

Loc Thai Nguyen

*Food Engineering and Bioprocess Technology
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I. Biographical Data

Education

- ✓ 2009: Ph.D., Food Science and Technology, The Ohio State University, USA.
- ✓ 2005: M.Sc., Food Engineering and Bioprocess Technology, Asian Institute of Technology, Thailand
- ✓ 1997: B.Sc., Food Technology, Can Tho University, Vietnam

Research interests

- ✓ Non-thermal food processing technologies
- ✓ Mathematical simulation in food engineering
- ✓ Transport phenomena of food processes.
- ✓ Integrated electrochemistry-based biosensors
- ✓ Novel sensing platforms based on nanomaterials

Professional experience

July 2014-till **Assistant Professor**, Food Engineering and Bioprocess Technology, Asian Institute of Technology, Thailand
2013-2014 **Researcher**, Laboratory of Biomedical Nanomaterials, Institute of Materials Science, Vietnam Academy of Science and Technology
2011-2013 **Lecturer**, International University – Vietnam National University, HCMC (HCMIU)
2010-2011 **Postdoctoral fellow**, University of Hawaii at Manoa
2005-2009 **Graduate research associate**, The Ohio State University
2001-2003 **Technical manager**, American Feeds Co. Ltd. (Vietnam)
1998-2001 **Lab supervisor**, Cailan Oils & Fats Ind. Co. (Vietnam)

Honor society

- ✓ Gamma Sigma Delta, The Honor Society of Agriculture, Ohio chapter.
- ✓ Phi Kappa Phi Honor Society, The Ohio State University chapter.

Awards and honors

- ✓ Outstanding graduate student research award (2008), Dept. of Food Science and Technology, The Ohio State University

- ✓ Outstanding high pressure laboratory associate award (2006), Dept. of Food Science and Technology, The Ohio State University
- ✓ Albert Stevens Prize (2005) (AIT, Thailand)
- ✓ The AIT Alumni Association Prize (2005) (AIT, Thailand)

II. Teaching

ED74.01: Food Process Engineering

BS302: Food Science and Technology

III. Researches

Publications

Referred journals and book chapter

1. **Nguyen, L.T.**, Rastogi, N.K., & Balasubramaniam, V.M. 2007. Evaluation of the instrumental quality of pressure-assisted thermally processed carrots. *Journal of Food Science*, 72(5), E264-E270.
2. Rastogi, N.K., **Nguyen, L.T.**, & Balasubramaniam, V.M. 2008. Effect of pretreatments on carrot texture after thermal and pressure-assisted thermal processing. *Journal of Food Engineering*. 88, 541-547.
3. Rastogi, N.K., **Nguyen, L.T.**, Jiang, B., & Balasubramaniam, V.M. 2008. Improvement in texture of pressure-assisted thermally processed carrots by combined pretreatments using response surface methodology. *Food and Bioprocess Technology*. 3(5), 762-771.
4. **Nguyen, L.T.**, & Balasubramaniam, V.M. 2011. Fundamentals of Food Processing Using High Pressure. In Handbook of nonthermal processing technologies for food. Zhang, H.Q., Barbosa-Carnovas, G.V., Balasubramaniam, V.M., Dunne, C.P, Farkas, D.F., Yuan, J.T.C. (Eds.). Blackwell Publishing.
5. **Nguyen, L.T.**, Tay, A., Balasubramaniam, V.M., Legan, J.D., Turek, E.J., & Gupta, R. 2009. Evaluating the impact of thermal and pressure treatment in preserving textural quality of selected foods. *LWT-Food Science and Technology*. 42(3), 525-534.
6. **Nguyen, L.T.**, Balasubramaniam, V.M., Sastry, S.K. 2011. Determination of in-situ thermal conductivity, thermal diffusivity, volumetric specific heat and isobaric specific heat of selected foods under pressure. *International Journal of Food Properties*. DOI: 10.1080/10942911003754726
7. **Nguyen, L.T.**, Choi, W., Lee, S.H., Jun, S. 2011. Exploring the heating patterns of multiphase foods in a continuous flow, simultaneous microwave, and ohmic combination heater. In: Taoukis PS, Stoforos NG, Karathanos VT, Saravacos GD, editors. Proceedings of the 11th International Congress on Engineering and Food. 2011 May 22-26; Athens, Greece.

8. Choi, W., **Nguyen, L.T.**, Lee, S.H., Jun, S. 2011. Heating uniformity of the solid-liquid mixture under microwave and ohmic combination heater. *Journal of Food Science*. 76(9), E576-E585.
9. Choi, W., Jun, S., **Nguyen, L.T.**, Runggraeng, N., Yi, H., Balasubramaniam, S., Puri, V.M. and Lee, J. 2013. 3-D milk fouling modeling of plate heat exchangers with different surface finishes using computational fluid dynamics codes. *Journal of Food Process Engineering*. 36(4), 439-449.
10. **Nguyen, L.T.**, Won, C., Jun, S., Lee, S.H. 2013. Exploring the heating patterns of multiphase foods in a continuous flow, simultaneous microwave and ohmic combination heater. *Journal of Food Engineering*. 116 (1), 65-71.
11. **Nguyen, L.T.**, Balasubramaniam, V.M., Ratphitagsanti, W. (2014). Estimation of accumulated lethality under pressure-assisted thermal processing. *Food and Bioprocess Technology*. 7(3), 633-644.
12. Nguyen, N.T., Nguyen, B.H., Ba, D.T., Pham, D.G, Khai, T.V, **Nguyen, L.T.**, Tran, L.D. 2014. Microwave-assisted synthesis of silver nanoparticles using chitosan: a novel approach. *Materials and Manufacturing Processes*. 29 (4), 418-421.
13. Vu, H.D., Nguyen, L.H., Nguyen, T.D., Nguyen,H.B., **Nguyen, L.T.**, Tran,D.L. 2014. Anodic stripping voltammetric determination of Cd²⁺ and Pb²⁺ using interpenetrated MWCNT/P1,5-DAN as an enhanced sensing interface. *Ionics*. doi: 10.1007/s11581-014-1199-8.
14. Do, P.T., Do, P.Q., Nguyen, H.B., Nguyen, V.C., Tran, D.L., Le, T.H., Nguyen, H.L, Pham, H.V., **Nguyen, L.T.**, Tran, Q.H. 2014. A highly sensitive electrode modified with graphene, gold nanoparticles, and molecularly imprinted over-oxidized polypyrrole for electrochemical determination of dopamine. *Journal of Molecular Liquids*. 198, 307 – 312. doi:10.1016/j.molliq.2014.07.029.
15. Nguyen, H.H.V., **Nguyen, L.T.** 2014. Carrot Processing. In *Handbook of Vegetable Preservation and Processing*, Second Edition. Hui, Y.H., Özgül Evranuz, E. (Eds). CRC Press. In Press.

Presentations at professional meetings

1. Loc Thai Nguyen, Rastogi, N.K., & Balasubramaniam, V.M. Evaluation of the instrumental quality of pressure-assisted thermally processed carrots. 2007 IFT Annual Meeting, Chicago, IL.
2. Rastogi, N.K., Nguyen, L.T., Jiang, B., & Balasubramaniam, V.M. Combined effects of various treatments on carrot texture during pressure-assisted thermal processing. 2007 IFT Annual Meeting, Chicago, IL.
3. Nguyen, L.T., Tay, A., Balasubramaniam, V.M., Legan, D., Turek, E., & Rockendra, G. Comparison of instrumental quality of selected foods during thermal and pressure assisted thermal processing. 2008 IFT Annual Meeting, New Orleans, LA.
4. Nguyen, L.T., Balasubramaniam, V.M., Sastry, S.K. In-situ determination of specific heat, thermal conductivity and diffusivity of selected foods under pressure. Conference of Food Engineering 2009, Columbus, OH

5. Nguyen, L.T., Balasubramaniam, V.M. Prediction of accumulated lethality for pressure assisted thermal processing. 2009 IFT Annual Meeting, Anaheim, CA
6. Nguyen, L.T., Balasubramaniam, V.M., Sastry, S.K. Determination of in-situ thermal conductivity, thermal diffusivity, volumetric specific heat and isobaric specific heat of selected foods under pressure. 2010 IFT Annual Meeting, Chicago, IL
7. Nguyen, L.T., Choi, W., Lee, S.H., Jun, S. Exploring the heating patterns of multiphase foods in a continuous flow, simultaneous microwave, and ohmic combination heater. 2011 IFT Annual Meeting, New Orleans, LA.
8. Choi, W., Jun, S., Nguyen, L.T., Rungraeng, N., Puri, V.M., Yi, H., Balasubramanian, S., Lee, J. 3D milk-fouling modeling of plate heat exchangers with different surface finishes using computational fluid dynamics. 2011 IFT Annual Meeting, New Orleans, LA.
9. Nguyen, L.T., Choi, W., Lee, S.H., Jun, S. Heating uniformity of multiphase foods processed by continuous flow microwave and ohmic combination heating. 45th Annual Microwave Power Symposium, New Orleans.

Presentations at forums

1. Loc Thai Nguyen, Rastogi, N.K., & Balasubramaniam, V.M. Evaluation of the instrumental quality of pressure-assisted thermally processed carrots. Edward F. Hayes Graduate Research Forum; 2007 OARDC Graduate Student Poster Competition, The Ohio State University, Columbus, OH.
2. Nguyen, L.T., Tay, A., Balasubramaniam, V.M., Legan, D., Turek, E., & Rockendra, G. Comparison of instrumental quality of selected foods during thermal and pressure assisted thermal processing. 2008 Edward F. Hayes Graduate Research Forum, The Ohio State University, Columbus, OH.

Research Grants and Sponsored Projects

- ✓ Developing paper-based biosensors for rapid detection of mycotoxins, pesticides and heavy metals in foods. Awarded VND 200m by Vietnam National University (HCMC) (No. C2013-28-07)