

Special Issue

Advanced Technology to Improve Plant Protein Functionality

Message from the Guest Editors

As the global population is projected to increase to 9.5 billion by 2050, this will result in a 30–50% increase in protein demand. Considering the fact that the production of these animal proteins is largely dependent on plant-based feeds, the conversion of plant proteins into these animal proteins is only about 3 % efficient. It also leads to more greenhouse gas emissions, the consumption of more water and the use of land. In addition, human health concerns, animal welfare, and religion are also topics for consideration. A combination of these factors has led to a growing demand for plant proteins to replace animal proteins in recent years. However, since plant proteins are usually obtained from agricultural by-products or require more complex extraction procedures, their technical functionality (solubility, emulsification, foaming, gelation, etc.) is much weaker than animal proteins. Therefore, there is an urgent need to explore new and advanced technologies to enhance the functional properties of plant proteins as effective alternatives to animal proteins.

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