

CURRICULUM VITAE



BUTIR-BUTIR PERIBADI (Personal Details)					
Nama Penuh (Full Name)	Tan Tai Boon		Gelaran (Title): Dr.		
No. MyKad / No. Pasport (Mykad No. /Passport No.) 871213-23-5211	Warganegara (Nationality) Malaysia	Bangsa (Race) Cina	Jantina (Gender) Lelaki		
Jawatan (Designation)	Pensyarah Kanan	Tarikh Lahir (Date of Birth)	13 Disember 1987		
H-index (as of April 2026)	18 (Scopus)	Citations	964 (Scopus)		
	22 (Google Scholar)		1188 (Google Scholar)		
Alamat Semasa (Current Address)	Jabatan/Fakulti (Department/Faculty)	E-mel dan URL (E-mail Address and URL)			
-	Jabatan Teknologi Makanan, Fakulti Sains dan Teknologi Makanan, Universiti Putra Malaysia	taiboon_tan@upm.edu.my			
B. KELAYAKAN AKADEMIK (Academic Qualification)					
Nama Sijil / Kelayakan (Certificate / Qualification obtained)	Nama Sekolah Institusi (Name of School / Institution)	Tahun (Year obtained)	Bidang pengkhususan (Area of Specialization)		
Sijil Tinggi Persekolahan Malaysia (STPM)	SMK Permatang Rawa	2006	-		
Ijazah Sarjana Muda	Universiti Putra Malaysia	2011	Sains dan Teknologi Makanan		
Ijazah Doktor Falsafah	Universiti Putra Malaysia	2015	Teknologi Makanan		
C. KEMAHIRAN BAHASA (Language Proficiency)					
Bahasa / Language	Lemah Poor(1)	Sederhana Moderate (2)	Baik Good (3)	Amat Baik Very good (4)	Cemerlang Excellent (5)
Inggeris					√
Bahasa Malaysia					√
Cina			√		
D. PENGALAMAN SAINTIFIK DAN PENGKhususan (Scientific experience and Specialisation)					
Organization	Position	Start Date	End Date	Expertise	

E. PEKERJAAN (Employment)				
Majikan/Employer	Jawatan/Designation	Jabatan/Department	Tarikh Iantikan/ Start Date	Tarikh tamat / Date Ended
Universiti Putra Malaysia	Felo Pasca Doktorat	Jabatan Teknologi Makanan	23 Mei 2016	23 Mei 2019
Universiti Putra Malaysia	Pensyarah Kanan	Jabatan Pengurusan dan Khidmat Makanan	3 Jun 2019	31 Mac 2022
Universiti Putra Malaysia	Pensyarah Kanan	Jabatan Teknologi Makanan	1 April 2022	-

F. ANUGERAH DAN HADIAH (Honours and Awards)				
Name of awards	Title	Award Authority	Award Type	Year
Academic	Japan Student Services Organization (JASSO) Scholarship Recipient	Japan Student Services Organization	International	2015
Non-Academic Awards	-			
Awards of Merit	Young Scientist Award	Malaysian Oil Scientists' and Technologists' Association (MOSTA)	National	2018
	ASEAN Outstanding Young Scientist	Department of Science and Technology, Guangxi Zhuang Autonomous Region, China	International	2025

G. SENARAI PENERBITAN (Publication Identity)	
Database	ID
Scopus	Tan, Tai Boon (57199869209)
ORCID	Tai Boon Tan (56797309800)
Google Scholar	Tan Tai Boon
ResearchGate	-
LinkedIn	Tan Tai Boon

H. SENARAI PENERBITAN (Sila masukan nama pengarang, tajuk, nama jurnal, jilid, muka surat dan tahun diterbitkan) (List of publications – author (s), title, journal, volume, page and year published)	
JOURNALS	<ol style="list-style-type: none"> Liau, K. Y., Liu, Y., Zhao, Y., & Tan, T. B. (2025). Comparative evaluation of palm-based carotene microcapsules produced via spray drying and supercritical fluid drying and their application as a non-dairy creamer. <i>Food and Bioprocess Technology</i>, 18, 9912-9926. Fu, M., Mat Yusoff, M., Mohd Adzahan, N., Tan, T.B. and Ismail-Fitry, M.R. (2025), Development and characterization of palm oil-based oleogels using beeswax and carnauba wax as healthier beef fat mimetics. <i>Journal of Food Science</i>, 90, e70241. Liu, F., Wang, Z., Cao, Y., Tan, T. B., Fan, Y., Ren, J., Zou, Y., Chen, Y., Xie, Y., & Xiao, X. (2025). Dynamic covalent network-enabled poly (vinyl alcohol)/carboxymethyl cellulose films: A self-reinforcing and recyclable approach for sustainable fruit packaging. <i>International Journal of Biological Macromolecules</i>, 318, 145127. Fu, M., Tan, T.B., Yusoff, M.M. et al. (2025). Exploring the efficacy of oleogel as fat replacers in meat products: a comparative analysis of various oleogelators. <i>Food and Bioprocess Technology</i>, 18, 5835–5866. Cui, M. Y., Tan, T. B., Fu, M., Cheng, Z. Y., Mat Yusoff, M. and Tan, C. P. (2025). Preparation and characterisation of palm-based tocotrienol-carotenoid emulsion stabilised by hemp protein isolate-ginsenoside emulsifier. <i>International Food Research Journal</i>, 32, 889-902. Teow, S. J., Choy, H. W., Khor, Y. P., Tan, T. B., Mat Yusoff, M., Gholivand, S. and Tan, C. P. (2025). Storage stability and sensory evaluation of tocotrienol-rich-fraction-fortified mayonnaise. <i>International Food Research Journal</i>, 32, 41-52.

7. Choy, H. W., Teow, S. J., Khor, Y. P., **Tan, T. B.**, Mat Yusoff, M., Gholivand, S. and Tan, C. P. (2025). Optimisation and characterisation of red palm carotene-based microcapsules stabilised by rice protein isolate-flaxseed gum complex using various coating materials and core-to-wall ratios. *International Food Research Journal*, 32, 53-65.
8. Teow, S. J., Choy, H. W., Khor, Y. P., **Tan, T. B.**, Yusoff, M. M., Gholivand, S., & Tan, C. P. (2025). Storage stability, release characteristics, and bioaccessibility of the tocotrienol-rich fraction encapsulated in maltodextrin-starch sodium octenyl succinate microcapsules. *Food and Bioproducts Processing*, 151, 11-19.
9. Gholivand, S., **Tan, T. B.**, Yusoff, M. M., Qoms, M. S., Wang, Y., Liu, Y., . . . Tan, C. P. (2025a). Eco-friendly encapsulation: Investigating plant-based protein-alginate shells for efficient delivery and digestion of hemp seed oil encapsulated via supercritical CO₂ dispersion. *Food Chemistry*, 463, 141515.
10. Gholivand, S., **Tan, T. B.**, Yusoff, M. M., Qoms, M. S., Wang, Y., Liu, Y., . . . Tan, C. P. (2025). Innovative microencapsulation of hemp seed oil using plant-based biopolymers: A comparative analysis of dehydration techniques on core stability, digestibility and release pattern. *Food Hydrocolloids*, 159, 110683.
11. Han Lyn, F., Ismail-Fitry, M. R., Noranizan, M. A., **Tan, T. B.**, & Nur Hanani, Z. A. (2024). Recent advances in extruded polylactic acid-based composites for food packaging: A review. *International Journal of Biological Macromolecules*, 266, 131340.
12. Gholivand, S., **Tan, T. B.**, Mat Yusoff, M., Choy, H. W., Teow, S. J., Wang, Y., . . . Tan, C. P. (2024). An in-depth comparative study of various plant-based protein-alginate complexes in the production of hemp seed oil microcapsules by supercritical carbon dioxide solution-enhanced dispersion. *Food Hydrocolloids*, 153, 110001.
13. Gholivand, S., **Tan, T. B.**, Yusoff, M. M., Choy, H. W., Teow, S. J., Wang, Y., . . . Tan, C. P. (2024). Advanced fabrication of complex biopolymer microcapsules via RSM-optimized supercritical carbon dioxide solution-enhanced dispersion: A comparative analysis of various microencapsulation techniques. *Food Chemistry*, 452, 139591.
14. Choy, Hew Weng, Teow, Shuh Jun, Khor, Yih Phing, **Tan, Tai Boon**, Gholivand, Somayeh, Mat Yusoff, Masni and Tan, Chin Ping (2024). Fabrication of palm carotene-based emulsion stabilized by rice protein isolate-flaxseed gum complex. *International Journal of Food Engineering*, 20, 365-375.
15. Gholivand, S., **Tan, T. B.**, Mat Yusoff, M., Choy, H. W., Teow, S. J., Wang, Y., . . . Tan, C. P. (2024). Elucidation of synergistic interactions between anionic polysaccharides and hemp seed protein isolate and their functionalities in stabilizing the hemp seed oil-based nanoemulsion. *Food Hydrocolloids*, 146, 109181
16. Toopkanloo, S. P., **Tan, T. B.**, Cheong, L.-Z., Liu, Y., & Tan, C. P. (2023). In vitro applicability of mixed soy lecithin-based liposomes with added several lipophilic agents as novel delivery systems for delivery of quercetin. *Journal of Dispersion Science and Technology*, 44(7), 1269-1277.
17. Taghavi, E., Mirhosseini, H., Tan, C. P., **Tan, T. B.**, Ngadin, A. A., Lani, M. N., . . . Anarjan, N. (2021). Formulation and functionalization of linalool nanoemulsion to boost its antibacterial properties against major foodborne pathogens. *Food Bioscience*, 44.
18. Toopkanloo, S. P., **Tan, T. B.**, Cheong, L.-Z., Liu, Y., & Tan, C. P. (2021). In vitro applicability of mixed soy lecithin-based liposomes with added several lipophilic agents as novel delivery systems for delivery of quercetin. *Journal of Dispersion Science and Technology*.
19. Niaz, A.; Adnan, A.; Bashir, R.; Mumtaz, M.W.; Raza, S.A.; Rashid, U.; Tan, C.P.; **Tan, T.B.** (2021). The In Vitro α -Glucosidase Inhibition Activity of Various Solvent Fractions of Tamarix dioica and 1H-NMR Based Metabolite Identification and Molecular Docking Analysis. *Plants*, 10, 1128
20. Tan, P.Y., **Tan, T.B.**, Chang, H.W., Mwangi, W.W., Tey, B.T., Chan, E.S., Lai, O.M., Liu, Y., Wang, Y. and Tan, C.P. (2021), Pickering emulsion-templated ionotropic gelation of tocotrienol microcapsules: effects of alginate and chitosan concentrations and gelation process parameters. *Journal of the Science of Food and Agriculture*, 101, 5963-5971

21. Abd Hadi, H.M.; Tan, C.P.; Mohamad Shah, N.K.; **Tan, T.B.**; Niranjan, K.; Mat Yusoff, M. (2021). Establishment of an Effective Refining Process for Moringa oleifera Kernel Oil. *Processes*, 9, 579
22. Soo, Y. N., Tan, C. P., Tan, P. Y., Khalid, N., & Tan, T. B.* (2020). Fabrication of oil-in-water emulsions as shelf-stable liquid non-dairy creamers: effects of homogenization pressure, oil type, and emulsifier concentration. *Journal of the Science of Food and Agriculture*.
23. Hew, K. S., Khor, Y.P., **Tan, T. B.**, Yusoff, M. M., Lai, O. M., Asis, A. J., Alharthi, F. A., Nehdi, I. A., & Tan, C. P. (2021). Mitigation of 3-monochloropropane-1,2-diol esters and glycidyl esters in refined palm oil: A new and optimized approach. *LWT*, 139, 110612
24. Tan, P.Y.; Tey, B.T.; Chan, E.S.; Lai, O.M.; Chang, H.W.; **Tan, T.B.**; Liu, Y.; Wang, Y.; Tan, C.P. (2021). Stabilization and Release of Palm Tocotrienol Emulsion Fabricated Using pH-Sensitive Calcium Carbonate. *Foods*, 10, 358
25. Toopkanloo, S.P.; **Tan, T.B.**; Abas, F.; Azam, M.; Nehdi, I.A.; Tan, C.P. (2021). Improving Vesicular Integrity and Antioxidant Activity of Novel Mixed Soy Lecithin-Based Liposomes Containing Squalene and Their Stability against UV Light. *Molecules*, 25,
26. Toopkanloo, S.P.; **Tan, T.B.**; Abas, F.; Alharthi, F.A.; Nehdi, I.A.; Tan, C.P. (2020). Impact of Quercetin Encapsulation with Added Phytosterols on Bilayer Membrane and Photothermal-Alteration of Novel Mixed Soy Lecithin-Based Liposome. *Nanomaterials*, 10, 2432
27. Liew, S. N., Utra, U., Alias, A. K., Tan, T. B.*, Tan, C. P., & Yussof, N. S. (2020). Physical, morphological and antibacterial properties of lime essential oil nanoemulsions prepared via spontaneous emulsification method. *LWT*, 128.
28. Goh, K. M., Wong, Y. H., Abas, F., Lai, O. M., Yusoff, M. M., **Tan, T. B.**, . . . Tan, C. P. (2020). Changes in 3-, 2-monochloropropanediol and glycidyl esters during a conventional baking system with addition of antioxidants. *Foods*, 9(6).
29. Ng, S. K., Tan, **T. B.**, **Tan, P. F.**, Chong, G. H., & Tan, C. P. (2020). Effect of selected high pressure processing parameters on the sensory attributes and shelf life of jackfruit (*Artocarpus heterophyllus* L.) bulb packed using different packaging materials. *International Food Research Journal*, 27(4), 675-682.
30. Chan, H. Y., Halim-Lim, S. A., **Tan, T. B.**, Kamarulzaman, N. H., Jamaludin, A. A., & Wan-Mohtar, W. A. A. Q. I. (2020). Exploring the drivers and the interventions towards sustainable food security in the food supply chain. *Sustainability (Switzerland)*, 12(19).
31. Hew, K. S., Asis, A. J., **Tan, T. B.**, Yusoff, M. M., Lai, O. M., Nehdi, I. A., & Tan, C. P. (2020). Revising degumming and bleaching processes of palm oil refining for the mitigation of 3-monochloropropane-1,2-diol esters (3-MCPDE) and glycidyl esters (GE) contents in refined palm oil. *Food Chemistry*, 307, 125545.
32. Chang, H. W., **Tan, T. B.**, Tan, P. Y., Nehdi, I. A., Sbihi, H. M., & Tan, C. P. (2020). Microencapsulation of fish oil-in-water emulsion using thiol-modified β -lactoglobulin fibrils-chitosan complex. *Journal of Food Engineering*, 264, 109680.
33. Hedayatnia, S., Tan, C. P., Joanne Kam, W.-L., **Tan, T. B.**, & Mirhosseini, H. (2019). Modification of physicochemical and mechanical properties of a new bio-based gelatin composite films through composition adjustment and instantizing process. *LWT*, 116, 108575
34. Ng, S. K., **Tan, T. B.**, Tan, P. F., Chong, G. H. & Tan, C. P. (2019). Effect of high pressure processing on the microbiological, physicochemical and enzymatic properties of jackfruit (*Artocarpus heterophyllus* L.) bulb. *Food Research*, 3, 213-220.
35. Tan, P. F., Ng, S. K., **Tan, T. B.**, Chong, G. H. & Tan, C. P. (2019). Shelf life determination of durian (*Durio zibethinus*) paste and pulp upon high-pressure processing. *Food Research*, 3, 221-230.
36. Tan, T. B.*, Nakajima, M., & Tan, C. P., (2018). Effect of polysaccharide emulsifiers on the fabrication of monodisperse oil-in-water emulsions using the microchannel emulsification method. *Journal of Food Engineering*, 238, 188-194.

	<p>37. Chang, H. W., Tan, T. B., Tan, P. Y., Abas, F., Lai, O. M., Wang, Y., Wang, Y., Nehdi, I. A., & Tan, C. P. (2018). Microencapsulation of fish oil using thiol-modified β-lactoglobulin fibrils/chitosan complex: A study on the storage stability and in vitro release. <i>Food Hydrocolloids</i>, <i>80</i>, 186-194.</p> <p>38. Chang, H. W., Tan, T. B., Tan, P. Y., Abas, F., Lai, O. M., Wang, Y., Wang, Y., Nehdi, I. A., & Tan, C. P. (2018). Physical properties and stability evaluation of fish oil-in-water emulsions stabilized using thiol-modified β-lactoglobulin fibrils-chitosan complex. <i>Food Research International</i>, <i>105</i>, 482-491.</p> <p>39. Tan, P. Y., Tan, T. B., Chang, H. W., Tey, B. T., Chan, E. S., Lai, O. M., . . . Tan, C. P. (2018). Effects of storage and yogurt matrix on the stability of tocotrienols encapsulated in chitosan-alginate microcapsules. <i>Food Chemistry</i>, <i>241</i>, 79-85.</p> <p>40. Tan, P. Y., Tan, T. B., Chang, H. W., Tey, B. T., Chan, E. S., Lai, O. M., Sham Baharin, B., Nehdi, I. A., & Tan, C. P. (2017). Effects of environmental stresses and <i>in vitro</i> digestion on the release of tocotrienols encapsulated within chitosan-alginate microcapsules. <i>Journal of Agricultural and Food Chemistry</i>, <i>65</i>, 10651-10657.</p> <p>41. Shariffa, Y. N., Tan, T. B., Uthumporn, U., Abas, F., Mirhosseini, H., Nehdi, I. A., Wang, Y. H., & Tan, C. P. (2017). Producing a lycopene nanodispersion: Formulation development and the effects of high pressure homogenization. <i>Food Research International</i>, <i>101</i>, 165-172.</p> <p>42. Shu, G., Khalid, N., Tan, T. B., Zhao, Y., Neves, M. A., Kobayashi, I., & Nakajima, M. (2017). Comparison of ergocalciferol nanodispersions prepared using modified lecithin and sodium caseinate: Insights of formulation, stability and bioaccessibility. <i>Journal of Functional Foods</i>, <i>38</i>, 28-35.</p> <p>43. Chang, H. W., Tan, T. B., Tan, P. Y., Abas, F., Lai, O. M., Nehdi, I. A., & Tan, C. P. (2017). Formation and characterization of thiol-modified fibrillated whey protein isolate solution with enhanced functionalities. <i>Journal of Food Engineering</i>, <i>214</i>, 277-286.</p> <p>44. <u>Tan, T. B.</u> *, Yussof, N. S., Abas, F., Mirhosseini, H., Nehdi, I. A., & Tan, C. P. (2016). Forming a lutein nanodispersion via solvent displacement method: The effects of processing parameters and emulsifiers with different stabilizing mechanisms. <i>Food Chemistry</i>, <i>194</i>, 416-423.</p> <p>45. <u>Tan, T. B.</u> *, Yussof, N. S., Abas, F., Mirhosseini, H., Nehdi, I. A., & Tan, C. P. (2016). Comparing the formation of lutein nanodispersion prepared by using solvent displacement method and high-pressure valve homogenization: Effects of formulation parameters. <i>Journal of Food Engineering</i>, <i>177</i>, 65-71.</p> <p>46. Shariffa, Y. N., Tan, T. B., Abas, F., Mirhosseini, H., Nehdi, I. A., & Tan, C. P. (2016). Producing a lycopene nanodispersion: The effects of emulsifiers. <i>Food and Bioprocess Technology</i>, <i>98</i>, 210-216.</p> <p>47. <u>Tan, T. B.</u> *, Yussof, N. S., Abas, F., Mirhosseini, H., Nehdi, I. A., & Tan, C. P. (2016). Stability evaluation of lutein nanodispersions prepared via solvent displacement method: The effect of emulsifiers with different stabilizing mechanisms. <i>Food Chemistry</i>, <i>205</i>, 155-162.</p> <p>48. <u>Tan, T. B.</u> *, Chu, W. C., Yussof, N. S., Abas, F., Mirhosseini, H., Cheah, Y. K., . . . Tan, C. P. (2016). Physicochemical, morphological and cellular uptake properties of lutein nanodispersions prepared by using surfactants with different stabilizing mechanisms. <i>Food & Function</i>, <i>7</i>, 2043-2051.</p> <p>49. Fu, C. W. F., Ho, C. W., Yong, W. T. L., Abas, F., Tan, T. B., & Tan, C. P. (2016). Extraction of phenolic antioxidants from four selected seaweeds obtained from Sabah. <i>International Food Research Journal</i>, <i>23</i>, 2363-2369</p>
Books/Monographs	-
Chapter in Books	<p>1. Tan, T. B., Tan, P. Y. & Gan, Y. L. (2022). Characterization of Nanoemulsions: The Way Forward. In Lee, Y.Y., Tang, T.K., Phuah, E.T. & Lai, O.M. (Eds.), <i>Recent Advances in Edible Fats and Oils Technology: Processing, Health Implications, Economic and Environmental Impact</i> (pp. 347-377). Springer Link.</p>

	<p>2. Tan, T. B. & Tan, P. Y. (2020). Food emulsions: A comprehensive overview of their preparation, stability and application. In Lasekan O. (Ed.), <i>A comprehensive guide to processed foods</i> (pp. 129-156). Hauppauge, NY: Nova Science Publishers.</p> <p>3. Tan, T. B. & Tan, C. P. (2018). Nanoemulsions and nanodispersions: A fundamental view of their preparation, characterization, stability evaluation, and application. In Rai, V. & Bai, J. (Eds.), <i>Nanotechnology applications in the food industry</i> (pp. 333-355). CRC Press.</p>
Proceedings	-
Other Publications	-

H. PROJEK PENYELIDIKAN (Research Projects)					
Project No.	Project Title	Role	Year	Source of fund	Status
	Fundamental Assessment of Cooking Oil Quality	Project Leader	2025	Sik Cheong Edible Oil Sdn. Bhd.	Ongoing
	Production of Honey-Black Seed Oil Emulsion	Project Leader	2024	Novoresearch Sdn. Bhd.	Completed
	Development of palm-based carotene nanoemulsions and microcapsules and their application in a model food system	Project Leader	2020	UPM	Completed
	Elucidation of synergistic mechanism underlying complexation of plant protein-polysaccharide for fabrication of functional lipid nanoemulsion	Project member	2020	MOHE	Completed
	Formulation, Processing and Product Characterization for Non-Dairy Creamer (Part 1)	Project member	2016	Oleon Sdn. Bhd.	Completed
	A new refining approach for production of refined palm oil with simultaneous reduction of glycidol and 3-monochloropropane-1,2-diol fatty acid esters in refined palm oil	Project member	2017 - 2019	UPM	Completed
	<i>Moringa oleifera</i> seeds de-hulling and application of the seed oil and protein in food products in Malaysia	Project member	2017 - 2019	UPM	Completed
	Development and Optimization of a Triple Quadrupole Gas Chromatograph-Mass Spectrometer Instrumental Method for the Detection of 3-, 2- Monochloropropane-1,2- diol and Glycidyl Esters in Palm Oil Subjected to Different High-Temperature Cooking Methods and Food Systems, and Development of a Mitigation Strategy Based on Antioxidants.	Project member	2018 - 2020	UPM	Completed
	Evaluation of the in vitro stability and antioxidant activity of nanoencapsulated anthocyanins extracted from ripened fruits of <i>Carissa carandas</i> Linn.	Project member	2018 - 2020	UPM	Completed
	Preparation, Characterization and Stability Evaluation of Nanoemulsions Loaded with Different Oils and Bioactive Compounds	Project Member	2018	Compass Foods Pte. Ltd.	Completed
	Formulation, Processing and Product Characterization for Non-Dairy Creamer (Part 2)	Project Member	2019	Oleon Sdn. Bhd.	Completed

I. TEACHING EXPERIENCE	
Courses Name / Code	Level
FST4834 Technology of Oils and Fats	Undergraduate (BSTM)
FST4830 Processing Technology of Food Plant Products	Undergraduate (BSTM)

FMO4301 Manufacturing and Commercialization of New Food Products	Undergraduate (BSOPM)
FSM3206 Technology in Mass Food Production	Undergraduate (BSPMK)
FMO4701 Food Supply Chain Management	Undergraduate (BSOPM)
FSM3601 Food Industry Operations Management	Undergraduate (BSPMK)
FSM4101 Research Methods in Foodservice	Undergraduate (BSPPM)
FSM4102 Research Methodology in Food Industry	Undergraduate (BSPMK)
FEM2313 Integrity and Anti-Corruption	Undergraduate (All programmes)
FST5302 Current Technology in Food Processing	Postgraduate
FST5101 Food Macrocomponents	Postgraduate
FST5002 Research Methodology and Statistics in Food Science and Technology	Postgraduate