



Ganesan Narsimhan

Ph.D. Indian Institute of Technology, Kanpur, India - 1980

Professor

Fellow, American Institute of Chemical Engineers

Research Areas:

Colloidal phenomena in Food and Biological systems; Structure and stability of Food Emulsions and Foams; Conformational Changes of Proteins/Enzymes at Interfaces; Transport phenomena in Dispersed Systems;

Classes Taught:

ABE 454 – Transport Processes in Food and Biological Systems
ABE 627 – Colloidal Phenomena in Bioprocessing
ABE 691- Transport Phenomena in Food and Bioprocess Engineering

Selected Publications (last 5 years):

Narsimhan, G., Analysis of creaming and formation of foam layer in aerated liquid, *Journal of Colloid and Interface Science*, **345**,566-572, 2010

Wu, X, Narsimhan, G. Characterization of the Effect of Electrostatic Interaction on the Structure of Trp-cage using Molecular Dynamics Simulation, *Molecular Simulation*, **36**, Issue 13, 1086 – 1095, 2010

Bi, L., Yang, L., Narsimhan, G., Bhunia, A. K. and Yao, Y., Designing carbohydrate nanoparticles for prolonged efficacy of antimicrobial peptide, *Journal of Controlled Release*, 150(2),150-156,2011

Narsimhan, G., Model for growth of bubbles during proofing of viscoelastic dough, *Bubble Science Engineering and Technology*, 4(2), 63-71, (2012)

Wu, X, Chang, H., Mello, C, Nagarajan, R. and Narsimhan, G., Effect of interaction with coesite silica on the conformation of Cecropin P1 using explicit solvent molecular dynamics simulation, *J. Chem. Phys.*, 138(4),045103 (2013)

Phoon, P.Y, Narsimhan, G. and San Martin-Gonzalez, M.F., Effect of Thermal Behavior of beta-Lactoglobulin on the Oxidative Stability of

Menhaden Oil-in-Water Emulsions, *J. Agricultural and Food Chem.*, 61(8),1954-1967 (2013)

Narsimhan, G., A mechanistic model for baking of unleavened aerated food, *LWT-Food Science and Technology*, 53(1), 146-155 (2013)

Phoon, P.Y., San Martin-Gonzalez, M.F and Narsimhan, G., Effect of hydrolysis of soy beta-conglycinin on the oxidative stability of O/W emulsions, *Food Hydrocolloids*, 35, 429-443 (2013)

Narsimhan, Ganesan. "A mechanistic model for baking of leavened aerated food." *Journal of Food Engineering* 143: 80-89 (2014)

Phoon, Pui Yeu, Lake N. Paul, John W. Burgner, II, M. Fernanda San Martin-Gonzalez, and Ganesan Narsimhan. "Effect of Cross-Linking of Interfacial Sodium Caseinate by Natural Processing on the Oxidative Stability of Oil-in-Water (O/W) Emulsions." *Journal of agricultural and food chemistry* 62.13: 2822-2829 (2014)

Zhou, Lu, Ganesan Narsimhan, Xiyou Wu, and Fengpei Du. "Pore formation in 1, 2-dimyristoyl-sn-glycero-3-phosphocholine/cholesterol mixed bilayers by low concentrations of antimicrobial peptide melittin." *Colloids and Surfaces B: Biointerfaces* 123, 419-428 (2014)

Ruckenstein, Eli, Gersh O. Berim, and Ganesan Narsimhan. "A novel approach to the theory of homogeneous and heterogeneous nucleation." *Advances in Colloid and Interface Science*, **215**,13-27(2015)