

Won Byong Yoon

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EDUCATIONAL BACKGROUND

- Ph.D.** Major: Biological Systems Engineering
Minor: Chemical Engineering (1996–2001)
University of Wisconsin–Madison, Madison, WI, U.S.A.
- M.Eng.** Mechanical Engineering (1999-2000)
University of Wisconsin–Madison, Madison, WI, USA
- M.Sci.** Food Science and Technology (1994-1996)
Oregon State University, Corvallis, OR, U.S.A.
- B.Sci.** Food Processing (1993)
KyungHee University, Seoul, S. KOREA

PROFESSIONAL EXPERIENCE

Professor: Kangwon National University (2008-present)

- Courses: Food engineering, Food Process Engineering, Engineering math, Physical chemistry, Food Processing, Advanced Food Engineering, Seafood Processing.
- Research interests: 1) Process design and analysis, 2) Food rheology, 3) Computer simulation for fluid dynamics, heat, and mass transfer, 4) Predictive modeling and risk assessment, 5)Molecular dynamic simulation

Regional Marketing Manager: Firmenich – Asia, Singapore (2007-2008)

- Asia-Pacific regional marketing manager for savory flavor division
- Technical sales and support for regional offices

Seafood Industry Specialist: Firmenich – Asia, Singapore (2006-2007)

- Technical sales and support for regional offices

Scientist/Associated director: CJ Foods R&D, Seoul, Korea (2002- 2006)

- Served as a division head of processed meat, seafood and frozen food
- Served as a project leader of cross functional team (CFT) for new product development for the Korean market and global markets
- Developed new extrusion technologies for textured soy protein products
- Designed a sterilization system for retort and semi-retort products
- Member of Buying Missionary group for Alaska Seafood sponsored by the Western United State Agricultural Trading Association

Research Associate: Department of Food Science and Technology, **University of California-Davis**, Davis, CA USA (2001- 2002)

- Application of MRI to determine flow behavior of dairy products

SELECTED PUBLICATIONS (since 2016)

- Park, HW, **Yoon, WB**. 2017. Effect of drying and grinding characteristics of colored potato (*Solanum tuberosum* L.) on tribology of mashed colored potato paste. *CyTA-J. Food*, (*in press*)
- Jung, HB, **Yoon, WB**. 2017. Rheological and Microstructural Properties of Noodle Dough with Purple-fleshed Potato (*Solanum tuberosum* L.) Flours: Grinding Kinetics and Effects of Particle Size. *CyTA-J. Food*, (*in press*)
- Jung, HB, **Yoon, WB**. 2017. Multifractal Approaches of the Ring Tensile Rupture Patterns of Dried Laver (*Porphyra*) as Affected by the Relative Humidity. *J. Food Sci.* (*in press*)
- Ham, TH, **Yoon, WB**. 2017. Application of direct steam injection system to minimize browning of white radish (*Raphanus sativus*) broth during sterilization. *Int. J. Agric. Biol.*, (*in press*)
- Lee, J, Park, HW, Jenkins, R, **Yoon, WB**, Park, JW. 2017. Image and chemical analyses of freezing-induced aggregates of fish natural actomyosin as affected by various phosphate compounds. *Food Biosci.*, 19:57-64.
- Moon, JH, **Yoon, WB**, Park, JW. 2017. Assessing the textural properties of Pacific whiting and Alaska pollock surimi gels prepared with carrot under various heating rates. *Food Biosci.*, 20:12-18
- Lee, MG, **Yoon WB**, Park JW. 2017. Combined effect of pH and heating conditions on the physical properties of Alaska pollock surimi gels. *J. of Text Stud.*, 48(3): 215-220
- Kim, DH, Kim, M, Oh, S, Lee, KM, Kim, SM, Nho, CW, **Yoon, WB**, Kang, K, Pan, C. 2017. The protective effect of antioxidant enriched fractions from colored potatoes against hepatotoxic oxidative stress in cultured hepatocytes and mice. *J. Food Biochem.*, 41(1): e12315
- Lee, JW, Hwang, YS, Kim, ST, **Yoon WB**, Han, WY, Kang IK, Choung MG. 2017. Seed coat color and seed weight contribute differential responses of targeted metabolites in soybean seeds. *Food Chem.* 214: 248-258
- Jung, HW, Pan, CH, **Yoon, WB**, 2016. Mathematical models of pretreatment processes to utilize purple-fleshed potato (*Solanum tuberosum* L.) peels for anthocyanin extraction. *Food Sci. Biotech.*, DOI 10.1007/s10068-016
- Moon, JH, Chung, DH, Pan, CH, **Yoon, WB**. 2016. Determination of principal components for characterizing the drying of sea cucumbers (*Stichopus japonicus* Selenka) using far infrared radiation drying and hot air drying. *J. Aquatic Food Product Tech.*, DOI: 10.1080/10498850.2015.1113220
- Hong, YK, Tang, JM, Huang, LH, **Yoon WB**, 2016. Mathematical Modeling and Monte Carlo Simulation of Thermal Inactivation of Non-proteolytic *Clostridium botulinum* Spores during Continuous Microwave-Assisted Pasteurization *Journal of Food Engineering*, *J. Food Eng.* 190: 61-71
- Lee, MG, Ham, TH, Song SH, Chung DH, **Yoon WB**, 2016. Effect of high pressure homogenization on the viability of yeast cell and volatile components in non-pasteurized rice wine, *Food Sci. Biotech.*, 25:1-8
- Park HW, Kim ST, Choung MG, Han WY, **Yoon WB**, 2016. Analysis of grinding kinetics and flow behavior of adzuki bean (*Phaseolus anagularis*) flour for hopper design, *J. of Food Process and Engineering*, 39: 366-376
- Lee, YJ, Kim, DB, OH, Lee, **Yoon WB**, 2016. Characterizing texture, color, and sensory attributes of cookies made with Jerusalem Artichoke (*Helianthus tuberosus* L.) flour using a mixture design and browning reaction kinetics. *Int. J. Food Eng.*, 12:107-126.
- Moon, JH, **Yoon WB**, 2016. Size dependence of the salting process for dry salted sea cucumber (*Stichopus japonicus*), *J. Food. Eng.* 170: 170-178.

Hong, YK, Huang L, **Yoon WB**, 2016. Mathematical modeling and growth kinetics of *Clostridium sporogenes* in cooked beef, *Food Control*. 60: 471-477.

HONORS & AWARDS

Best Education reward (2017): Kangwon National University, Chuncheon, Gangwon, S. Korea.

Best research paper award (2016): Korea Science Association, Seoul, S. Korea

Sales & Marketing Award (2003): Sales and Marketing Division Annual Award, CJ Corp., Seoul, Korea

Session organizer and moderator (2002): *Food engineering and rheology session, Institute of Food Technologists Annual meeting, Anaheim, CA USA*

Joh's foundation fellowship (2001): Joh's foundation fellowship award sponsored by Joh's foundation and Korean Food Technologist Association, New Orleans, FL USA

3rd Prize and honorable student scholarship (2001): Korean American Food Technologists Association (KAFTA), the 7th Annual Graduate Research Paper Competition, New Orleans, LS USA

Final candidates (2000): *Graduate Research Paper Competition in Food Engineering Division, Institute of Food Technologists (IFT), Dallas, TX USA*

1st Prize & Outstanding Student Award Scholarship (2000): Korean American Food Technologists Association (KAFTA), the 6th Annual Graduate Research Paper Competition, Dallas, TX USA

2nd Prize and honorable student scholarship (1999): Korean American Food Technologists Association (KAFTA), the 5th Annual Graduate Research Abstract Competition, Chicago, IL, USA

2nd Prize and honorable student scholarship (1996): Korean American Food Technologists Association (KAFTA), the 2nd Annual Graduate Research Abstract Competition, New Orleans, FL USA

3rd Prize and honorable student scholarship (1995): Korean American Food Technologists Association (KAFTA), the 1st Annual Graduate Research Abstract Competition, Anaheim, CA USA

4th Prize and honorable student scholarship (1993): National Undergraduate Research Competition – Division of Biological science and engineering (hosted by Korean Research Foundation), Seoul, S. Korea

CERTIFICATIONS

- Certification of training: Polyflow and Fluent , Gambit (2009, 2010)
- Certification of training: Computational fluid dynamics in NISA & Display III (2005)
- Certification of training: Computational fluid dynamics in Fluent (2005)
- Certification of training: 6-sigma BlackBelt in R&D division (2004)
- Surimi seafood technology school in Oregon State University (1995, 1996)

MEMBERSHIP and PROFESSIONAL ACTIVITY

- Member of Korea Food industry Assoc. (2009~present)

- Member of IFT(2005~present)
- Member of the Institute of Food Technologists (2002- 2003)
- Member of Society of Rheology (1997-1999).
- Member of Korean American Food Technologist Association (1994-2002).

SOCIAL ACTIVITY

- Member of Kangwon National University's Kumdo School (2009 ~ present)
- Head instructor of 'Taekwondo school in Davis Korean Church', Davis, CA USA (2001- 02)
- *President* of Korean Student and Scholar Association (KSSA) at University of Wisconsin–Madison, Madison, WI USA (1999-2000)
- President of (UW) Taekwondo Demonstration Team, Madison, WI USA (1998-2001)