This Special Issue is primarily about the benefits of these new technologies towards improving the health and nutrition of the final product without compromising safety and sensory quality, i.e., taste and texture.



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