KASETSART UNIVERSITY
FACULTY OF AGRO-INDUSTRY

# Assoc. Prof. Pitiya Kamonpatana

Food Science and Technology Department, Faculty of Agro-Industry, Kasetsart University

Tel: 66-2562-5208 e-mail: pitiya.k@ku.th

## Education

Ph.D. (Food Engineering), The Ohio State University, USA
M.Eng. (Mechanical Engineering), Kasetsart University, Thailand
B.Eng. (Food Engineering), King Mongkut's Institute of Technology Ladkrabang, Thailand

## Expertise

- Ohmic heating and ohmic assisted thermal sterilization of packaged foods
- Ohmic assisted hydro-distillation of essential oil
- Thermal processing: Retort and UHT
- Continuous flow ohmic heating systems
- High pressure processing (HPP)
- Extrusion
- Pet food processing technologies
- Food plant design
- Process validation and challenge study
- Development of microbiological protocols for aseptic processes
- Software development of food processing: thermal processing, aseptic processing, ohmic heating, microwave heating, etc.

## Selected Works

### Book Chapter

**Kamonpatana, P.**, Gavahian, M. & Sastry S.K. (2022). 12. Ohmic heating for food processing: methods and procedures related to process parameters. *In* Gavahian, M. Emerging Food Processing Technologies (Methods and Protocols in Food Science). Springer Link.

**Kamonpatana, P**. (2018). Packaging for Foods Processed by Ohmic Heating. Module Reference in Food Science. (Encyclopedia)

Sastry, S.K. & **Kamonpatana, P**. (2014). Electrical Conductivity of Foods, pp. 527-570. *In* Rao, M.A., Rizvi, S.S.H., Datta, A.K. & Ahmed, J., eds. Engineering Properties of Foods. CRC Press, Boca Raton, FL.

**Selected publications**


**Kamonpatana, P.** Sastry, K. (2022). Electrical conductivity of foods and food components: The influence of formulation processes. Journal of Food Process Engineering, e13992.

Torgbo, S., Sukatta, U., **Kamonpatana, P.** & Sukyai, P. (2022) Ohmic heating extraction and characterization of rambutan (*Nephelium lappaceum* L.) peel extract with enhanced antioxidant and antifungal activity as a bioactive and functional ingredient in white bread preparation. Food Chemistry, 382.

Moreno, J.P.C., Ratphitagsanti, W., Suwannaporn, P & **Kamonpatana, P.** (2021). Stabilization of rice bran using ohmic heating or ultra-superheated steam. Agriculture and Natural Resources, 55(5), 816-825.

Sereechantarerk, C., Hongsprabhas, P., Chanput, W. & **Kamonpatana, P.** (2021). Effects of ohmic heating on structural and physicochemical changes of whey proteins. Agriculture and Natural Resources, 55(3), 464-472.

Tepnatim, W., Daud, W. & **Kamonpatana, P.** (2021). Simulation of thermal and electric field distribution in packaged sausages heated in a stationary versus a rotating microwave oven. Foods, 10(7), 1622.

Tiravibulsin, C., Lorjaroenphon, Y., Udompijitkul, P. & **Kamonpatana, P.** (2021). Sterilization of coconut milk in flexible packages via ohmic-assisted sterilizer. LWT-Food Science and Technology, 147, 111552.

Wattanayon, W. **Kamonpatana, P.** & Udompijitkul, P. (2021). Ohmic Heating of a Solid-Liquid Food Mixture in an Electrically Conductive Package. Journal of Food Engineering, 289, 110180.

Inmanee, P, **Kamonpatana, P.** & Pirak T. (2019). Ohmic heating effects on *Listeria monocytogenes* inactivation, and chemical, physical, and sensory characteristic alterations for vacuum packaged sausage during post pasteurization**.** LWT-Food Science and Technology. 108: 183-189.

Yodsuwan, N., **Kamonpatana**, P., Chisti, Y. & Sirisansaneeyakul, S. (2018). Ohmic heating pretreatment of algal slurry for production of biodiesel. Journal of Biotechnology, 267: 71-78.

Kanogchaipramot, K., Tongkhao, K., Sajjaanantakul T. & **Kamonpatana**, P. (2016). Ohmic Heating of an Electrically Conductive Food Package. Journal of Food Science, 81(12): E2966-E2976.

**Kamonpatana**, P., Mohamed, H.M.H, Shynkaryk, M., Heskitt, B., Yousef, A. & Sastry, S.K. (2013). Mathematical Modeling and Microbiological Verification of Ohmic Heating of a Multicomponent Mixture of Particles in a Continuous Flow Ohmic Heater System with Electric Field Parallel to Flow. Journal of Food Science, 78(11), E1721-1734.

**Kamonpatana**, P., Mohamed, H.M.H, Shynkaryk, M., Heskitt, B., Yousef, A. & Sastry, S.K. (2013). Mathematical Modeling and Microbiological Verification of Ohmic Heating of a Solid-Liquid Mixture in a Continuous Flow Ohmic Heater System with Electric Field Perpendicular to Flow. Journal of Food Engineering, 118, 312-325.

Somavat, R., **Kamonpatana, P.**, Mohamed, H.M.H. & Sastry, S.K. (2012). Ohmic Sterilization inside a Multi-Layered Laminate Pouch for Long-Duration Space Missions. Journal of Food Engineering, 112, 134-143.