

## Curriculum Vitae

**Family name:** Techavuthiporn  
**First name:** Chairat  
**Academic Position:** Associated Prof.  
**Gender:** Male  
**Date of Birth:** September 5<sup>th</sup>, 1977  
**Nationality:** Thai  
**Work address:** Department of Agricultural Education  
School of Industrial Education and Technology  
King Mongkut's Institute of Technology Ladkrabang  
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### Education/Professional studies:

Institution	Degree	Major	Country
• Gifu University	Ph.D. (2008)	Agricultural Science	Japan
• King Mongkut's University of Technology Thonburi	Msc. (2002)	Postharvest Technology	Thailand
• University of the Thai Chamber of Commerce	Bsc. (1999)	Food Industrial Technology	Thailand

### Professional experience record:

Organization	Position	Duration
• Department of Agricultural Education, King Mongkut's Institute of Technology Ladkrabang	Lecturer	2020 to present

• Division of Food Science and Technology, Huachiew Chalermprakiet University	Lecturer	2014 to 2020
• Division of Food Technology and Nutrition, Christian University of Thailand	Lecturer	2013 - 2014
• Division of Postharvest Technology, King Mongkut's University of Technology Thonburi	Researcher	2009 - 2013
• Division of Postharvest Technology, King Mongkut's University of Technology Thonburi	Assistant researcher	2002 - 2004

#### **Research interest and experience:**

- Postharvest technology and quality of fruit and vegetables
- Fresh-cut produces (fruit and vegetables)
- Controlled atmosphere condition and modified atmosphere packaging
- Food Packaging

#### **Teaching experience:**

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|-----------------------------|----------------------------------|
| - Produce Packaging Systems | - Food Packaging                 |
| - Postharvest Technology    | - Fruit and Vegetable Technology |
| - Food Plant Sanitation     | - Food Analysis                  |
| - Food Microbiology         | - Management in Industry         |
| - Food Nutrition and Health | - Food Processing                |

#### **Organizing conference:**

- Convener and secretariat of Southeast Asia Symposium on "Quality management in postharvest systems" held at Golden Tulip Sovereign Hotel Bangkok, Bangkok Thailand during February 21-24, 2012.
- Convener and secretariat of Southeast Asia Symposium on "Quality and safety of fresh and fresh cut produce" held at Radisson Hotel, Bangkok Thailand during August 3-5, 2009.

## Professional experience:

- Invited speaker: Workshop on cooperative knowledge sharing with local and international institutes. Myanmar. **January 13, 2023**. (online via Zoom)
- Invited speaker: in Training on Innovative Training Strategies to In-service extension staffs, contact farmers and Private Sectors for Strengthening of Central Agriculture Research and Training cent. Myanmar. **November 18, 2022**. (online via Zoom)
- Invited speaker; in WEBINAR on Nutritional and Agricultural Technology for 21th Century II 2022 by UTM. **January 25, 2022**.
- Invited speaker; in International Conference on Food, Agriculture and Sustainable Technology (IC-FAST 2021) by Department of Food and Agricultural Product Technology, Andalas University, Indonesia. **November 18, 2021**.
- Invited speaker; “Anoxia Treatment vs Fresh Produce” at Department of Horticulture and Landscape Architecture, National Taiwan University, Taiwan on December 14, 2018.
- Invited speaker; in the 4<sup>th</sup> International Workshop 2017 “Recent Postharvest Technology for Sustainable Agriculture and Food” at Andalas University, Padang, Indonesia on **July 17, 2017**
- Invited lecturer; in the subject of “Food Packaging” in College of Health Science, Christian University of Thailand (2014).
- Invited lecturer; in the subject of “Produce Packaging System” in School of Bioresources and Technology, King Mongkut’s University of Technology Thonburi (2013-2014)
- Invited speaker; in the topic of “Postharvest handling system of horticultural crops” in Training course of “Leadership Enhancement for Asian Food Safety Leaders” organized by The National Food Institute (NFI), on **February 11, 2012**, Bangkok, Thailand
- Invited speaker; in the topic of “Retail packaging for fresh produce” in Training courses of “Postharvest Technology of Fresh Produce for export” organized by Agricultural Research Development Agency (Public Organization) (ARDA), on **August 24, 2011**, Bangkok, Thailand.
- Invited speaker; in the topic of “Packaging materials for minimally processed products” and “Retail packaging for fresh-cut vegetables” in Training courses of “Packaging Systems for Minimally Processed Products” organized by Postharvest Innovation Center (PHTIC), King Mongkut’s University of Technology Thonburi, on **August 10, 2011**, Bangkok, Thailand
- Invited speaker; in the topic of “Standard, physiological quality and safety of fresh vegetables and fruit” in Training course of “Standard and Quality of Fresh Vegetables and Fruit” organized by Taksin University (Pathalung Campus), on **August 17, 2008**, Pathalung, Thailand

## Book:

1. Invited contributor with a short chapter on Langsat (*Lansium domesticum*) to the book “The Exotic Fruits Reference Guide”, be published by Elsevier.

## Publications :

### International publications

- Tantrarapornrerk, N., Vichitsoonthonkul, T., **Techavuthiporn, C.**, Photchanachai, S. 2023. Growth and antioxidant system of Chinese kale microgreens in response to different illumination of light sources. *New Zealand Journal of Crop and Horticultural Science*, 51(1), 108-122. <https://doi.org/10.1080/01140671.2021.1958876>
- Supapvanich, S., Sittiprasert, W., **Techavuthiporn, C.** 2022. Application of ultrasonic incorporated with calcium gluconate maintains physicochemical quality of pink guavas during short-term storage at room temperature. *Food Science and Biotechnology*, 31(3), 285–294
- Techavuthiporn, C.**, Potaros, T., Jarerat, A., Nimitkeatkai, H. 2022. Physicochemical properties and bioactive compounds of purple rice (*Oryza sativa* L.) seedlings grown under light-emitting diodes. *Agriculture and Natural Resources*, 56, 343-350.
- Jarerat, A., **Techavuthiporn, C.**, Chanchomsuek, C., Nimitkeatkai, H. 2022. Enhancement of Antioxidant Activity and Bioactive Compounds in Eggplants Using Postharvest LEDs Irradiation. *Horticulturae*, 8(134). <https://doi.org/10.3390/horticulturae8020134>
- Tantrarapornrerk, N., Photchanachai, S., Boonyariththongchai, P., **Techavuthiporn, C.** 2022. ZnSO<sub>4</sub> spraying affects the growth and phytochemicals of Chinese kale microgreens. *Journal of Plant Nutrition*, <https://doi.org/10.1080/01904167.2022.2105717>
- Nimitkeatkai, N., **Techavuthiporn, C.**, Boonyariththongchai, P., Supapvanich, S. 2022. Commercial active packaging maintaining physicochemical qualities of carambola fruit during cold storage. *Food Packaging and Shelf Life*, 32, 100834. **(Corresponding author)** <https://doi.org/10.1016/j.fpsl.2022.100834>
- Supapvanich, S., Promyou, S., **Techavuthiporn, C.** 2021. Efficient comparison of calcium chloride and calcium gluconate immersions on quality maintenance and bioactive compounds of ready-to-cook baby corns. *Current Applied Science and Technology*, 21(3): 524-534. **(Corresponding author)**

- Techavuthiporn, C.,** Thammawong, M., Nakano, K. 2021. Effect of short-term anoxia treatment on endogenous ethanol and postharvest responses of broccoli florets during storage at ambient temperature. *Scientia Horticulturae*, 277: 109813 (**Corresponding author**)
- Lichanporn, I., **Techavuthiporn, C.,** Wongs-Aree, C. 2020. Effect of silver particle-longkong peel extract coating on postharvest decay and browning in longkong fruit. *Horticulture Journal*, 89(3): 328-336.
- Supapvanich, S., Kernprrie, Y., Boonyaritthongchai, P., **Techavuthiporn, C.,** Tepsorn, R., Youryon, P. 2019. Physicochemical quality maintenance and bioactive compounds enhancement of Thai guava fruit cv. 'Kim Ju' by using combinative hot water and methyl jasmonate immersion. *Emirates Journal of Food and Agriculture*, 31(5): 395-404
- Supapvanich, S., Chimsoontorn, V., Anan, W., Boonyaritthongchai, P., Tepsorn, R., **Techavuthiporn, C.** 2018. Effect of preharvest chitosan application on bioactive compounds of and sunflower sprouts during storage. *International Journal of Agricultural Technology*, 14(7): 1987-1998.
- Techavuthiporn, C.,** Supabvanich, S. 2018. Effect of *capsicum oleores* and garlic oil on sensorial quality and microbial growth of mixed salads for Thai green papaya salad. *International Food Research Journal*, 25(3): 936-942 . (**Corresponding author**)
- Poubol, J., **Techavuthiporn, C.,** Kanlayanarat, S. 2018. Guava fruit treated with hot water on microbiological quality of fresh-cut 'Kimju' and 'Pan Srithong' guava . *International Food Research Journal*, 25(3): 903-907 .
- Supapvanich, S., Mitsang, P., Youryon, P., **Techavuthiporn, C.,** Boonyaritthongchai, P., Tepsorn, R. 2018. Postharvest quality maintenance and bioactive compounds enhancement in 'Taaptimjaan' wax apple during short-term storage by salicylic acid immersion. *Horticulture, Environment, and Biotechnology*, 59: 373–381.
- Liamnimitr, N., Thammawong, M., **Techavuthiporn, C.,** Fahmy, K., Suzuki, T., Nakano, K. 2018. Optimization of bulk modified atmosphere packaging for long-term storage of 'Fuyu' persimmon fruit. *Postharvest Biology and Technology*, 135: 1-7.
- Supapvanich, S., Mahasap, B., Boonyaritthongchai, P., **Techavuthiporn, C.,** Tepsorn, R., Youryon, P. 2017. Salicylic acid immersion maintains physiochemical quality and enhances bioactive compounds in 'Kimju' guava fruit during cold storage. *Emirates Journal of Food and Agriculture*, 29(8): 620-628.
- Techavuthiporn, C.,** Boonyaritthongchai, P., Supabvanich, S. 2017. Physicochemical changes of 'Phulae' pineapple fruit treated with short-term anoxia during ambient storage. *Food Chemistry*, 228: 388-393. (**Corresponding author**)
- Techavuthiporn, C.,** Boonyaritthongchai, P. 2016. Effects of anti-browning agents on wound responses of fresh-cut mangoes. *International Food Research Journal*, 23(5): 1879-1886. (**Corresponding author**)

- Chareekhot, K., Wongs-Aree, C., Boonyaritthongchai, P., Kanlayanarat, S., **Techavuthiporn, C.**, Ohashi, S., Nakano, K. 2016. Physiological and physico-chemical changes in green papaya (*Carica papaya* L. cv 'KaekNoul') shreds taken from the outer or inner mesocarp. The Journal of Horticultural Science & Biotechnology, 91(4): 378-385.
- Techavuthiporn, C.**, Boonyaritthongchai, P. 2016. Effect of prestorage treatment with short-term anoxia treatment and modified atmosphere packaging on the physical and chemical changes of green asparagus. Postharvest Biology and Technology, 117: 64-70. **(Corresponding author)**
- Chareekhot, K., **Techavuthiporn, C.**, Wongs-Aree, C., Boonyaritthongchai, P., Kanlayanarat, S. 2014. Assessment of three green papaya (*Carica papaya* Lin.) cultivars ('Krang', 'Kaek Noul', and 'Kaek Dum') for use as shredded fruit. The Journal of Horticultural Science & Biotechnology, 89(3): 321-328. **(Corresponding author)**
- Lichanporn, I., **Techavuthiporn, C.**, 2013. The effects of nitric oxide and nitrous oxide on enzymatic browning in longkong (*Aglaia dookoo* Griff.). Postharvest Biology and Technology, 86: 62-65.
- Komasatitaya, J., Luagnsa-Ard, N., **Techavuthiporn, C.** 2012. Characteristic of starch-filled LLDPE plastic processed from plastic waste. Journal of the Chinese Institute of Engineers, 35(1): 45-50.
- Sa-Nguanpuag, K., Kanlayanarat, S., Srilaong, V., Tanprasert, K., **Techavuthiporn, C.** 2011. Ginger (*Zingiber officinale*) oil as an antimicrobial agent for minimally processed produce: A case study in shredded green papaya. International Journal of Agriculture and Biology, 13: 895-901. **(Corresponding author)**
- Techavuthiporn, C.**, Nakano, K., Maezawa, S. 2008. Applicability of a respiration-based ascorbic acid prediction model to a range of selected vegetables. Journal of the Japanese Society of Agricultural Machinery, 70(3): 74-81. **(Ph.D. Publication)**
- Techavuthiporn, C.**, Nakano, K., Maezawa, S. 2008. Prediction of ascorbic acid content in broccoli using a model equation of respiration. Postharvest Biology and Technology, 47: 373-381. **(Ph.D. Publication)**

#### **International publications (Proceedings)**

- Yingsanga, P., **Techavuthiporn, C.** 2019. Effect of short-term anoxia treatment on quality changes in fresh cut pineapple cv. Sri-Racha. International Conference on Sustainable Agriculture and Biosystem 2019 (ICSAB2019), held on November 12-13, 2019 at Andalas University, Indonesia.
- Yingsanga, P., **Techavuthiporn, C.** 2019. Effect of Pre-treatment with Short-anoxia Condition on Quality Changes in Fresh Cut Pineapple. International Food Research Conference 2019 (IFRC2019), held on August 27-29, 2019 at The Everly Putrajaya, Malaysia.

- Tantharapornrer, N., **Techavuthiporn, C.**, Boonyariththongchai, P., Vichitsoonthonkul, T., Photchanachai, S. 2017. Effect of CaCl<sub>2</sub> on the yield and antioxidants of chinese kale microgreens. The International Symposium on Food Security and Sustainable Development (ISFS2017). held on November 22-24, 2017 at Industrial University of Ho Chi Minh City.
- Techavuthiporn, C.**, Supabvanich, S. 2017. Effect of passive modified atmosphere storage incorporated with 1-MCP on quality of asparagus spears during cold storage. ACTA Horticulturae, (Article in Press)
- Komasatitaya, J., **Techavuthiporn, C.** 2016. Performance of starch based flexographic inks and biodegradability. The 2<sup>nd</sup> Environment and Natural Resources International Conference (ENRIC2016), 74-78.
- Chareekhot, K., Wongs-Aree, C., Boonyariththongchai, P., Kanlayanarat, S., **Techavuthiporn, C.** 2015. Use of acidified sodium chlorite as an antimicrobial treatment on the microbial control of shredded green papaya. ACTA Horticulturae, 1088, 395-400.
- Chareekhot, K., Wongs-Aree, C., Boonyariththongchai, P., Kanlayanarat, S., **Techavuthiporn, C.** 2015. Effect of hot water treatments on qualities of shredded green papaya during storage period. ACTA Horticulturae, 1088, 389-393.
- Techavuthiporn, C.**, Kanlayanarat, S. 2010. Quality changes of different form of minimally processed longkong at low temperature storage. ACTA Horticulturae, 877, 635-640.
- Techavuthiporn, C.**, Kakaew, P., Puthmee, T., Kanlayanarat, S. 2010. The effect of controlled atmosphere conditions on sensory attribute changes of shredded unripe papaya. ACTA Horticulturae, 876, 103-107.
- Techavuthiporn, C.**, Kanlayanarat, S. 2010. Physiological changes in different forms of fresh-cut mango during storage at low temperature. ACTA Horticulturae, 875, 157-161.
- Kaewsuksaeng, S., **Techavuthiporn, C.**, Sornwisai, Y. 2010. Effect of UV-C radiation on biochemical changes of longkong (*Aglaia dookkoo* Griff.) after harvesting. ACTA Horticulturae, 875, 133-136.
- Kaewsuksaeng, S., **Techavuthiporn, C.**, Sornwisai, Y. 2010. Pericarp browning alleviation and maintenance of postharvest quality of longkong (*Aglaia dookkoo* Griff.) by using UV-C radiation. ACTA Horticulturae, 875, 127-131.
- Piromruen, B., Jirapong, C., **Techavuthiporn, C.**, Wongs-Aree, C. 2009. Effects of 1-Methylcyclopropene and controlled atmosphere on ripening and volatile compounds of 'Keaw Sawoey' mango. ACTA Horticulturae, 837, 259-264.
- Sopee, A., **Techavuthiporn, C.**, Kanlayanarat, S. 2006. High carbon dioxide atmosphere improve quality and storage life of rambutan (*Nephellium Lappaceum* L.) fruit. ACTA Horticulturae, 712, 865-871.
- Nampan, K., **Techavuthiporn, C.**, Kanlayanarat, S. 2006. Hydrocooling improves quality and storage life of 'rong-rein' rambutan (*Nephellium Lappaceum* L.). ACTA Horticulturae, 712, 763-769.

- Techavuthiporn, C.,** Niyomlao, W., Kanlayanarat, S. 2006. Superatmospheric oxygen retards pericarp browning of litchi cv. 'Hong Huay'. *ACTA Horticulturae*, 712, 629-634.
- Techavuthiporn, C.,** Niyomlao, W., Kanlayanarat, S. 2006. Low oxygen storage of litchi cv. 'Hong Huay'. *ACTA Horticulturae*, 712, 623-627.
- Kaewchana, R., **Techavuthiporn, C.,** Kanlayanarat, S. 2006. Sucrose fatty acid coating retards pericarp browning of litchi cv. 'Hong Huay'. *ACTA Horticulturae*, 712, 579-583.

#### **Nation publications**

- Techavuthiporn, C.,** Poubol, J. 2015. Microbiological change of fresh-cut 'Kimju' Guava as affected by hot air treatment. *Agricultural Sci. J.* 46:3 (Suppl.), 657-660.
- Techavuthiporn, C.,** Boonyarithongchai, P. 2015. Effects of plastic bags on quality changes in green asparagus during simulating storage and retailing temperature conditions. *Agricultural Sci. J.* 46:3 (Suppl.), 653-656.
- Poubol, J., **Techavuthiporn, C.,** Kanlayanarat, S. 2014. Effect of Hot Water Dipping on Microbiological Quality of Fresh-cut 'Pan Srithong' Guava. *Agricultural Sci. J.* 45:2 (Suppl.), 437-440.
- Techvuthiporn, C.,** Bonyarithongchai, P., Jaikaew, N. 2013. Effect of Anoxia Conditions on Quality Changes of Pineapple 'Phulae'. *Agricultural Sci. J.* 44:3 (Suppl.), 221-224.
- Krunying, S., Wongs-Aree, C., **Techavuthiporn, C.** 2012. Maintaining Fresh Asparagus Quality Using Cold Shock Treatment Prior to Storage. *Agricultural Sci. J.* 43:3 (Suppl.), 327-330.
- Tungmaiwongsatorn, T., Kanlayanarat, S., Wongs-Aree, C., Srilaong, V., **Techavuthiporn, C.** 2011. Effect of oxygen and carbon dioxide on respiration rate of fresh cut kale leaves. *Agricultural Sci. J.* 42:3 (Suppl.), 561-564.
- Charoenchongsuk, N., **Techavuthiporn, C.,** Buanong, M., Wongs-Aree, C., Kanlayanarat, S. 2011. Effect of plastic films on quality changes of broccolini during shelf-life. *Agricultural Sci. J.* 42:3 (Suppl.), 681-684.
- Chareekot, K., Wongs-Aree, C., Boonyarithongchai, P., Kanlayanarat, S., **Techavuthiporn, C.** 2011. Effect of hydrocooling on storage quality of shredded green papaya. *Agricultural Sci. J.* 42:3 (Suppl.), 661-664.
- Wongjunta, M., **Techavuthiporn, C.,** Kanlayanarat, S., Seta, S., Wongs-Aree, C., Buanong, M. 2011. Influence of ethyphon on senescence and vase life of *Mokara* orchid flowers cvs. Moodang and Dao-lai. *Agricultural Sci. J.* 42:3 (Suppl.), 347-350.
- Matvijit, S., **Techavuthiporn, C.,** Khewkhom, N., Wongs-Aree, C., Kanlayanarat, S. 2011. Effect of Zingiberaceae crude extract on inhibition of *Penicillium digitatum* Sacc.. *Agricultural Sci. J.* 42:3 (Suppl.), 303-306.

- Ngamkham, P., **Techavuthiporn, C.**, Srilaong, V., Wongs-Aree, C., Buanong, M. 2011. Effect of cytokinins on delaying leaf senescence of Rabbit's foot fern (*Davallia* sp.) after harvest. *Agricultural Sci. J.* 42:3 (Suppl.), 295-298.
- Techavuthiporn, C.**, Tungmaiwongsatorn, T. 2011. Effect of anoxia conditions on qualities of green asparagus. *Agricultural Sci. J.* 42:3 (Suppl.), 275-278.
- Chalayon, S., Wongs-Aree, C., Uthairatanakij, A., **Techavuthiporn, C.**, Mingmuang, A. 2011. Effect of storage temperature on the quality of *Schizophyllum commune* Fr.. *Agricultural Sci. J.* 42:3 (Suppl.), 161-164.
- Suksamran, C., Srilaong, V., Wasusri, T., **Techavuthiporn, C.**, Kanlayanarat, S. 2011. An analysis of logistics cost in the cabbage production of Prachuapkhirikhan province. *Agricultural Sci. J.* 42:3 (Suppl.), 145-148.
- Puangpan, P., **Techavuthiporn, C.**, Uthairatanakij, A., Jitareerat, P., Srilaong, V. 2011. The use of sodium metabisulfite substitutes for browning inhibition in aromatic coconut. *Agricultural Sci. J.* 42:3 (Suppl.), 53-56.
- Techavuthiporn, C.**, Kanlayanarat, S. 2011. Effects of antibrowning agents on quality changes in minimally processed ripe mango. *Agricultural Sci. J.* 42:1 (Suppl.), 667-670.
- Pravichai, N., **Techavuthiporn, C.**, Kanlayanarat, S. 2011. Effect of relative humidity on quality changes in shredded green papaya. *Agricultural Sci. J.*, 42:1 (Suppl.), 660-663.
- Huabbangyang, O., Buanong, M., Wongs-Aree, C., **Techavuthiporn, C.**, Srilaong, V. 2010. Study of nutritional and free radical scavenging activity in edible flowers. *Agricultural Sci. J.*, 41:3/1 (Suppl.), 381-384.
- Techavuthiporn, C.**, Poubol, J., Kanlayanarat, S. 2010, Effect of hot water dipping on quality characteristics of fresh-cut guava (cv. Pan Srithong and Kimjuu). *Agricultural Sci. J.*, 41:1 (Suppl.), 421-424.
- Kowitcharoen, L., Srilaong, V., Wongs-Aree, C., Jitareerat, P., **Techavuthiporn, C.** 2009. Inhibition of Browning reaction on aromatic coconut mesocarp by various anti-browning agents. *Agricultural Sci. J.*, 40:3 (Suppl.), 315-318.
- Chatkaew, A., Jitareerat, P., Uthairatanakij, A., **Techavuthiporn, C.**, Naetiladdanon, S. 2009. Effects of electrical voltage for controlling *Erwinia* sp., a causal agent of soft rot disease in vegetables. *Agricultural Sci. J.*, 40:3 (Suppl.), 71-74.
- Techavuthiporn, C.**, Kanlayanarat, S. 2008. Respiratory response of shredded green papaya to low temperatures, reduced oxygen and enhanced carbon dioxide. *Agricultural Sci. J.* 39:3 (Suppl.), 160-163
- Sapayasarn, P., Nimitkeatkai, H., **Techavuthiporn, C.**, Wongs-Aree, C. 2008. Comparative study between hot water and hot vapour treatment on ripening quality of 'Nam Dok Mai' mango. *Agricultural Sci. J.* 39:3 (Suppl.), 91-94.