

# ภาคผนวกตัวบ่งชี้ที่ 1 การบริหารจัดการหลักสูตรตามประกาศกระทรวงศึกษาธิการ เรื่อง เกณฑ์มาตรฐานหลักสูตรระดับปริญญาตรีและบัณฑิตศึกษา

หลักสูตรวิทยาศาสตรมหาบัณฑิต สาขาวิชาเทคโนโลยีการบรรจุ

หลักสูตรใหม่ พ.ศ.2561

คณะอุตสาหกรรมเกษตร

มหาวิทยาลัยเชียงใหม่

ประจำปีการศึกษา 2563 วันที่รายงาน 31 กรกฎาคม 2564



## ข้อมูลหลักสูตร

- สภามหาวิทยาลัยอนุมัติหลักสูตรฯ เมื่อวันที่ 30 กันยายน 2560
- สกอ. รับทราบหลักสูตรฯ เมื่อวันที่ 2 มีนาคม 2561
- มีผลบังคับใช้หลักสูตรตั้งแต่ภาคการเรียนที่ 1 ปีการศึกษา 2561
- มีการเปลี่ยนแปลงอาจารย์ผู้รับผิดชอบหลักสูตรจากที่ระบุไว้ใน มคอ 2 โดยผ่านการอนุมัติโดย สภามหาวิทยาลัยแล้วในคราวประชุมครั้งที่ ..... เมื่อวันที่ ..... (ถ้ามี)
- ได้มีการดำเนินการปรับปรุงหลักสูตรให้เป็นปัจจุบันหรือเปิดหลักสูตรใหม่ ให้สอดคล้องตามเกณฑ์ มาตรฐานหลักสูตร เมื่อปี พ.ศ. 2560 ซึ่งได้ผ่านความเห็นชอบจากที่ประชุมคณะกรรมการบริหาร ประจำคณะอุตสาหกรรมเกษตร ในคราวประชุมครั้งที่ 4/2559 เมื่อวันที่ 16 เมษายน 2560 สภาวิชาการให้ความเห็นชอบหลักสูตร ในการประชุมครั้งที่ 1/2559 เมื่อวันที่ 13 มกราคม 2559 สภามหาวิทยาลัยอนุมัติหลักสูตร ในการประชุมครั้งที่ 9/2560 เมื่อวันที่ 1 พฤศจิกายน 2560 และ สกอ. ได้รับทราบหลักสูตรปรับปรุงหรือหลักสูตรใหม่ดังกล่าว เมื่อวันที่ 2 มีนาคม 2561
- หลักสูตรปรับปรุง พ.ศ. .... หรือหลักสูตรใหม่ พ.ศ. 2561 นี้ ได้เปิดรับนักศึกษาปีการศึกษา 2561 เปิดสอนโดยใช้หลักสูตรดังกล่าวมาแล้ว 3 ปี มีระยะเวลาการจัดการศึกษาของหลักสูตร 2 ปี และมีการปรับปรุงหลักสูตรสม่ำเสมอตามรอบระยะเวลาของหลักสูตรทุกรอบ 5 ปี โดยจะครบรอบการปรับปรุงหลักสูตรครั้งต่อไปในปี พ.ศ. 2566

## ผลงานทางวิชาการของอาจารย์

### 1. ผลงานทางวิชาการของอาจารย์ประจำหลักสูตร/อาจารย์ผู้รับผิดชอบหลักสูตร/อาจารย์ผู้สอน ประจำปี 2559-2563

#### 1) ผู้ช่วยศาสตราจารย์ ดร.สุทธิรา สุทธสุภา

##### ผลงานตีพิมพ์ในวารสารทางวิชาการระดับนานาชาติ (ทุกผลงานเป็นงานวิจัย)

1. **Sutthasupa, S.**; Faungnawakij, K.; Wagener, K. B.; Sanda, F.; “Thermo-responsive micelles prepared from brush-like block copolymers of proline- and oligo(lactide)-functionalized norbornenes” *Polymer* 2019, 177, 178–188
2. Sangsuwan, J. **Sutthasupa, S.** “Effect of chitosan and alginate beads incorporated with lavender, clove essential oils, and vanillin against *Botrytis cinerea* and their application in fresh table grapes packaging system” *Packag. Technol Sci.* 2019, 32, 595–605.
3. **Sutthasupa, S.\*** Sanda, F. “Macroporous scaffolds: Molecular brushes based on oligo(lactic acid)–amino acid–indomethacin conjugated poly(norbornene)s” *Eur. Polym. J.* 2018, 98, 162–171.
4. Sangsuwan, J\* Pongsapakworawat, T. Bangmo, P. **Sutthasupa, S** “Effect of chitosan beads incorporated with lavender or red thyme essential oils in inhibiting *Botrytis cinerea* and their application in strawberry packaging system” *LWT. Food. Sci. Tech.* 2016, 74, 14–20.
5. **Sutthasupa, S.\*** Sanda, F. “Synthesis of diblock copolymers of indomethacin/aspartic acid conjugated norbornenes and characterization of their self assembled nanostructures as drug carriers” *Eur. Polym. J.* 2016, 85, 211–224.

##### การนำเสนอผลงานในที่ประชุมวิชาการระดับนานาชาติ (ทุกผลงานเป็นงานวิจัย)

1. **Sutthasupa, S.,** Faungnawakij, K. Sanda, F. Thermoresponsive polymeric micelles from brush-like polymer based oligo(lactic acid) and proline functionalized polynorbornene. International Conference on. Advanced and Applied Petroleum, Petrochemicals, Polymers 2018 (ICAPPP 2018), Bangkok, Thailand, 18-20 Dec 1028. (poster)

## 2) รองศาสตราจารย์ ดร. เจิมขวัญ สัจจ์สุวรรณ

### ผลงานตีพิมพ์ในวารสารทางวิชาการระดับนานาชาติ (ทุกผลงานเป็นงานวิจัย)

1. **Sangsuwan, J.** and Sutthasupa, S. 2019. Effect of chitosan and alginate beads incorporated with lavender, clove essential oils and vanillin against *Botrytis cinerea* and their application in fresh table grapes packaging system. *Packaging Technology and Science*. 32(12): 595-605.
2. Jaimun, R. and **Sangsuwan, J.\*** 2019. Efficacy of chitosan-coated paper incorporated with vanillin and ethylene adsorbents on the control of anthracnose and the quality of Nam Dok Mai mango fruit. *Packaging Technology and Science*. 32(8): 383-394.
3. Torpol, K., Wiriyaacharee, P., Sriwattana, S.\*, **Sangsuwan, J.** and Prinyawiwatkul, W. 2019. Optimising chitosan-pectin hydrogel beads containing combined garlic and holy basil essential oils and their application as antimicrobial inhibitor. *International Journal of Food Science and Technology*. 54(6): 2064-2074.
4. Panumong P., Kim S.M., **Sangsuwan, J.**, Leksawasdi, N. and Rattanapanone, N.\* 2019. Influence of Calcium Salts on Quality and Microstructure of Minimally-processed Litchi Fruit. *Chiang Mai Journal of Science*. 46(1): 46-61.
5. Torpol, K., Wiriyaacharee, P., Sriwattana, S.\*, **Sangsuwan, J.** and Prinyawiwatkul, W. 2018. Antimicrobial activity of garlic (*Allium sativum* L.) and holy basil (*Ocimum sanctum* L.) essential oils applied by liquid vs. vapour phases. *International Journal of Food Science and Technology*. 53(9): 2119-2128.
6. Jaimun, R., **Sangsuwan, J.\***, Intipunya, P. and Chantrasri, P. 2018. Active Wrapping Paper Against Mango Anthracnose Fungi and Its Releasing Profiles. *Packaging Technology and Science*. 31(6): 421-431.
7. Panumong P., **Sangsuwan, J.** and Rattanapanone, N.\* 2017. Effect of Modified Atmosphere Packaging with Varied Gas Combinations and Treatment on the Quality of Minimally-Processed Litchi Fruit. *Songklanakarin Journal of Science and Technology*. 39(6): 715-722.
8. Jainan, A., Deenu, A., Naruenartwongsakul, S., Raviyan, P., **Sangsuwan, J.** and Kamthai, S. 2017. Preliminary Study of Alkaline Pretreatment Effect on Carboxymethyl Flour (CMF) from Chiang Mai University (CMU) Purple Rice Properties. *Chiang Mai Journal of Science*, 44(4), 1624-1632.
9. **Sangsuwan, J.**, Pongsapakworawat, T., Bangmo, P. and Sutthasupa, S. 2016. Effect of chitosan beads incorporated with lavender or red thyme essential oils in

inhibiting *Botrytis cinerea* and their application in strawberry packaging system. LWT- Food Science and Technology. 74, 14-20.

10. Panumong P., **Sangsuwan, J.**, Kim S.M. and Rattanapanone, N. 2016. The Improvement of Texture and Quality of Minimally-Processed Litchi Fruit Using Various Calcium Salts. Journal of Food Processing and Preservation. 40(6), 1297-1308.
11. Panumong P., Kim S.M., **Sangsuwan, J.** and Rattanapanone, N. 2016. Combined Effect of Calcium Chloride and Modified Atmosphere Packaging on Texture and Quality of Minimally-Processed Litchi Fruit. Chiang Mai Journal of Science. 43(3):556-569.

### การนำเสนอผลงานในที่ประชุมวิชาการระดับนานาชาติ (ทุกผลงานเป็นงานวิจัย)

1. **Sangsuwan, J.**, Sutthasupa, S., Thabrat, W. and Kamthai, S. Mechanical damage and storage life of mango in active molded pulp. 2<sup>nd</sup> Innovations in Food Packaging, Shelf Life and Food Safety Conference. Stadthalle Erding, Munich, Germany. October 3-6, 2017.

### ผลงานอื่นๆ

1. (สิทธิบัตร) เจิมขวัญ สังข์สุวรรณ และสมชาย วงศ์สุริยศักดิ์ “สิทธิบัตรกล่อง”, เลขที่สิทธิบัตร 64336 ให้ไว้ ณ วันที่ 20 กรกฎาคม 2561

### 3) รองศาสตราจารย์ ดร. พรชัย ราชตะนทะพันธุ์

#### ผลงานตีพิมพ์ในวารสารทางวิชาการระดับนานาชาติ (ทุกผลงานเป็นงานวิจัย)

1. Wirongrong Tongdeesontorn, Lisa J. Mauer, Sasitorn Wongruong, Pensiri Sriburi and **Pornchai Rachtanapun\*** (2020) Physical and Antioxidant Properties of Cassava Starch–Carboxymethyl Cellulose Incorporated with Quercetin and TBHQ as Active Food Packaging. Polymers, 12, 366; 1-18, doi:10.3390/polym12020366.
2. Ngo, T.M.P., Nguyen, T.H., Dang, T.M.Q., Tran, T.X., **Rachtanapun, P.** (2020) Characteristics and Antimicrobial Properties of Active Edible Films Based on Pectin and Nanochitosan. International journal of molecular sciences Volume 21, Issue 6, 23 March 2020
3. Kodsangma, A., Homsaard, N., Nadon, S., **Rachtanapun, P.**, Leksawasdi, N., Phimolsiripol, Y., Imsomphun, C., Seesuriyachan, P., Chaiyaso, T., Jantrawut, P., Inmutto, N., Ougizawa, T., Jantanasakulwong, K. (2020) Effect of sodium benzoate and chlorhexidine gluconate on a bio-thermoplastic elastomer made from thermoplastic starch-chitosan blended

- with epoxidized natural rubber. Carbohydrate Polymers. Volume 242, 15 August 2020, 116421, doi.org/10.1016/j.carbpol.2020.116421
4. Wongkaew, M., Sommano, S.R., Tangpao, T. **Rachtanapun, P.**, Jantanasakulwong, K. (2020) Mango peel pectin by microwave-assisted extraction and its use as fat replacement in dried chinese sausage. Foods Volume 9, Issue 4, Article number 450
  5. Rungsiri Suriyatem, Nichaya Noikang, Tamolwan Kankam, Kittisak Jantanasakulwong, Noppol Leksawasdi, Yuthana Phimolsiripol, Chayatip Insomphun, Phisit Seesuriyachan, Thanongsak Chaiyaso, Pensak Jantrawut, Sarana Rose Sommano and **Pornchai Rachtanapun\***. (2020) Physical Properties of Carboxymethyl Cellulose from Palm Bunch and Bagasse Agricultural Wastes: Effect of Delignification with Hydrogen Peroxide. Polymers 2020, 12, 1505; doi:10.3390/polym12071505
  6. Thi Minh Ngo Phuong, Thanh Hoi Nguyen, Thi Mong Quyen Dang, Thi Xo Tran and **Pornchai Rachtanapun\*** (2020) Characteristics and Antimicrobial Properties of Active Edible Films Based on Pectin and Nanochitosan. International Journal of Molecular Sciences 2020, 21(6), 2224; doi.org/10.3390/ijms21062224 - 23 Mar 2020
  7. Wirongrong Tongdeesoontorn, Lisa J. Mauer, Sasitorn Wongruong, Pensiri Sriburi and **Pornchai Rachtanapun\*** (2020) Physical and Antioxidant Properties of Cassava Starch–Carboxymethyl Cellulose Incorporated with Quercetin and TBHQ as Active Food Packaging. Polymers, 12, 366; 1-18, doi:10.3390/polym12020366.
  8. Araya Kodsangma, Nattagarn Homsaard, Sudarut Nadon, **Pornchai Rachtanapun**, Noppol Leksawasdi, Yuthana Phimolsiripol, Chayatip Insomphum, Phisit Seesuriyachan, Thanongsak Chaiyaso, Pensak Jantrawut, Nakin Inmutto, Toshiaki Ougizawa, Kittisak Jantanasakulwong\* (2020) Effect of sodium benzoate and chlorhexidine gluconate on a bio-thermoplastic elastomer made from thermoplastic starch-chitosan blended with epoxidized natural rubber. Carbohydrate Polymers Volume 242, 15 August 2020, 116421. doi.org/10.1016/j.carbpol.2020.116421
  9. Nattagarn Homsaard, Araya Kodsangma, **Pornchai Rachtanapun**, Noppol Leksawasdi, Yuthana Phimolsiripol, Phisit Seesuriyachan, Thanongsak Chaiyaso, Sarana Sommano and Kittisak Jantanasakulwong\* (2020) Efficacy of cassava starch blending with gelling agents and palm oil coating in improving egg shelf life. International Journal of Food Science and Technology First published: 15 June 2020 doi.org/10.1111/ijfs.14675
  10. Tongdeesoontorn, W., Mauer, L.J., Wongruong, S., Sriburi, P., **Rachtanapun, P.** (2020) Physical and antioxidant properties of cassava starch-carboxymethyl cellulose

- incorporated with quercetin and TBHQ as active food packaging. *Polymers* 2020, 12(2), 366; doi.org/10.3390/polym12020366
11. Siwarote Boonrasri, Pongdhorn Sae-Oui and **Pornchai Rachtanapun**. (2020) Chitosan and natural rubber latex biocomposite prepared by incorporating negatively charged chitosan dispersion. *Molecules* 2020, 25(12), 2777; doi.org/10.3390/molecules25122777
  12. Chaiwong, N., Leelapornpisid, P. Jantanasakulwong, K. **Rachtanapun, P.**, Seesuriyachan, P. Sakdatorn, V., Leksawasdi, N. and Phimolsiripol, Y. (2020) Antioxidant and Moisturizing Properties of Carboxymethyl Chitosan with Different Molecular Weights. *Polymers* 2020, 12(7), 1445; <https://doi.org/10.3390/polym12071445>
  13. Saenjaiban, A., Singtisan, T., Suppakul, P., Jantanasakulwong, K, Punyodom, W., **Rachtanapun, P.** (2020) Novel color change film as a time–temperature indicator using polydiacetylene/silver nanoparticles embedded in carboxymethyl cellulose. *Polymer* Volume 12, Issue 10, October 2020, Article number 2306, Pages 1-14 <https://doi.org/10.3390/polym12102306>.
  14. Panraksa, Pattaraporn; Udomsom, Suruk; **Rachtanapun, Pornchai**; Chittasupho, Chuda; Ruksiriwanich, Warintorn; Jantrawut, Pensak. 2020. "Hydroxypropyl Methylcellulose E15: A Hydrophilic Polymer for Fabrication of Orodispersible Film Using Syringe Extrusion 3D Printer" *Polymers* 12(11), 2666. <https://doi.org/10.3390/polym12112666>.
  15. Wisetkomolmat, J., Suksathan, R., Puangpradab, R., Kunasakdakul, K., Jantanasakulwong, K., **Rachtanapun, P.**, Sommano, S.R. (2020) Natural surfactant saponin from tissue of *litsea glutinosa* and its alternative sustainable production. *Plants* Volume 9, Issue 11, Article number 1521, Pages 1-15
  16. Klunklin, W., Jantanasakulwong, K., Phimolsiripol, Y., Leksawasdi, N., Seesuriyachan, P., Chaiyaso, T., Insomphun, C., Phongthai, S., Jantrawut, P., Sommano, S. R., Punyodom, W., Reungsang, A., Ngo, T. M. P., and **Rachtanapun, P.** (2020). Synthesis, Characterization, and Application of Carboxymethyl Cellulose from Asparagus Stalk End. *Polymers*, 13(1), 81. doi: 10.3390/polym13010081.
  17. Tanpong Chaiwarit, **Pornchai Rachtanapun**, Nutthapong Kantrong, Pensak Jantrawut \* (2020) Preparation of Clindamycin Hydrochloride Loaded De-esterified Low-Methoxyl Mango Peel Pectin Film Used as Topical Drug Delivery System, *Polymers*, 12(5), 1006 <https://doi.org/10.3390/polym12051006>
  18. Tantala J., Vangnai K., **Rachtanapun, P.** and Rachtanapun, C.\* (2019) Active Antimicrobial Collagen Casing, *Italian Journal of Food Science*, 31 (5), 171-175.

19. Kittisak Jantanasakulwong \*, Nattagarn Homsaard, Panurod Pengjun, **Pornchai Rachtanapun**, Noppol Leksawasdi, Yuthana Phimolsiripol, Charin Techapun, Pensak Jantrawut (2019) “Effect of dip coating polymer solutions on properties of thermoplastic cassava starch”, *Polymers*, 11, 1746, 1-11; doi:10.3390/polym11111746.
20. Juthamas Tantala, Wirongrong Tongdeesoontorn, Chitsiri Rachtanapun, Kittisak Jantanasakulwong and **Pornchai Rachtanapun** (2019) Moisture Sorption Isotherms and Prediction Models of Carboxymethyl Chitosan Films from Different Sources with Various Plasticizers, *Advances in Materials and Engineering*, Volume 2019, Article ID 4082439, 18 page. Published online: 9 January 2019, <https://doi.org/10.1155/2019/4082439>
21. Rungsiri Suriyatem, Rafael A Auras and **Pornchai Rachtanapun** (2019) Utilization of carboxymethyl cellulose from durian rind agricultural waste to improve physical properties and stability of rice starch-based film, *Polymers and The Environment*, 27(2), 286-298. Published online: 28 November 2018. <http://doi.org/10.1007/s10924-018-1343-z>
22. Ngo Thi Minh Phuong, Dang Thi Mong Quyen, Tran Thi Xo, **Pornchai Rachtanapun** (2018) “Effects of zinc oxide nanoparticles on the properties of pectin/alginate edible films”, *International Journal of Polymer Science*, Volume 2018, Article ID 5645797, 9 pages.
23. Rungsiri Suriyatem , Rafael A. Auras , Chitsiri Rachtanapun , **Pornchai Rachtanapun** (2018) “Biodegradable rice starch/carboxymethyl chitosan films with added propolis extract for potential use as active food packaging”, *Polymers*, 10(9), 954 (page 1-14) <https://doi.org/10.3390/polym10090954> (Q1, Impact factor 2.935 ปี 2560 โดย Institute of Scientific Information (USA)) SNIP 1.213, SJR 0.852 โดย Scopus)
24. Kittisak Jantanasakulwong, Somchai Wongsuriyasak, **Pornchai Rachtanapun**, Phisit Seesuriyachan, Thanongsak Chaiyaso, Noppol Leksawasdi, Charin Techapun, Toshiaki Ougizawa (2018) “Mechanical Properties Improvement of Thermoplastic Corn Starch and Polyethylene-grafted-maleicanhydride blending by Na<sup>+</sup> ions neutralization of Carboxymethyl Cellulose”, *International Journal of Biological Macromolecules*, 120, 297-301. (Accepted Aug 16, 2018) (Q1, Impact factor 3.909 โดย Institute of Scientific Information (USA), SNIP=1.307, SJR=0.917 ปี 2560 โดย Scopus)
25. Duangjai Noiwan, Kiattisak Sutenan, Chatchai Yodweingchai and **Pornchai Rachtanapun** (2018). “Postharvest Life Extension of Fresh-Cut Mango (*Mangifera indica* cv. Fa-Lun) Using Chitosan and Carboxymethyl Chitosan Coating”, *Journal of Agricultural Science*. 10 (8), 438-446.

26. Rungsiri Suriyatem, Rafael A. Auras and **Pornchai Rachtanapun** (2018) "Improvement of mechanical properties and thermal stability and extension of biodegradability of rice starch-based film with carboxymethyl chitosan", *Industrial Crops and Products*, 122, 37-48.
27. Patcharin Phokasem, Punpong Lekhakula, Niramom Utama-ung, **Pornchai Rachtanapun** and Panuwan Chantawannakul (2017), "Optimization of Mixed Bacillus Cultures as An Inoculant in Northern Thai Style Fermented Soybeans (Thua-nao) by Mixture Design", *Chiang Mai Journal of Science*, 44(2) : 414-426
28. Rungsiri Suriyatem, Rafael A. Auras, Pilairuk Intipunya, **Pornchai Rachtanapun**, (2017) "Predictive mathematical modeling for EC50 calculation of antioxidant activity and antibacterial ability of Thai bee products", *Journal of Applied Pharmaceutical Science*, 7 (09), pp. 122-133, DOI: 10.7324/JAPS.2017.70917
29. Duangjai Noiwan, Panuwat Suppakul, Adisak Joomwong, Jamnong Uthaibutra, **Pornchai Rachtanapun** (2017) "Kinetics of Mango Fruits cv. Nam Dok Mai Si Thong Quality Changes during Storage at Various Temperatures" to *Journal of Agricultural Science*, 9, (6); 199-212. ISSN 1916-9752 E-ISSN 1916-9760
30. Dau Hung Anh, Kanchana Dumri, Nguyen Tuan Anh, Winita Punyodom, **Pornchai Rachtanapun**. (2016) "Facile Fabrication of Polyethylene/Silver Nanoparticles Nanocomposites Using Silver Nanoparticles Traps and Holds Early Antibacterial Effect" *Journal of Applied Polymer Science*, 133 (17), 43331 (1-8) (accepted 9 December 2015, published May 2016: DOI: 10.1002/app.43331)
31. Dang Thi Mong Quyen, **Pornchai Rachtanapun**. (2016) "Effects of Antimicrobial Agents- Carbendazim and Vanillin on Chitosan/Methyl Cellulose Films Properties", *Journal of Biotechnology*, 14(1A): 503-508.

#### ผลงานตีพิมพ์ในวารสารทางวิชาการระดับชาติ (ทุกผลงานเป็นงานวิจัย)

1. Chakrabandhu, Y., Osiriphun, S., Jinsiriwanit, S., Leksawasdi, N., Intipunya, P., **Rachtanapun**, P., Ngeunkaew, K., & Tananchai, K. 2019. Influences of Ultrasonic Assisted Pectin Extraction with Hydrochloric and Citric Acid from Kluai Namwa (Musa ABB cv.) on Yields Analyzed by Taguchi Method. *Naresuan Uni. J. Sci. Technol. (NUJST)*, 27(1), 44-54.



### การนำเสนอผลงานในที่ประชุมวิชาการระดับนานาชาติ (ทุกผลงานเป็นงานวิจัย)

1. Tanpong Chaiwarit, Kittisak Jantanasakulwong, **Pornchai Rachtanapun** and Pensak Jantrawu (2020) "Production of Low Methoxyl Pectin by De-Esterification of Mango Peel Pectin, and Its Potential Use as a Film-Forming Agent for Thin Film Drug Delivery" 2nd International Conference on Functional Materials and Applied Technologies (FMAT 2020), Tokyo, Japan December 15-17, 2020.
2. Apisit Seanjaiban, Teeranuch Singtisan, Panuwat Suppakul and **Pornchai Rachtanapun\*** (2019) "Color Change of Polydiacetylene (PDA)/Silver Nanocomposite Embedded in Carboxymethyl Cellulose (CMC) Film as Time-Temperature Indicator" The International Polymer Conference of Thailand - PCT-9 June 13 - 14, 2019, Amari Watergate Hotel, Bangkok, Thailand.
3. R. Suriyatem, R.A. Auras, C. Rachtanapun, **P. Rachtanapun\*** (2019) Properties improvement of rice starch-based film by incorporation with carboxymethyl chitosan and propolis extract, Sixth International Symposium Frontiers in Polymer Science, 5-8 May 2019, Budapest, Hungary.
4. **P. Rachtanapun\***, R. Suriyatem, N. Noikang, T. Tamolwan Kankam (2019) Effect of hydrogen peroxide concentration on carboxymethyl cellulose from palm bunch and bagasse, Sixth International Symposium Frontiers in Polymer Science, 5-8 May 2019, Budapest, Hungary.
5. **P. Rachtanapun\***, K. Jantanasakulwong, W. Panmee, S. Boonsong (2019) Effect of monochloroacetic acid on properties of carboxymethyl bacterial cellulose powder and film from NATA de coco, Sixth International Symposium Frontiers in Polymer Science, 5-8 May 2019, Budapest, Hungary.
6. Anongnat Chaimala, Somchai Wongsuriyasak, **Pornchai Rachtanapun**, Phisit Seesuriyachan, Thanongsak Chaiyaso, Noppol Leksawasdi, Yuthana Phimolsiripol, Pensak Jantrawut, Charin Techapun, Kittisak Jantanasakulwong (2019) "Modified thermo thermoplastic cassava starch with sericin from 1 cocoon as reactive functional groups for polymers blending", Sixth International Symposium Frontiers in Polymer Science, 5-8 May 2019, Budapest, Hungary.
7. Duangjai Noiwan, Panuwat Suppakul, **Pornchai Rachtanapun** (2017) "Development of mixed pH-dye based indicator for monitoring the ripening of mango fruit cv. Nam Dok

Mai Si Thong”, The 8th Shelf Life International Meeting 2017, November 1 -3, 2017, The Sukosol Hotel, Bangkok, Thailand.

8. Rungsiri Suriyatem, Rafael A. Auras, Pilairuk Intipunya and **Pornchai Rachtanapun** (2017) “Antioxidant Activity and EC50 Estimation using Mathematical Models for Different Types of Bee Products”, The 8th Shelf Life International Meeting 2017, November 1 -3, 2017, The Sukosol Hotel, Bangkok, Thailand.
9. Rungsiri Suriyatem, Rafael A. Auras and **Pornchai Rachtanapun**, “Effect of Carboxymethyl Chitosan on Optical properties, Thermal Stability and Biodegradability of Rice Starch Based Film”, The 8th Shelf Life International Meeting 2017, November 1 -3, 2017, The Sukosol Hotel, Bangkok, Thailand.
10. **Pornchai Rachtanapun**, Chutima Nantararat, Thitiporn Intapuan, and Budsarin Kayasit. (2017) “Effect of Sodium Hydroxide on Properties of Carboxymethyl Bacterial Cellulose from NATA de coco”, The 8th Shelf Life International Meeting 2017, November 1 -3, 2017, The Sukosol Hotel, Bangkok, Thailand.
11. **Pornchai Rachtanapun**, Anongnat Somwangthanaroj, Karnpitcha Pimporn, Khontharot Okhapan, Phattarawut chobtangsil (2017) “Nanocomposite Rice Starch Based Films with Different Intercalating Agents”, The 8th Shelf Life International Meeting 2017, November 1 -3, 2017, The Sukosol Hotel, Bangkok, Thailand.
12. Dang Thi Mong Quyen, **Pornchai Rachtanapun** (2016) “Effects of Antimicrobial Agents- Carbendazim and Vanillin on Chitosan/Methyl Cellulose Films Properties”, The 7th AFOB Regional Symposium - Asian Biotechnology: Research and Application", January 28-30, 2016, Hue city, Vietnam
13. Hung Anh Dau, **Pornchai Rachtanapun** and Kanchana Dumri (2016) “Fabrication of Berberine Modifying Bentonite/Carboxymethyl Chitosan Film as an Absorbent to Remove Organophosphate Insecticides from Contaminated Water” , ICMMT 2016, May 14-16, 2016 in Chiang Mai, Thailand.

#### การนำเสนอผลงานในที่ประชุมวิชาการระดับชาติ (ทุกผลงานเป็นงานวิจัย)

1. Siwarote Boonrasri and **Pornchai Rachtanapun** (2019) Effect of Palm Oil as Activator in C-Black Filled Natural Rubber, The 11th Rajamangala University of Technology National Conference, 24-26 August 24-26, 2019.
2. Duangjai Noiwan, Kiattisak Sutenan, Chatchai Yodweingchai and **Pornchai Rachtanapun** (2018) “Shelf Life Extension of Fresh-Cut Mango cv. Fa-Lun by Carboxymethyl Chitosan

coating, 16th National Postharvest Technology Conference 2018, Chan Thaburi, page 111.

#### ผลงานอื่นๆ

1. (สิทธิบัตร) อีรวรรณ บุญญวรรณ และ พรชัย ราชตะนะพันธ์ “กระบวนการปรับปรุงฟิล์มเมทิลเซลลูโลส เพื่อเพิ่มความสามารถการต้านทานน้ำด้วยเทคโนโลยีพลาสมา”, เลขที่สิทธิบัตร 75522 ให้ไว้ ณ วันที่ 27 มีนาคม 2563

#### 4) ผู้ช่วยศาสตราจารย์ ดร.สุฐพัศ คำไทย

##### ผลงานตีพิมพ์ในวารสารทางวิชาการระดับนานาชาติ (ทุกผลงานเป็นงานวิจัย)

1. Kanjapach Boontranurak, Patcharin Raviyan, Jiraphat Panya, Suphanida Mantana and **Suthaphat Kamthai**. 2020. “Preparation of Film Incorporating Spray-dried Red Cabbage Anthocyanin Encapsulated with Bagasse Carboxymethyl Cellulose”. Chiang Mai J. Sci. 2020; 4x(x) : 1-16. In press (Accepted)
2. Boontranurak, K., Raviyan, P., Panya, J., Mantana, **S.**, **Kamthai**, S. (2020) Preparation of film incorporating spray-dried red cabbage anthocyanin encapsulated with bagasse carboxymethyl cellulose. Chiang Mai Journal of Science Volume 47, Issue 5, September 2020, Pages 926-942
3. **Suthaphat Kamthai** and Rathanawan Magaraphan. 2018. “Development of an active polylactic acid (PLA) packaging film by adding bleached bagasse carboxymethyl cellulose (CMCB) for mango storage life extension”. Packaging Technology and Science. 32:103–116.
4. Anong Jainan, Aree Deenu, and **Suthaphat Kamthai**. 2018. “Biopolymer Film Based on Rice Straw Carboxymethyl Cellulose (CMCr) and Chiang Mai University (CMU) Purple Rice Carboxymethyl Flour (CMF)”. Chiang Mai J. Sci. 2018; 45(5) : 2140-2151
5. **Suthaphat Kamthai** and Rathanawan Magaraphan. 2017. “Mechanical and barrier properties of spray dried carboxymethyl cellulose (CMC) film from bleached bagasse pulp”. Industrial Crops & Products. 109. 753-761.
6. Anong Jainan, Aree Deenu, Srisuwan Naruenartwongsakul, Patcharin Rayiyan, Jurmkwan Sangsuwan and **Suthaphat Kamthai**. 2017. “Preliminary Study of Alkaline

Pretreatment Effect on Carboxymethyl Flour (CMF) from Chiang Mai University (CMU) Purple Rice Properties”. Chiang Mai J. Sci. 2017; 44(4) : 1624-1632.

#### ผลงานตีพิมพ์ในวารสารทางวิชาการระดับชาติ (ทุกผลงานเป็นงานวิจัย)

1. Praewdao Sopa, Monthinee Kantadech, Kanokkarn Pannasai, Wannika Khomwongsawat and **Suthaphat Kamthai**. 2017. “Efficiency of Ethylene Adsorbent Coated Paper for Extending Storage Life of Num Dok Mai Mango”. Agricultural Sci. J. 48:3 (Suppl.):339-342
2. Nittaya Kasakun, Patchareewan Saobuntan, Wit Watcharawipa, Nannaphat Kaewsangiem and **Suthaphat Kamthai**. 2017 “Efficiency of Packaging Bag for Extending Storage-life of Fresh-cut Lettuce (*Lactuca sativa* L.)”. Agricultural Sci. J. 48:3 (Suppl.):375—380
3. Krittaya Srimanee, Katawut Sukorrphas, **Suthaphat Kamthai**, 2016. “Efficiency of Hexanal Coated Paper for Banana Anthracnose and Crown Rot Fungi Inhibition” Agricultural Sci. J. 47: 3 (Suppl.) 79-82
4. Nuttawadee Jinaphan, Jurmkwan Sangsuwan, Sutthira Sutthasupa and **Suthaphat Kamthai**. 2016. “Effect of Rice Straw Carboxymethyl Cellulose Film Blended with Polyethylene Glycol on “Nam Dok Mai” Mangoes Storage Life”. Agricultural Sci. J. 47: 3 (Suppl.) 357-360. (Funding by: National Research Council of Thailand) : Co-project

#### ผลงานอื่นๆ

##### สิทธิบัตร

1. สิทธิบัตร เรื่อง กระบวนการผลิตแป้งคาร์บอกซีเมธิลจากข้าวเก่า หมายเลขคำขอสิทธิบัตรเลขที่ 1601005628 (2559)
2. สิทธิบัตร เรื่อง กระบวนการผลิตผงสีคาร์บอกซีเมธิลเซลลูโลสโดยเทคนิคแอนแคปซูล์และอบลมร้อนแบบพ่นฝอย หมายเลขคำขอสิทธิบัตรเลขที่ 1601007890 (2559)

##### อนุสิทธิบัตร

1. อนุสิทธิบัตรเรื่อง แถบชี้วัดสำหรับติดตามคุณภาพของผลไม้ในบรรจุภัณฑ์ตัดแปลงบรรยากาศ หมายเลขอนุสิทธิบัตรเลขที่ 1603000913 (2559)

#### 5) ผู้ช่วยศาสตราจารย์ ดร.ลินดา ธิรภัทรพันธ์

#### ผลงานตีพิมพ์ในวารสารทางวิชาการระดับนานาชาติ (ทุกผลงานเป็นงานวิจัย)

1. N. Petchana, N. Phoopiam, L. Thiraphattaraphun, Natural pH Indicator from

Tapioca Starch/Curcumin Film. AIP Conference Proceedings, 2020, 2279, p: 070002-1-070002-6.

2. R. Bintiina, P. Puntawongb, **L. Thiraphattaraphun.**, Properties of Potato Flour-Based Loose-Fill Foams. Materials Today: Proceedings. Materials Today: Proceedings, 2019, vol. 7 part 4, p: 2078-2082.

#### ผลงานตีพิมพ์ในรายงานสืบเนื่องจากการประชุมวิชาการระดับนานาชาติ (ทุกผลงานเป็นงานวิจัย)

1. Pawitra Thongsuk, Maliwan Ruanka, **Linda Thiraphattaraphun.** (2019). Properties of Rice Husk Silica/Rice Starch Composite Films. Proceedings of the Pure and Applied Chemistry International Conference 2019 (PACCON2019). 1st Edition June 2019. P.131-P.135
2. Kamonphop Saengpanya, Wasakorn Nopotha, **Linda Thiraphattaraphun.** (2019) Temperature Indicator Based on Paper Coated with Anthocyanins Extracted from Red Cabbage. Proceedings of 8th International IUPAC Conference on Green Chemistry. 1st Edition May 1, 2019. ISBN (E-book) 978-616-93355-0-4, 9-14 September 2018, p: 34-38.
3. Nisa Promsen, Suparada Tagan and **Linda Thiraphattaraphun.** (2018). Starch Foams Based on Rice Starch/Rice Straw Fiber. PCT-8: The International Polymer Conference of Thailand Proceedings Book, June 14th-15th 2018, Amari Watergate Bangkok Hotel, Bangkok, Thailand. p: 116-120.

#### การนำเสนอผลงานในที่ประชุมวิชาการระดับนานาชาติ (ทุกผลงานเป็นงานวิจัย)

1. Pawitra Thongsuk, Maliwan Ruanka, **Linda Thiraphattaraphun.** Properties of Rice Husk Silica/Rice Starch Composite Films. The Pure and Applied Chemistry International Conference 2019 - PACCON 2019 TOGETHER FOR THE BENEFIT OF MANKIND. February 7-8, 2019, Bangkok International Trade & Exhibition Centre (BITEC), Bangkok, Thailand. (Poster Presentation)
2. Natchaporn Petchana, Nattreya Phoopiam, **Linda Thiraphattaraphun.** Natural pH Indicator from Tapioca Starch/Curcumin Film. The Second Materials Research Society of Thailand International Conference (2nd MRS Thailand International Conference) 10-12 July 2019 The Zign Hotel, Pattaya, Thailand. (Poster Presentation)
3. Kamonphop Saengpanya, Wasakorn Nopotha, **Linda Thiraphattaraphun.** Temperature Indicator Based on Paper Coated with Anthocyanins Extracted from Red

Cabbage. 9 - 14 September 2018, Shangri-La Hotel, Bangkok, Thailand. (Poster Presentation)

4. Nisa Promsen, Suparada Tagan and **Linda Thiraphattaraphun**. Starch Foams Based on Rice Starch/Rice Straw Fiber. PCT-8:, June 14th-15th 2018, Amari Watergate Bangkok Hotel, Bangkok, Thailand. (Poster Presentation)
5. Bintiina, R., Puntawongb, P., and **Thiraphattaraphun, L.** Properties of Potato Flour-Based Loose-Fill Foams. The First Materials Research Society of Thailand International Conference (1st MRS Thailand International Conference), October 31 – November 3, 2017, The Empress Convention Center, Chiang Mai, Thailand. (Poster Presentation)

#### 6) ผู้ช่วยศาสตราจารย์ ดร.กิตติศักดิ์ จันทนสกุลวงศ์

ผลงานตีพิมพ์ในวารสารทางวิชาการระดับนานาชาติ\_(ทุกผลงานเป็นงานวิจัย)

1. Chaisuwana, W., **Jantasakulwongb, K.**, Wangtueaid, S., Phimolsiripolb, Y., Chaiyasob, T., Techapunb, C. Phongthaib, S., Youe, S., Regensteinf, J.M., Seesuriyachan, P.\*. FBIO 100564: Microbial Exopolysaccharides for Immune Enhancement: Fermentation, Modifications and Bioactivities. Food bioscience 2020, <https://doi.org/10.1016/j.fbio.2020.100564>. (IF2020=3.22)
2. Chaisuwan, W., **Jantasakulwong, K.**, Wangtueai, S., Phimolsiripol, Y., Chaiyaso, T., Techapun, C., Phongthai, S., You, S.G., Regenstein, J.M. and Seesuriyachan, P. 2020. Microbial exopolysaccharides for immune enhancement: Fermentation, modifications and bioactivities. Food Bioscience. Volume 35: 100564. June 2020 <https://doi.org/10.1016/j.fbio.2020.100564>. (IF2020=3.22)
3. Kodsangma, A., Homsaard, N., Nadon, S., Rachtanapun, P., Leksawasdi, N., Phimolsiripol, Y., Imsomphun, C., Seesuriyachan, P., Chaiyaso, T., Jantrawut, P., Inmutto, N., Ougizawa, T., **Jantasakulwong, K.** (2020) Effect of sodium benzoate and chlorhexidine gluconate on a bio-thermoplastic elastomer made from thermoplastic starch-chitosan blended with epoxidized natural rubber. Carbohydrate Polymers. Volume 242, 15 August 2020, 116421, [doi.org/10.1016/j.carbpol.2020.116421](https://doi.org/10.1016/j.carbpol.2020.116421) (IF2020=7.182)
4. Wongkaew, M., Sommano, S.R., Tangpao, T. Rachtanapun, P., **Jantasakulwong, K.** (2020) Mango peel pectin by microwave-assisted extraction and its use as fat replacement in dried chinese sausage. Foods Volume 9, Issue 4, Article number 450 [doi.org/10.3390/foods9040450](https://doi.org/10.3390/foods9040450). (IF2020=4.092)

5. Surin, S., You, S.G., Seesuriyachan, P., Muangrat, R., Wangtueai, S., Režek Jambrak, A., Phongthai, S., **Jantanasakulwong, K.**, Chaiyaso, T. and Phimolsiripol, Y. (2020) Optimization of ultrasonic-assisted extraction of polysaccharides from purple glutinous rice bran (*Oryza sativa* L.) and their antioxidant activities. *Scientific Reports* volume 10, Article number: 10410 (2020) Published: 26 June 2020 (IF2020=4.000)
6. Rungsiri Suriyatem, Nichaya Noikang, Tamolwan Kankam, **Kittisak Jantanasakulwong**, Noppol Leksawasdi, Yuthana Phimolsiripol, Chayatip Insomphun, Phisit Seesuriyachan, Thanongsak Chaiyaso, Pensak Jantrawut, Sarana Rose Sommano and Pornchai Rachtanapun\*. (2020) Physical Properties of Carboxymethyl Cellulose from Palm Bunch and Bagasse Agricultural Wastes: Effect of Delignification with Hydrogen Peroxide. *Polymers* 2020, 12, 1505; doi:10.3390/polym12071505 (IF2020=3.426)
7. Araya Kodsangma, Nattagarn Homsaard, Sudarut Nadon, Pornchai Rachtanapun, Noppol Leksawasdi, Yuthana Phimolsiripol, Chayatip Insomphun, Phisit Seesuriyachan, Thanongsak Chaiyaso, Pensak Jantrawut, Nakarin Inmutto, Toshiaki Ougizawa, **Kittisak Jantanasakulwong\*** (2020) Effect of sodium benzoate and chlorhexidine gluconate on a bio-thermoplastic elastomer made from thermoplastic starch-chitosan blended with epoxidized natural rubber. *Carbohydrate Polymers* Volume 242, 15 August 2020, 116421. doi.org/10.1016/j.carbpol.2020.116421
8. Nattagarn Homsaard, Araya Kodsangma, Pornchai Rachtanapun, Noppol Leksawasdi, Yuthana Phimolsiripol, Phisit Seesuriyachan, Thanongsak Chaiyaso, Sarana Sommano and **Kittisak Jantanasakulwong\*** (2020) Efficacy of cassava starch blending with gelling agents and palm oil coating in improving egg shelf life. *International Journal of Food Science and Technology* First published: 15 June 2020 doi.org/10.1111/ijfs.14675 (IF2020=2.773)
9. Chaiwong, N., Leelapornpisid, P. **Jantanasakulwong, K.** Rachtanapun, P., Seesuriyachan, P. Sakdatom, V., Leksawasdi, N. and Phimolsiripol, Y. (2020) Antioxidant and Moisturizing Properties of Carboxymethyl Chitosan with Different Molecular Weights. *Polymers* 2020, 12(7), 1445; <https://doi.org/10.3390/polym12071445> (IF2020=3.426)
10. Saenjaiban, A., Singtisan, T., Suppakul, P., **Jantanasakulwong, K.** Punyodom, W., Rachtanapun, P. (2020) Novel color change film as a time–temperature indicator using polydiacetylene/silver nanoparticles embedded in carboxymethyl cellulose. *Polymer* Volume 12, Issue 10, October 2020, Article number 2306, Pages 1-14 (IF2020=3.426)

11. Kamon Yakul · Tanyawat Kaewsalud · Charin Techapun · Phisit Seesuriyachan · **Kittisak Jantanasakulwong** · Masanori Watanabe · Shinji Takenaka · Thanongsak Chaiyaso. (2020) Enzymatic valorization process of yellow cocoon waste for production of antioxidative sericin and fibroin film. *Journal of Chemical Technology & Biotechnology*. doi.org/10.1002/jctb.6604 (IF2020=4.092)
12. Tanyawat Kaewsalud · Kamon Yakul · **Kittisak Jantanasakulwong** · Wanaporn Tapingkae · Masanori Watanabe · Thanongsak Chaiyaso. (2020) Biochemical Characterization and Application of Thermostable-Alkaline Keratinase From *Bacillus halodurans* SW-X to Valorize Chicken Feather Wastes. *Waste and Biomass Valorization*. doi.org/10.1007/s12649-020-01287-9 (IF2020=2.3)
13. Wisetkomolmat, J., Suksathan, R., Puangpradab, R., Kunasakdakul, K., **Jantanasakulwong**, K., Rachtanapun, P., Sommano, S.R. (2020) Natural surfactant saponin from tissue of *litsea glutinosa* and its alternative sustainable production. *Plants* Volume 9, Issue 11, Article number 1521, Pages 1-15 doi: 10.3390/plants9111521. (IF2020=2.762)
14. Worrapat Chaisuwan, Apisit Manassa, Yuthana Phimolsiripol, **Kittisak Jantanasakulwong**, Thanongsak Chaiyaso, Wasu Pathom-aree, SangGuan You and Phisit Seesuriyachan. (2020) Integrated Ultrasonication and Microbubble-Assisted Enzymatic Synthesis of Fructooligosaccharides from Brown Sugar. *Foods* 2020, 9, 1833; doi:10.3390/foods9121833
15. Klunklin, W., **Jantanasakulwong**, K., Phimolsiripol, Y., Leksawasdi, N., Seesuriyachan, P., Chaiyaso, T., Insomphun, C., Phongthai, S., Jantrawut, P., Sommano, S. R., Punyodom, W., Reungsang, A., Ngo, T. M. P., and Rachtanapun, P. (2020). Synthesis, Characterization, and Application of Carboxymethyl Cellulose from Asparagus Stalk End. *Polymers*, 13(1), 81. doi: 10.3390/polym13010081.
16. Wattanapanom S., Muenseema J., Techapun C., **Jantanasakulwong** K., Sanguanchaipaiwong V., Chaiyaso T., Hanmoungjai P., Seesuriyachan P., Khemacheewakul J., Nunta R., Sommanee S., Mahakuntha C., Maniyom S., Jinsiriwanit S., Moukamnerd C., Leksawasdi N. (2019) Kinetic parameters of *Candida tropicalis* TISTR 5306 for ethanol production process using an optimal enzymatic digestion strategy of assorted grade longan solid waste powder. *Chiang Mai Journal of Science*, 46(6), 1036-1054. (IF2020=0.325)



17. **Jantanasakulwong, K.,\*** Homsaard, N., Phengchan, P., Rachtanapun, P., Leksawasdi, N., Phimolsiripol, Y., Techapun, C. and Jantrawut. P. Effect of Dip Coating Polymer Solutions on Properties of Thermoplastic Cassava Starch. *Polymers* 2019, 11, 1746; doi:10.3390/polym11111746 (IF2020=3.164)
18. Nunta, R., Techapun, Charin., **Jantanasakulwong, K.,** Chaiyaso, T., Seesuriyachan, P., Khemacheewakul, J., Mahakuntha, C., Porninta, K., Sommanee, S., Trinh, N.T., Leksawasdi. N.\* Batch and continuous cultivation processes of *Candida tropicalis* TISTR 5306 for ethanol and pyruvate decarboxylase production in fresh longan juice with optimal carbon to nitrogen molar ratio. *J Food Process Eng.* 2019; 42:e13227. (IF2020=1.448)
19. Thi, K., Phanab, K. Phanb H. T., Brennanc, C. S., Regensteind, J. M. **Jantanasakulwong, K.** Boonyawane, D. Phimolsiripola, Y. Gliding arc discharge non-thermal plasma for retardation of mango anthracnose. *Food science and technology*, 2019, 105, 142-148. (IF2018=3.129)
20. Tantala, J., Rachtanapun, C., Tongdeesoontorn, W., **Jantanasakulwong, K.,** Rachtanapun, P. Moisture sorption isotherms and prediction models of carboxymethyl chitosan films from different sources with various plasticizers. *Advances in Materials Science and Engineering* 2019, doi.org/10.1155/2019/4082439.
21. Chaiwarit, T., Ruksiriwanich, W., **Jantanasakulwong, K.,** Jantrawut, P.,\* Use of Orange Oil Loaded Pectin Films as Antibacterial Material for Food Packaging. *Polymers*, 2019, 10(10) 1144; doi:10.3390/polym10101144
22. Juthamas Tantala, Wirongrong Tongdeesoontorn, Chitsiri Rachtanapun, **Kittisak Jantanasakulwong** and Pornchai Rachtanapun (2019) Moisture Sorption Isotherms and Prediction Models of Carboxymethyl Chitosan Films from Different Sources with Various Plasticizers, *Advances in Materials and Engineering*, Volume 2019, Article ID 4082439, 18 page. Published online: 9 January 2019, <https://doi.org/10.1155/2019/4082439>
23. **Jantanasakulwong, K.,\*** Wongsuriyasak, S., Rachtanapun, P., Seesuriyachan, P., Chaiyaso, T. Leksawasdi, N., Techapun, C. Mechanical properties improvement of thermoplastic corn starch and polyethylene-grafted-maleic anhydride blending by Na<sup>+</sup> ions neutralization of carboxymethyl cellulose. *International Journal of Biological Macromolecules* 120 (2018) 297–301.
24. Khemacheewakul, J., Techapun, C., Kuntiya, A., Sanguanthaipaiwong, V. Chaiyaso, T., Hanmoungjai, P., Seesuriyachan, P., Leksawasdi, N., Nunta, R., Sommanee, S.,

- Jantanasakulwong, K.,** Chakrabandhu, Y., and Noppol Leksawasdi, N.\* Development of Mathematical Model for Pyruvate Decarboxylase Deactivation Kinetics by Benzaldehyde with Inorganic Phosphate Activation Effect. Chiang Mai J. Sci. 2018; 45(3): 1426-1438
25. Jantrawut, P.,\* Chaiwarit, T., **Jantanasakulwong, K.,** Brachais, C.H., Chambin, O. Effect of plasticizer type on tensile property and in vitro indomethacin release of thin films based on low-methoxyl pectin. Polymers. 2017, 9, 289; doi 10.3390.
26. **Jantanasakulwong, K.,\*** Leksawasdi, N., Seesuriyachan, P., Wongsuriyasak, S. Techapun, C., Ougizawa, T. Reactive blending of thermoplastic starch, epoxidized natural rubber and chitosan., European Polymer Journal. 2016, 153, 89-95.
27. **Jantanasakulwong, K.,\*** Leksawasdi, N., Seesuriyachan, P., Wongsuriyasak, S. Techapun, C., Ougizawa, T. Reactive blending of thermoplastic starch and polyethylene-graft-maleic anhydride with chitosan as compatibilizer., Carbohydrate Polymers. 2016, 84, 292-299.
28. **Jantanasakulwong, K.,\*** Kobayashi, Y., Kuboyama, K., Ougizawa, T. Thermoplastic vulcanizate based on poly(lactic acid) and acrylic rubber blended with ethylene ionomer. Journal of Macromolecular Science, Part B. 2016 doi.org/10.1080/00222348.2016.1238434.

#### การนำเสนอผลงานในที่ประชุมวิชาการระดับนานาชาติ (ทุกผลงานเป็นงานวิจัย)

1. P. Rachtanapun\*, **K. Jantanasakulwong,** W. Panmee, S. Boonsong (2019) Effect of monochloroacetic acid on properties of carboxymethyl bacterial cellulose powder and film from NATA de coco, Sixth International Symposium Frontiers in Polymer Science, 5-8 May 2019, Budapest, Hungary.
2. **Jantanasakulwong, K.,** Leksawasdi, N. Seesuriyachan, P., Wongsuriyasak, S., Techapun1, Ougizawa, T. 2017 the ICPC 2017: 19th International Conference on Polymer Chemistry to be held in Paris, France on November, 20-21, 2017.
3. **Jantanasakulwong, K.,** Leksawasdi, N. Seesuriyachan, P., Wongsuriyasak, S., Techapun1, C., Ougizawa, T. 2016 Reactive Blending of Thermoplastic Starch and Epoxidized Natural Rubber with Chitosan as Compatibilizer. The 5th International Conference on Biomass Energy & Exhibition (ICBE 2016). China National Convention Center, Beijing, People Republic of China. 16 – 19 October 2016, Oral Presentation

4. **Jantasakulwong, K.,** Leksawasdi, N Seesuriyachan, P., Wongsuriyasak, S., Techapun1, C., Ougizawa, T. 2016 Mechanical Properties Improvement of Starch Blending with Natural Rubber and Carboxymethyl Cellulose. The Food and Applied Bioscience International Conference (FAB) 4-5 February 2016 in Chiang Mai, Thailand, Oral Presentation.

7) อาจารย์ ดร.เปรม ทองชัย (เริ่มบรรจุเมื่อวันที่ 16 พฤษภาคม 2562)

ผลงานตีพิมพ์ในวารสารทางวิชาการ

-

การนำเสนอผลงานในที่ประชุมวิชาการ

-

ผลงานอื่นๆ

-

ผู้ทรงคุณวุฒิภายนอก

1. ผศ.ดร.ต่อศักดิ์ กิตติกรณ์

ผลงานทางวิชาการที่ได้รับการตีพิมพ์เผยแพร่ในระดับนานาชาติ

1. Thorsak Kittikorn, Sujinda Jitjaicham and Ramitanun Malakul. 2019. "Use of Chitosan and Its Derivative as Fungal (*Aspergillus niger*) Inhibitor on Poly(lactic) acid/ Sisal Biocomposite". Srinakharinwirot Science Journal, 35 (2) : 1-16
2. Amparo Ribes-greus, Thorsak Kittikorn, Emma Stromberg, Monica Ek, Teruel Juanes, Jose David Badia, Reig Rodrigo and Sigbritt Karlsson. 2017. "Effect of sisal and hydrothermal ageing on the dielectric behaviour of polylactide/sisal biocomposites". Composites Science and Technology, 149 (-) : 1-10
3. Amparo Ribes-greus, Thorsak Kittikorn, Emma Stromberg, Sigbritt Karlsson, Monica Ek and Jose David Badia. 2017. "Relevant factors for the eco-design of polylactide/sisal biocomposites to control biodegradation in soil in an end-of-life scenario ". Polymer Degradation and Stability, 143 (-) : 9-19
4. Amparo Ribes Greus, Thorsak Kittikorn, Barbara Bosio, Arisabetta Arato, Romero Teruel Juanes, Monica Ek, Jose David Badia, Emma Stromberg, Sigbritt Karlsson and Carrascosa Moliner. 2018. "Thermal and thermo-oxidative stability and kinetics of decomposition of PHBV/sisal composites". Chemical Engineering Communications, 205 (2) : 226-237

5. Thorsak Kittikorn, Ramitanun Malakul, Sigbritt Karlsson, Monica Ek and Emma Stromberg. 2018. "Enhancement of mechanical, thermal and antibacterial properties of sisal/ polyhydroxybutyrate-co-valerate biodegradable composite". Journal of Metals, Materials and Minerals, 28 (1) : 52-61
6. Thorsak Kittikorn, Siriporn Kongsuwan and Ramitanun Malakul. 2017. "Investigation of the Durability of Sisal Fiber/PLA Biocomposite through Evaluation of Biodegradability by Means of Microbial Growth". Journal of Metals, Materials and Minerals, 27 (2) : 23-34
7. Amparo Ribes Greus, Thorsak Kittikorn, Christina Moliner, Jose David Badia, Barbara Bosio, Sigbritt Karlsson, Roberto Teruel Juanes, Emma Stromberg, Monica Ek and Elisabetta Arato. 2018. "Thermal kinetics for the energy valorisation of polylactide/sisal biocomposites". Thermochimica ACTA, 670 (-) : 169-177
8. Thorsak Kittikorn. 2020. "Enhancement of interfacial adhesion and engineering properties of polyvinyl alcohol/polylactic acid laminate films filled with modified microfibrillated cellulose". JOURNAL OF PLASTIC FILM & SHEETING, 36 (4 Article Number: 8756087920915745) : 368-390

## 2. ผศ.ดร.วิรงรอง ทองดีสุนทร

### ผลงานทางวิชาการที่ได้รับการตีพิมพ์เผยแพร่ในระดับนานาชาติ

#### *International Publications*

1. Tongdeesoontorn W., Mauer L.J., Wongruong S., Sriburi P., Rachtanapun P. 2012. Mechanical and physical properties of cassava starch-gelatin composite films, International Journal of Polymeric Materials, 61, 778-792.
2. Rachtanapun, P., Tongdeesoontorn, W. 2011. Effect of NaOH Concentration on Sorption Isotherm of Carboxymethyl Rice Starch Films and Prediction Models, Chiang Mai Journal of Science, 38(3), 380-388.
3. Tongdeesoontorn W., Mauer L.J., Wongruong S., Sriburi P., Rachtanapun P. 2011. Effect of carboxymethyl cellulose concentration on physical properties of biodegradable cassava starch-based films, Chemistry Central Journal, 5, 6-13.

4. Rachtanapun, P., Tongdeesoontorn, W. 2010. Effect of Antioxidants on Properties of Rice Flour/Cassava Starch Film Blends Plasticized with Sorbitol, *Kasetsart Journal (Natural Science)*, 43, 252-258.
5. Tongdeesoontorn, W., Mauer, L. J., Wongruong, S., Rachtanapun, P. 2009. Water vapour permeability and sorption isotherm of cassava starch based films blended with gelatin and carboxymethyl cellulose. *Asian Journal of Food and Agro-Industry*, 2, 501-514.
6. Rachtanapun, P., Tongdeesoontorn, W. 2009. Effect of Glycerol Concentration on the Sorption Isotherm and Water Vapor Permeability of Carboxymethyl Cellulose Films from Waste of Mulberry Paper, *Asian Journal of Food and Agro-Industry*, 2, 478-488.
7. Rachtanapun, P., Tongdeesoontorn, W. 2009. Moisture Sorption Isotherm and Water Vapor Permeability of Carboxymethyl Cellulose from Papaya Peel/Cornflour Blended Films, *Asian Journal of Food and Agro-Industry*, 2, 791-801.

National Publication

*International Oral Presentations*

8. Tongdeesoontorn W., Mauer L.J., Wongruong S., Sriburi P. and Rachtanapun P. (2011) “ Properties and Antioxidant Activities of Cassava Starch/Gelatin Composite Films Incorporated with Quercetin and TBHQ” Chiang Mai International Conference of Biomaterials and Applications, August 9-10, 2011, Chiang Mai, Thailand.
9. Tongdeesoontorn, W., Mauer L.J., Wongruong S. and Rachtanapun P. (2009) “Effect of Gelatin and Carboxymethyl Cellulose Concentration and Relative Humidity on Cassava Starch Based Film Properties” The Fourth China-Europe Symposium on Processing and Properties of Reinforced Polymers, June 8-12, 2009, Guilin, China.

*International Poster Presentations*

10. Wirongrong Tongdeesoontorn, Pornchai Rachtanapun and Phanuphong Chaiwut, “Production and characterization of carboxymethyl cellulose (CMC) from pineapple peel and pulp (*Ananas comosus* L. Merr ‘Smooth Cayenne’)”, Food Innovation Asia Conference 2015, June 18-19, 2015, Bangkok, Thailand.
11. Nitayaporn Arunyeeyee, Wassana Saka-I and Wirongrong Tongdeesoontorn, “Effect of CMC edible coating from pineapple peel on quality of sweet peppers (*Capsicum annuum*)”

- L.) during storage time”, Food Innovation Asia Conference 2015, June 18-19, 2015, Bangkok, Thailand.
12. Wassana Saka-I, Nitayaporn Arunyee and Wirongrong Tongdeesoontorn, “Preparation and properties of carboxymethyl cellulose film from pineapple core (*Ananas comosus*, CV. ‘Nang Lae’)”, Food Innovation Asia Conference 2015, June 18-19, 2015, Bangkok, Thailand.
  13. Tongdeesoontorn W., Mauer L.J., Wongruong S., Sriburi P. and Rachtanapun P., “Applications of Biodegradable Active Packaging from Cassava Starch-Carboxymethyl Cellulose Films Incorporated with Antioxidant”, Starch Update 2013, Nov 21-22, 2013, Bangkok, Thailand.
  14. Tongdeesoontorn W. and Rachtanapun P., “Water Vapor Transmission Rate and Sorption Isotherm of Cassava Starch-Carboxymethyl cellulose (CMC) Films Incorporated with Quercetin and TBHQ”, Starch Update 2011, Feb 13-14, 2012, Bangkok, Thailand.
  15. Tongdeesoontorn W., Mauer L.J., Wongruong S., Sriburi P. and Rachtanapun P., “Physical Properties and Antioxidant Activity of Cassava Starch-Carboxymethyl cellulose (CMC) Films Incorporated with Quercetin and TBHQ”, The Third Thai-Japan Bioplastics and Biobased Materials Symposium 2011, Nov 7-8, 2011, Bangkok, Thailand.
  16. Tongdeesoontorn W., Mauer L.J., Wongruong S., Sriburi P. and Rachtanapun P., “Effect of Antioxidant Contents on Water Vapor Transmission Rate and Sorption Isotherm of Cassava Starch-Carboxymethyl cellulose (CMC) Films”, InnoBioPlast 2010, Sep 9-11, 2010, Bangkok, Thailand.
  17. Tongdeesoontorn W., Mauer L.J., Wongruong S., Sriburi P. and Rachtanapun P., “Study of chemical interaction, melting temperature and morphology of cassava starch based films with gelatin and carboxymethyl cellulose”, Functional and Sensing Materials (FuSeM 2009), Dec 7-9, 2009, Bangkok, Thailand.
  18. Tongdeesoontorn W., Mauer L.J., Wongruong S., Sriburi P. and Rachtanapun P., “Effect of Antioxidant Concentrations and Relative Humidity on Mechanical Properties of Cassava Starch/ Gelatin Films”, Starch Update 2009 The 5th International Conference on Starch Technology, September 24-25, 2009, Bangkok, Thailand.
  19. Tongdeesoontorn, W., Mauer L.J., Wongruong S. and Rachtanapun P., “Water Vapor Permeability and Sorption Isotherm of Cassava Starch Based Films Blended with Gelatin

- and Carboxymethyl Cellulose”, Food Innovation Asian Conference 2009, June 18-19, 2009, Bangkok, Thailand.
20. Rachtanapun, P. and Tongdeesoontorn, W., “Effect of Glycerol Concentration on the Sorption Isotherm and Water Vapor Permeability of Carboxymethyl Cellulose Films from Waste of Mulberry Paper”, Food Innovation Asian Conference 2009, June 18-19, 2009, Bangkok, Thailand.
  21. Rachtanapun, P. and Tongdeesoontorn, W., “Moisture Sorption Isotherm and Water Vapor Permeability of Carboxymethyl Cellulose from Papaya Peel / Cornflour Blended Films” Food Innovation Asian Conference 2009, June 18-19, 2009, Bangkok, Thailand.
  22. Tongdeesoontorn W., Mauer L.J. and Rachtanapun P., “Effect of gelatin and carboxymethyl cellulose concentration and relative humidity on cassava starch-based film properties”, Whistler Center for Carbohydrate Research (WCCR) annual Board Meeting 2008, West Lafayette, IN, USA.
  23. Rachtanapun, P. and Tongdeesoontorn, W., “Effect of Antioxidants on Water Vapor Transmission Rate (WVTR) and Water Sorption Isotherm of Blended Rice Flour/Cassava Starch Film”, Proceedings of 16th IAPRI World Conference on Packaging, June 8-12, 2008, Bangkok, Thailand.
  24. Wirongrong Tongdeesoontorn and Pawinee Kanawud, “Isolation of Hemicellulose from Raw Papaya Peel and Determination of its constituent sugars”, The 16th Annual Meeting of Thai Society for Biotechnology “Innovative Biotechnology : The Opportunity for Kitchen of the World”, 2005, Pitsanulok, Thailand.
  25. Wirongrong Tongdeesoontorn and Pawinee Kanawud, “Separation of Pectin and Hemicellulose from Raw Papaya Peel”, The 15th Annual Meeting of Thai Society for Biotechnology “Sustainable Development of SMEs Through Biotechnology” and JSPS-NRCT Symposium “The Forefront of Bioinformatics Application, 2004, Chiang Mai, Thailand.

#### **ผลงานทางวิชาการที่ได้รับการตีพิมพ์เผยแพร่ในระดับชาติ**

##### *National Publication*

1. Rachtanapun, P., Tongdeesoontorn, W. 2007. Extending Shelf Life of Brown Rice by Using Different Packaging Materials and Oxygen Absorber, Agricultural Science Journal, 38, 5 (suppl.) 229-233.

*National Conferences*

2. Rachtanapun, P. and Tongdeesoontorn, W., "Sorption Isotherm of Carboxymethyl Rice Starch Synthesized with Various Sodium Hydroxide Concentration", The First Rice Research Conference 2010 "Moving Rice Research Towards Innovation", December 15-17, 2010, Kasetsart University, Bangkok, Thailand.
3. Rachtanapun, P. and Tongdeesoontorn, W., "Effect of Antioxidants on Properties of Rice Flour/ Cassava Starch Film Blends Plasticized with Sorbitol", Proceedings of 47th Kasetsart University Annual Conference, March 17-20, 2008, Bangkok, Thailand. 449-456.
4. Rachtanapun, P. and Tongdeesoontorn, W., "Extending Shelf Life of Brown Rice by Using Different Packaging Materials and Oxygen Absorber", Proceedings of 5th National Technical Seminar on Postharvest Technology, Miracle Grand Conventional, Bangkok, June 28-29, 2007, page 30.