

Curriculum Vitae
Pornchai Rachtanapun



1. Biodata

1.1 Name: Associate Professor Dr. Pornchai Rachtanapun

1.2 Address: Division of Packaging Technology, Faculty of Agro-Industry,

Chiang Mai University, Muang, Chiang Mai 50100 Thailand

Tel: +666-35492556, +665-3948224; Fax: +665-3948206

E-mail: pornchai.r@cmu.ac.th

1.3 Date of Birth: 28 November 1971

1.4 Academic History

Degree	Year	Institution
1.4.1 Doctor of Philosophy (Packaging)	2003	Michigan State University, USA
1.4.2 Master of Science in Chemistry (Polymer Chemistry)	1999	Michigan Technological University, USA
1.4.3 Bachelor of Science (Packaging Technology)	1993	Kasetsart University, Thailand
Certificate		
1.4.4 Certificate of Attendance Understanding ISO 22000:2005 Requirements Training Course	2006	BUREAU VERITAS (Thailand) Ltd.
1.4.5 HACCP Expert	2003	Food Institute Technology, Thailand
1.4.6 Certificate of Attendance Train the Trainer for GMP and HACCP	2003	Food Institute Technology,

Thailand

1.4.7	Certificate of Marketing Strategy	1995	Chulalongkorn University, Thailand
1.4.8	Certificate of New Researcher	1994	Chiang Mai University and National Research Council of Thailand
1.4.9	Certificate of Tourist Guide	1993	Thammasart University and Tourism Authority of Thailand

Training Courses

Turn Passion to Wealth, Landmark Forum, Landmark Advanced, Communication, Advanced Communication, Millionair Mind Intensive, Gallira Bussiness, Train the Trainer

1.5 Scholarships and Awards

2014 Outstanding Researcher, Faculty of Agro Industry, Chiang Mai University, year 2014

2013 Outstanding Senior Researcher, Faculty of Agro Industry, Chiang Mai University, year 2013

2012 Listed in the Marquis's 29th Edition of Who's Who in the World (2012)

2011 Outstanding Researcher, Faculty of Agro Industry, Chiang Mai University, year 2011

2011 Honorable Mention Award on topic of "Mechanical and Thermal Properties of Soy Protein Isolate Films Blended with Carboxymethyl Chitosan", The Proceedings of 49th Kasetsart University Annual Conference, February 1-4, 2011, Bangkok, Thailand by **Pornchai Rachtanapun** and Rungsiri Suriyatem.

2011 Third Prize Award, on the topic of "¹H-NMR Analysis of Degree of Substitution in N,O-Carboxymethyl Chitosans from Various Sources and Types", from *Chiang Mai International Conference on Biomaterials & Applications*

(CMICBA 2011), 9-10 August 2011, Chiang Mai, Thailand, by A. Jaidee, S. Luangkamin, P. Rachtanapun.

2011 The Most Promising Scientific Work Award, on the topic of
“Effects of Treatment Time by Sulfur Hexafluoride (SF6) Plasma on Barrier and Mechanical Properties of Paperboard” from 25th IAPRI Symposium on Packaging, Berlin, Germany By Tanyarut Jinkarn, Suchada Thawornwiriyanan, Dheerawan Boonyawan, **Pornchai Rachtanapun** and Amporn Sane. (May 16-18, 2011)

2009 Outstanding New Researcher, Faculty of Agro Industry, Chiang Mai University, year 2009

2009 First Award, Innovation of Kasetsart University, Branch Agro-Industry 2009 from Kasetsart University

รางวัลชนะเลิศ ผลการประกวดนวัตกรรมมหาวิทยาลัยเกษตรศาสตร์
สาขาอุตสาหกรรมเกษตร 2552 จากมหาวิทยาลัยเกษตรศาสตร์
โดย ผศ.ดร. ธัญญรัตน์ จิฎกานัญณ์ นางสาวสุชาดา ถาวรวิริยะนันท์
ดร.อัมพร เสน่ห์ รศ.ดร.ธีรวรรณ บุญวรรณ ผศ.ดร. พรชัย ราชตะนทะพันธุ์

2004 Royal Thai Government Scholarship, Thai Kitchen to World Kitchen, Japan (October 2-15, 2004)

2003 Recognition for significant contributions made to the society and to the plastic industry, Thermoplastic Materials and Foams Division Society of Plastics Engineers, Inc. (May 4, 2003)

2003 Travel Grants Recognition from Michigan State University on Topics of
-“Characterization of Microcellular Foamed Polyolefin Blend Composites with Wood Fiber”, New Orleans, LA.

-“Cell Morphology and Impact Strength of Microcellular Foamed HDPE/PP Blends”, Nashville, TN.

-“Effect of Melt Index of HDPE on Microcellular Foaming of HDPE/PP Blends”, Bethlehem, PA

1998 Research Assistance, Department of Chemistry, Michigan Technological
University, USA

1998 Teaching Assistance, Department of Chemistry, Michigan Technological
University, USA

1997-2003 Royal Thai Government Scholarship, Ministry of University Affairs (MUA)

1993 Thai Packaging Center for Export Contest, Bangkok, Thailand (1993)

The Admiring Award for Packaging Design

2. Appointments

2.1. Lecturer

Division of Packaging Technology, Faculty of Agro-Industry, Chiang Mai University,
Chiang Mai, Thailand (June 2003-Present)

-Taught

603200 Packaging in Daily Life (Lecture)

603211 Principles of Packaging (Lecture)

603341 Dynamics of Packaging (Lecture)

603341 Dynamics of Packaging (Lab)

603411 Packaging Economics (Lecture)

603421 Flexible Packaging Materials (Lecture)

603471 Packaging Management (Lecture)

603441 Packaging Machinery (Lecture)

603451 Packaging Design (Lecture)

603451 Packaging Design (Lab)

603495 Selected Topics in Packaging

603497 Research Project

603499 Seminars

606242 Packaging for Marine Products (Lecture)

601792 Selected Topics (Lecture)

Department of Packaging Technology, Faculty of Agro-Industry, Chiang Mai
University, Chiang Mai, Thailand

(Feb1996-June1997)

-Taught Introduction of Agro-Industry and Bakery Technology

Department of Packaging Technology, Faculty of Agro-Industry, Chiang Mai
University, Chiang Mai, Thailand

(Dec1993-Feb1995)

-Taught Food Packaging and Food Processing

2.2. Invited Lecturer

School of Cosmetic Science, Mea Fah Luang University, Chiang Rai, Thailand
(2009-2011)

1702703 Advanced Cosmetic Science for Hair and Nail

1702704 Advanced cosmetic science for skin

Technology Management of Agricultural Produces and Packaging, School of Agro-
Industry, Mea Fah Luang University, Chiang Rai, Thailand (2009-2011)

1408241 Packaging Materials and Application

Division of Postharvest Technology and Package, School of Agro-Industry, Mea Fah
Luang University, Chiang Rai, Thailand (2005-2007)

Packaging Materials I

Packaging Materials II

Faculty of Pharmacy, Chiang Mai University, Chiang Mai, Thailand (2008)

Rajamangala University of Technology Lanna, Lumphang, Thailand (2007)

Department of Product Development, Faculty of Agro-Industry, Chiang Mai
University, Chiang Mai, Thailand (2007)

Institute of Postharvest Technology, Chiang Mai University, Chiang Mai, Thailand
(2007)

Department of Food Science and Technology, Faculty of Agro-Industry, Chiang Mai
University, Chiang Mai, Thailand (2007)

Department of Industrial Chemistry, Faculty of Science, Chiang Mai University,
Chiang Mai, Thailand (2006)

Department of Biology, Faculty of Science, Chiang Mai University, Chiang Mai,
Thailand (2006)

Department of Applied Biology, Rajabhat Chiang Mai University, Chiang Mai,
Thailand (2004)

Faculty of Engineering, Chiang Mai University, Thailand (2004)

2.3. Peer Reviewers

Research Articles, The International Conference on Food and Applied Bioscience
(2018)

Final Research Report, Songklanakarin University (2018)

Research Articles, Agriculture and Natural Resources (2017)

Research Articles, Journal of Applied Polymer and Science (2017)

Research Articles, Journal of Macromolecular Science, Part A: Pure and Applied
Chemistry (2017)

Research Articles, Carbohydrate Polymers (2017)

Research Articles, Food Innovation Asia Conference 2018 "Creative Food for Future
and Sustainability (FIAC 2017)

Research Articles, the Journal of Food Processing and Preservation. (2017)

Research Articles, the Food Innovation Asia Conference (FIAC) 2017, Bangkok,
Thailand. (2017)

Research Articles, Journal of Macromolecular Science, Part A: Pure and Applied
Chemistry (2017)

Research Articles, Progress in Organic Coatings (2016)

Research Articles, Packaging Technology and Science (2016)

Research Articles, LWT- Food Science and Technology (2016-present)

Research Articles, The International Conference on Food and Applied Bioscience
(2016)

Research Articles, BioResources (2012)

Research Articles, International Conference of Food and Applied Bioscience (2012)

Research Articles, Pure and Applied Chemistry International Conference
(PACCON 2012)

Research Articles, Abstract of Food Biotechnology & Sea Cucumber Utilization,
Ocean University of China

Research Articles, Chiang Mai International Conference on Biomaterials &
Applications (CMICBA 2011),

Research Articles, Proceeding of Pure and Applied Chemistry International (2012)

Research Articles, Food Hydrocolloids (2012)

Research Articles, Journal of Agricultural and Food Chemistry (2012)

Research Articles, Proceeding of the 50th Kasetsart University Annual Conference,
Feb 2012 Bangkok, Thailand

Research Articles, Abstract of Pure and Applied Chemistry International Conference
(PACCON2012)

Research Articles, Advanced Materials Research (2011)

Research Articles, Chiang Mai International Conference on Biomaterials &
Applications (CMICBA 2011)

Progress report, Office of the National Research Council of Thailand (NRCT)

Research Articles, African Journal of Agricultural Research

Research Articles, Thai Journal of Agricultural Science

Research Articles, Taksin Journal

Research Articles, International Food Research Journal

Research Articles, Pure and Applied Chemistry International Conference
(PACCON2011)

International Research Proposal, Ontario Research Fund, Canada – Research
Excellence ROUND 5

Final Research Report, North National Science and Technology Development
Agency: NSTDA – Thailand

Proposal, North National Science and Technology Development Agency: NSTDA –
Thailand

Research Articles, The 49th Kasetsart University Annual Conference, Feb 1-4, 2011
Bangkok, Thailand

Research Abstract, Pure and Applied Chemistry Conference 2011 (PACCON 2011)
January 5-7, 2011, Bangkok, Thailand

Research Articles, International Conference on Agriculture and Agro-Industry 2010
(ICAA 2010)

Research Abstract, 2nd Agro-Industry Conference, Chiang Mai University, 2010

Research Abstract, The 8th National Postharvest Conference, 2010

Research Articles, International Food Research Journal (ISSN 1985-4668) reference
number IFRJ-2010-076, 2010

Final Research Report, Ubon Ratchatanee University, 2010

Final Research Report, Office of the National Research Council of Thailand, 2010

Final Research Report, National Research Fund, 2010

Research Articles, Journal of Composite Materials, 2010

Research Articles, Journal of Applied Polymer and Science 2007- present

Research Articles, eXPRESS Polymer Letter 2007

Research Articles, Chiang Mai Journal of Agro-Industry 2007-present

Research Article, Kasetsart Journal (Natural Science) 2007-present

Research Articles, The 48th Kasetsart University Annual Conference, Feb 3-5, 2010
Bangkok, Thailand

Research Article, IRPUS Conference #1 2009, Bangkok, Thailand

Research Articles, 16th IAPRI 2008 World Conference on Packaging, June 8-12,
2008, Bangkok, Thailand

Research Articles, The 47th Kasetsart University Annual Conference, March 17-20,
2009 Bangkok, Thailand

Research Articles, The 46th Kasetsart University Annual Conference, January 29-
February 1, 2008 Bangkok, Thailand

Research Articles, The 45th Kasetsart University Annual Conference, January 30-
February 2, 2007 Bangkok, Thailand

Research Articles, Proceedings of TIChE17, 2007

Research Article, Research Project, Faculty of Agro-Industry, Chiang Mai University,
Thailand

Research Article, Industrial and Research Project Undergraduate Student (IRPUS)
2008-2010, Thailand

Research Article, The 35th Congress on Science and Technology of Thailand

Final Research Report, Faculty of Agro-Industry, Chiang Mai University, Thailand

Proposal, Industrial Research Project Undergraduate Student (IRPUS), 2009,
Thailand

Proposal, TRF Master Research Grant (MAG), 2009, Thailand

2.4. Committee

2011, 2018 Editorial Board for Chiang Mai University Journal of Agro-Industry

2011 Academic Committee of Chiang Mai International Conference on
Biomaterials & Applications (CMICBA 2011)

2010 Academic Committee of International Conference on Agriculture and
Agro-Industry 2010 (ICAAI 2010): Food, Health and Trade

2010 Academic Committee of 2nd Agro-Industry Conference, Chiang Mai
University

2010 Academic Committee of 8th National Postharvest Conference

2009 Academic Committee of 1st Agro-Industry Conference, Chiang Mai
University

2009-2010 Graduate Study Committee of School of in Agro-Industry, Chiang Mai
University

2007-2010 Guest Graduate School Lecture, Department of Packaging
Technology and Materials, Kasetsart University

2007-2009 Internal Audit Quality Assurance Committee of Faculty of Agro-
Industry, Chiang Mai University

2007-2012	Undergraduate Study Executive Committee of Marine Product Technology, Faculty of Agro-Industry, Chiang Mai University
2007-2009	Community Service Committee of Faculty of Agro-Industry, Chiang Mai University
2007-2012	Academic Committee of Faculty of Agro-Industry, Chiang Mai University
2006-2012	Graduate Study Committee of Postharvest Technology, Chiang Mai University
2005-2012	Graduate Study Committee of Biotechnology branch Biotechnology in Agro-Industry, Chiang Mai University
2005-2012	Research Committee of Faculty of Agro-Industry, Chiang Mai University
2005-2012	Board of Chiang Mai Journal of Agro-Industry, Chiang Mai University
2005-2012	Undergraduate Study Committee of Packaging Technology, Chiang Mai University
2004-2012	Graduate School Lecture (Permanent), Chiang Mai University
2003-2004	Advisor for Dormitory 3, Chiang Mai University

2.5. Invited Speaker

Invited Speaker, Ethylene Absorber, Lumpoon Province, NSTDA, 2018

Invited Speaker, Ethylene Absorber, Chachoengsao Province NSTDA, 2018

Invited Speaker, Marketing 4.0, Southeast Asia University, 2018

Invited Speaker, Packaging Department of Agricultural Extension (DOAE), 2017

Invited Speaker, Thailand 4.0 with Research in the Future, Center of Scientific Equipment for Advanced Research, Thammasat University, Rangsit, December 26, 2016

Invited Speaker, Topic, "Principles and practice in food packaging and labeling"

Training of Trainers on Village Level Food Processing for Micro-enterprise Development in Mae Hong Son Highland Community 23-27 May 2011, Skill Training Center, Mae Hong Son, Food and Agriculture Organization (FAO) - Thailand

Invited Speaker, Topic, "The Importance and Trend of Packaging Development in 2010" Naresuan University, Phayao, Thailand, June 16, 2010.

Invited Speaker, Workshop on Development of Food Packaging for Local Food Business, Topic, "Packaging Design", June 2, 2010. Division of Packaging Technology, Faculty of Agro-Industry, Chiang Mai University, Chiang Mai, Thailand

Invited Speaker, Topic, "Basic Packaging", STS Consumer Products Co., Ltd., March 29-30, 2010. Samutprakarn, Thailand

Invited Speaker, Topic, SEM Application on polymers and fibers analysis, Key success to SEM operation, March 8, 2010. Kantary Hills Hotel, Chiang Mai, Thailand

Invited Speaker, International workshop, Topic, "Post-harvest Technology of Perishable Crops" Innovation Center of Postharvest Technology, Chiang Mai University, Chiang Mai, Thailand

Invited Speaker, Monk Hospital, Topic, "Mind Map" August 17, 2009, Bangkok, Thailand

Invited Speaker, National Science and Technology Development Agency (NSTDA): Northern Network, Topic, "Packaging Technology for Produce, and Active Packaging for Produce" May 21, 2009. Green Lake Resort Hotel, Chiang Mai, Thailand

Invited Speaker, 1th Biomaterials for medical application, Topic, "Biopolymers" May 15, 2009, Kantary Hills Hotel, Chiang Mai, Thailand

Invited Speaker, Topic, "Thailand 4.0 with Research in The Future" Center of Scientific Equipment for Advanced Research, Thammasart University, Rungsit, Bangkok, December 26, 2016

Invited Speaker, International Training of the Trainer, Topic “Packaging Design and Trend of Packaging”, December 25, 2008, Faculty of Agro-Industry, Chiang Mai, Thailand

Invited Speaker, Packaging for Hard disk Drive Industry, Topic “Plastic Packaging and Structural Packaging Design” at Science Park, Thammasart Center, Rangsit, Pathumtanee, July 3-4, 2008, Department of Mechanical Engineering, School of Engineering, Suranaree University, Thailand

Invited Speaker, Training on Food Packaging, Topic “How importance of Packaging and Packaging Innovation Researches”, May 5-9, 2008, Rajamangala University of Technology Lanna, Lumphang, Thailand

Invited Speaker, Instigation of Science and Technology, Topic “Packaging Development of Traditional Food for Community”, February 22, 2008, Research Network of Institute of Research and Development Science and Technology, Chiang Mai University, Thailand

Invited Speaker, Training of the Trainer, Topic “Packaging Technology”, December 25, 2007, Faculty of Agro-Industry, Chiang Mai, Thailand

Invited Speaker, Workshop “Mind Map®”, December 12, 2007, Department of Food Science and Technology, Faculty of Agro-Industry, Chiang Mai University, Chiang Mai, Thailand

Invited Speaker, Topic “Packaging Selection for Soft Drink and Use of Mind Map® for Soft Drink Development”, November 10, 2007, Rajamangala University of Technology Lanna, Lumphang, Thailand

Invited Speaker, Workshop on Healthy food from Mushroom, Topic “Packaging” SMEs, September 23, 2007, Rajamangala University of Technology Lanna, Lumphang, Thailand

Invited Speaker, Workshop Topic “Mind Map®”, for student, September 17, 2007, Department of Health Science, Mea Fah Luang University

Invited Speaker, Workshop Topic “Mind Map®”, for student, August 22, 2007, Faculty of Laws, Chiang Mai University, Thailand

Invited Moderator, Topic “Role of Postharvest Technology on Farmer Development and Encouragement of Thai Economy”, July 14, 2007, Mea Fah Luang University, Thailand

Invited Speaker, Training on Agricultural Product Processing, Topic “Principles of Packaging, Marketing, and Selection”, June 20, 2007, Muang Lamphoon Tambon Administration Organization (TAO) Ma-kheur Jae, Thailand

Invited Speaker, Topic “Rice Packaging Development for Commercial” June 6-7, 2007, Chiang Mai, Thailand

Invited Speaker, Workshop Topic “Mind Map®”, for Job Development, May 15-16, 2007, Mea Fah Luang University, Chiang Rai, Thailand

Invited Speaker, International Training of the Trainers of Food Processing for Countries in the Greater Mekong Sub region (MS) and Developing Countries of ASEAN (TOT3), Topic, “Packaging Technology”, February 3, 2007, Faculty of Agro-Industry, Chiang Mai University, Chiang Mai, Thailand

Invited Speaker, Workshop Topic “Mind Map®”, Siam Global House, Chiang Mai, Thailand, November 21, 2006

Invited Speaker, International Training of the Trainer (TOT) on Food Processing for Countries in the Greater Mekong Sub region (GMS) and Developing Countries of ASEAN, “Packaging Technology”, March 20-31, 2006, Faculty of Agro-Industry, Chiang Mai University, Thailand

Invited Speaker, “Nam Poo” The Wisdom of Lanna Food, Topic “Food and Packaging”, August 19, 2004, Institute of Science and Development Technology, Chiang Mai University, Chiang Mai, Thailand

2.6. Thesis Supervisor

2017 Co-Committee

Ph.D. Student: Juthamas Tantala

2017 Co-Committee

Ph.D. Student: Ngo Thi Minh Phuong

- 2012 Co-Committee
Ph.D. Student: Warunee Chomkitichai
- 2009 Co-Committee
K. Sutjarittangtham
- 2011 Chair Committee
Ph.D. Student: Rungsiri Suriyatem (ID: 541351006)
Thesis Title: Development of Antioxidative Biocomposite Film from Rice Starch and Carbohydrate Derivatives Incorporated with Bee Products
- 2010 Co-Committee
Ph.D. Student: K. Sutjarittangtham
- 2010 Co-Committee
Master Student: Atchara Jaidee
Thesis Title: Syntheses, characterizations and biological activities of carboxymethylchitosans
- 2010 Chair Committee (ID: 515170104)
Master Student: Surawut Wannaruemon
IS Title: Sodium O-carboxymethyl chitosan as a sustained release carrier for eau de cologne
- 2010 Chair Committee
Ph.D. Student: Mrs. Dang Thi Mong Quyen (ID: 529751005)
Thesis Title: Studies of antimicrobial biodegradable chitosan film to preserve fresh -pineapples fruit cv.Queen
- 2008-2016 Chair Committee
Ph.D. Student: Douangjai Noiwan (ID: 519751003)
Thesis Title: Intelligent Packaging for Postharvest Application
- 2008 Co-Committee
Master Student: Anon Wattananan
Thesis Title: Quality Improvement of Packaging Films by Diamond-Like Carbon Coating

- 2008 Co-Committee
Master Student: Panpong Lakakul (ID: 500531091)
Thesis Title: Process development of Local Fermented Soybean of Northern Thailand
- 2006 Co-Committee
Master Student: Suchada Thawornwiriyanan (ID: 49700719)
Thesis Title: The Improvement of Water Resistance Property of Paperboard by Low Temperature Plasma
- 2005 Chair Committee
Ph.D. Student: Wirongrong Tongdeesoontorn (ID: 4879512)
Thesis Title: Production of Antioxidant Starch Based Films
- 2005 Co-Committee
Ph.D. Student: Jurmkwan Sangsuwan (ID: 4879501)
Thesis Title: Development of Antimicrobial Biodegradable Film for Fresh-Cut Fruit
- 2005 Co-Committee
Master Student: Mr. Wutthirat Phatnobool (ID: 4639547)
Thesis Title: Production of Ethylene Absorber for Extending Postharvest Life of Banana *cv. Gros Michel*
- 2002 Co-Committee
Ph.D. Student: Wanrudee Kaewmesri (ID: 4565032)
Thesis Title: Polypropylene Rigid Foam and Effect Microstructure on Foaming and Foam Properties

2.7. Others

- 2017 Packaging Expert to evaluate BRC Packaging iTAP project of Technic Gravure Company
March 31, 2017
- 2012 Co-Chair of Session in the 1st Asean Plus Three Graduate Research Congress 2012, Chiang Mai, Thailand.

2011	Chair of Session in the Chiang Mai International Conference on Biomaterials & Applications (CMICBA 2011), 9-10 August 2011, Chiang Mai, Thailand.
2011	Master of Ceremony in International Symposium Program on APEC-ATCWG Biofuels Network Annual Symposium and Biotrade/Technical Training Workshop, May 30-June 4, 2011, Chiang Mai, Thailand
2009	Chair of Session in the International conference on Functionalized and Sensing Materials 2009 (FuSeM 2009), December 8, 2009, Bangkok, Thailand
2008	Chair of Session in the 16th IAPRI World Conference on Packaging, June 10, 2008, Bangkok, Thailand
2007	Acting Head department of Packaging Technology, Faculty of Agro-Industry, Chiang Mai University
2005-2006	Vice head department of packaging technology, Faculty of Agro-Industry, Chiang Mai University
2004-present	Head of Packaging Research and Development Unit, Institute of Science and Development Technology, Chiang Mai University
2004-2006	Faculty Senate of Chiang Mai University

3. Research

3.1. Research Interest

- 3.1.1. Biopolymer based films
- 3.1.2. Synthesis and characterization of derivatives(carboxymethy) of cellulose, starch and chitosan and their applications
- 3.1.3. Packaging materials and characterization
- 3.1.4. Active and intelligent packaging technology
- 3.1.5. Nanotechnology emphasis on nanocomposite film and nanocoating
- 3.1.6. Packaging for Posthavest

- 3.1.7. Shelf life of products and predictive models
- 3.1.8. Composite Materials from agro-industry and agricultural wastes

3.2. Research Project

- 3.2.1. Project Leader: Moisture Sorption Isotherms and Prediction Models of Carboxymethyl Chitosan Films from Different Sources with Various Plasticizers (2019)
- 3.2.2. Project Leader: Utilization of carboxymethyl cellulose from durian rind agricultural waste to improve physical properties and stability of rice starch-based film (2019)
- 3.2.3. Project Leader: Biodegradable rice starch/carboxymethyl chitosan films with added propolis extract for potential use as active food packaging (2017-2018)
- 3.2.4. Project Leader: Effects of zinc oxide nanoparticles on the properties of pectin/alginate edible films (2017-2018)
- 3.2.5. Project Leader: "Improvement of mechanical properties and thermal stability and extension of biodegradability of rice starch based film with carboxymethyl chitosan (2017-2018)
- 3.2.6. Project Coordinator: Production of Deodorant from Sodium Carboxy Methyl Chitosan Mixed with Mangosteen Tannin (2017)
- 3.2.7. Project Coordinator: Modification of Water Soluble Chitosan for Skin Care Cosmetic (2015-2016)
- 3.2.8. Project Advisor: Development of Antioxidative Biocomposite Film from Rice Starch and Carbohydrate Derivative Incorporated with Bee Products (The Royal Golden Jubilee) (2013-2015)
- 3.2.9. Project Mentor: Production and properties determination of carboxymethyl cellulose (CMC) from pineapple peel and pulp (*Ananas comosus* L. Merr) Smooth Cayenne Cultivar (2013-2014)
- 3.2.10. Project Coordinator: Research and Development Project of Materials for Bioscience and Medical Applications (2012-2013)

- 3.2.11. Project Coordinator: Value creation and values added to tamarind seed (2012-2013)
- 3.2.12. Project Coordinator: Shelf life extension of fresh-cut jackfruits with edible coating film having the composition of carboxymethyl cellulose from the wasted bottom end of asparagus from the farm (2012-2013)
- 3.2.13. Project Coordinator: Development of edible coating film for fresh-cut durian having the composite of carboxymehtyl cellulose from durian husk (2012-2013)
- 3.2.14. Project Advisor: Development of mixed pH-dye-based indicator for monitoring the ripening of mango fruit (*Mangifera indica* cv. Namdokmai-Sitong) (Higher Education Commission) (2008-2012)
- 1.1.1. Project Leader: Development of soy protein isolate based film with carboxymethyl cellulose and nanoclay (2011-2012)
- 1.1.2. Project Leader: Development of Intelligent Packaging Ripeness Indicator for Monitoring Ripeness for Exported Mango (2010-2011)
- 1.1.3. Project Leader: Influence of oleic acid and carboxymethyl chitosan on mechanical properties and water vapor permeability characteristics of soy protein film (2009-2010)
- 1.1.4. Project Coordinator: Use of Polymer Composite Packaging Film to Maintain Quality and Extend Shelf Life of Thai vegetables and fruits (2009-2010)
- 1.1.5. Project Leader: Synthesis of Carboxymethy Cellulose from *Mimosa Pigra* Peel (2008-2010)
- 1.1.6. Project Leader: Effects of Modified Atmosphere Packaging on Postharvest Quality of Longan cv. Daw
- 1.1.7. Project Coordinator: Improvement of Water Resistance and Moisture of Polylactic Acid Film with Plasma (2009)
- 1.1.8. Project Coordinator: Effect of Equilibrium Modified Atmosphere Packaging on Shelf Life of Minimally Processed Sweet Bamboo Shoot cv. *Dendrocalamus Latiflorus* Munro (2008-2009)

- 1.1.9. Project Coordinator: Development of Local Fermented Soybean of Northern Thailand for International Market Standard (2008-2009)
- 1.1.10. Project Leader: Value Added of Durian Husks: Synthesis of Carboxymethyl Cellulose from Durian Husk (2008-2009)
- 1.1.11. Project Leader: Improvement of Biodegradable Film by Plasma Immersion technique (2008)
- 1.1.12. Project Leader: DLC Film Synthesis for Improvement Quality of Packaging Film (2008)
- 1.1.13. Project Leader: Application of Active Film in Packaging Lychee: Effect of Plastic Packaging Film on Postharvest Quality of Lychee (2008)
- 1.1.14. Project Leader: Application of Active Film in Packaging Strawberry: Effect of Plastic Packaging Film on Postharvest Quality of Strawberry (2008)
- 1.1.15. Project Leader: Pot from Degradable Tamarind Bark (2008)
- 1.1.16. Project Leader: Production of Carboxymethyl chitosan (CMC) Film and Their Film Properties (2008)
- 1.1.17. Project Leader: Development of Active Packaging as Ethylene Absorber for Extending Economic Fruit Storage Life Purpose to Thai Fruit Export (2006-2007)
- 1.1.18. Project Leader: Production of Carboxymethylcellulose from Agriculture Waste as Binder in Ceramics (2007)
- 1.1.19. Project Leader: Application of Carboxy Methyl Cellulose from Papaya Peel for Fruit Coating (2007)
- 1.1.20. Project Leader: The study of Process and Properties of Composites from Eucalyptus with Ethylene Absorber (2007)
- 1.1.21. Project Leader: Production of Ethylene Absorber from Diatomite (2007)
- 1.1.22. Project Leader: Effect of Bleaching Process on Mechanical Properties of Carboxy Methyl Cellulose from Papaya Peel (2006)
- 1.1.23. Project Leader: Production of Carboxy Methyl Cellulose Film from Waste of Mulberry Paper (2006)

- 1.1.24. Project Leader: Effect of Carboxy Methyl Cellulose from Papaya Peel / Corn Starch Blend Films on Mechanical Properties (2006)
- 1.1.25. Project Leader: Extending Shelf Life of Cargo Rice (Husked rice) by Using Different Packaging and Oxygen Absorber (2006)
- 1.1.26. Project Leader: Effects of Packaging Types and Storage Conditions on Shelf Life of Fresh *Spirulina platensis* (2006)
- 1.1.27. Project Coordinator: Production of Ethylene Absorber for Extending Fruit Storage Life Purpose to Commercial Benefits (2006)
- 1.1.28. Project Leader: Production of Cellulose Derivative Film from Papaya Peel (2005)
- 1.1.29. Project Leader: Antioxidant Released Starch Film (2005-2007)
- 1.1.30. Project Leader: Extending Shelf Life of “Paper Ark” (2005)
- 1.1.31. Project Coordinator: Development of Brand and Identity for Small Enterprise in Chiang Mai (2005)
- 1.1.32. Project Coordinator: Packaging Development for Ready-to-Eat Fermented Fish (2005)

2. Publications and Academic Activities

2.1. Patents

- 2.1.1. **พรชัย ราชตะนະพันธุ** อภิลิทธิ์ แสนใจบาล ธีรณัฐ สิงธิสารและ ภาณุวัฒน์ สรรพกุล “วัสดุป้องกันอุณหภูมิและเวลา”, เลขที่คำขอ 1901001252
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- 2.3.26. พิษญา บุญประสม, **พรชัย ราชตะนະພັນ** และวุฒิรัตน์ พัฒนิบูรณ์ “การผลิตสารดูดซับเอทิลีนสำหรับยืดอายุการเก็บรักษาผลไม้” *ทุน สวทช ภาคเหนือ* งบประมาณปี 2549
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- 2.3.28. สมชาย วงศ์สุริยศักดิ์ และ**พรชัย ราชตะนະພັນ** และ เปรม ทองชัย “การพัฒนาศาตราสินค้าและสร้างอัตลักษณ์ให้กับผู้ประกอบการวิสาหกิจขนาดย่อม ในจังหวัดเชียงใหม่” *ทุนนักวิจัยรุ่นใหม่ มช.* งบประมาณปี 2549
- 2.3.29. **พรชัย ราชตะนະພັນ** ประสงค์ ศิริวงศ์ไชยาติ พวงทอง ใจสันติ เรณู ปิ่นทอง “การแปรรูปลูกอมผลฝรั่ง” ใน *การเผยแพร่ผลงานวิจัยของมูลนิธิโครงการหลวงครั้งที่ 2*. เชียงใหม่, 2542, หน้า 157-170 (323 หน้า).

2.4. Journal Articles

International Publications

- 2.4.1. 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, *Advanced in Materials and Engineering*, Volume 2019, Article ID 4082439, 18 page. Published online: 9 January 2019, <https://doi.org/10.1155/2019/4082439>
- 2.4.2. 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>
- 2.4.3. 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.

- 2.4.4. 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)
- 2.4.5. 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⁺ 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)
- 2.4.6. 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.
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- 2.4.8. 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

- 2.4.9. 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
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National Publications

- 2.4.68. Apita Bunsiri, Jittima Jirapothithum, Sorada Kanokpanonth, **Pornchai Rachatanapun** and Worada Samosornsuk (2014) "Edible Coating Solutions Consisting of The Mixture of Carboxymethyl Cellulose from Durian Husk for Coating Durian Aril", *Agricultural Science Journal*, 45:3/1 (suppl.), 269-272.
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2.5. Proceedings and Abstracts

International Oral Presentation:

- 2.5.1. 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
- 2.5.2. 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.
- 2.5.3. 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.
- 2.5.4. R. Suriyatem and **P. Rachtanapun** (2013) “Prediction modeling for moisture sorption isotherms of rice starch/carboxymethyl cellulose from durian rind blend films”. *2013 International Conference on Mechanical Engineering, Industrial Materials and Industrial Electronics (MII 2013)*, September 1-2, 2013, Hong Kong, China. (Abstract)
- 2.5.5. **Pornchai Rachtanapun** and Rungsiri Suriyatem (2012) “Moisture Sorption Characteristic and Water Vapor Transmission Rate of Soy Protein Isolate/Carboxymethyl Cellulose Blend Film”, *the 5th Shelf Life International Meeting (SLIM 2012)*, Changwon, Korea.

- 2.5.6. Krittika Tanprasert, **Pornchai Rachtanapun**, Suchapa Netpradit and Nitus Tipsotnalyana (2011) "Effect of Plasticizers on Properties and Printability of Carboxymethyl Cellulose Film from Durian Rind", *International conference on Imaging and Printing Technologies*, August 17-20, 2011, Bangkok, Thailand.
- 2.5.7. **P. Rachtanapun**. (2011) "Biopolymer Film Development for Food Packaging Applications", *Chiang Mai International Conference on Biomaterials & Applications (CMICBA 2011)*, 9-10 August 2011, Chiang Mai, Thailand.
- 2.5.8. Quyen.T.M. Dang, A. Joomwong and **P. Rachtanapun** (2011) "Antimicrobial Activity and Properties of Chitosan/Methyl Cellulose Films Incorporated with Cabendazim", *Chiang Mai International Conference on Biomaterials & Applications (CMICBA 2011)*, 9-10 August 2011, Chiang Mai, Thailand.
- 2.5.9. W. Tongdeesoontorn, L. J. Mauer, S. Wongruong, P. Sriburi, **P. Rachtanapun** (2011) "Properties and Antioxidant Activities of Cassava Starch/Gelatin Composite Films Incorporated with Wuerceitin and TBHQ", *Chiang Mai International Conference on Biomaterials & Applications (CMICBA 2011)*, 9-10 August 2011, Chiang Mai, Thailand.
- 2.5.10. **P. Rachtanapun**, M. Jakkaew and R. Suriyatem (2011). "Characterization of Chitosan and Charboxymethyl Chitosan Films from Various Sources and Molecular Sizes", *Chiang Mai International Conference on Biomaterials & Applications (CMICBA 2011)*, 9-10 August 2011, Chiang Mai, Thailand.
- 2.5.11. (The Most Promising Scientific Work Award) Tanyarut Jinkarn, Suchada Thawornwiriyanan, Dheerawan Boonyawan, **Pornchai Rachtanapun** and Amporn Sane (2011) "Effects of Treatment Time by Sulfur Hexafluoride (SF₆) Plasma on Barrier and Mechanical Properties of Paperboard", 25th IAPRI Symposium on Packaging, May 16-18, 2011, Berlin, Germany.
- 2.5.12. K. Sutjarittangtham, S. Sanpa, T. Tunkasiri, **P. Rachtanapun**, P. Chantawannakul, U. Intatha, K. Pengpat¹, G. Rujijanagul and S. Eitssayeam. (2011). "Polylactic acid (PLA)/propolis compound nanofibers

by electrospinning”, *The 2011 International Forum on Functional Materials (IFFM2011) and the 2nd Special Symposium on Advances in Functional Materials (AFM-2)*, July 28-31, Jeju Grand Hotel, Jeju, Korea.

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(2011) Sodium Carboxymethyl Chitosan as A Novel Fixative for eau de cologne”, *Pure and Applied Chemistry International Conference (PACCON2011)*, January 5-7, 2011, Miracle Grand Hotel, Bangkok, Thailand.

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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.

2.5.16. Chanokporn Chaiwong, **Pornchai Rachtanapun**, Somrutai Tunma, Rafael

Auras, Dheerawan Boonyawan “Surface Modification and Permeability Analytical Studies of Polylactic Acid Induced by HMDSO-Plasma”, Twelfth International Conference on Plasma Surface Engineering, September 13 - 17, 2010, in Garmisch-Partenkirchen, Germany

2.5.17. Quyen Dang Thi Mong, Adisak Joomwong, Hai Le Ha and **Pornchai**

Rachtanapun (2010). “Morphology, Physical and Chemical Properties of Queen Pineapple Fruit”, *The Proceeding of 7th International Pineapple Symposium 2010*, Convention Center, Johor Bahru, Johor, Malaysia, July 13-15, 2010

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Panuwan Chantawannakun “Differences of some nutritional and physical

properties of Northern Thai-Style Fermented Soybeans (Thua-nao) dried by three different methods" *The Proceeding of Food Innovation Asia conference*, Bangkok, Thailand, June 17-18, 2010.

- 2.5.19. Sangsuwan, J., N. Rattanapanone, B.R. Harte and **P. Rachtanapun**. (2009). Development of vanilin/ chitosan/methylcellulose film for fresh-cut fruit. *The Proceeding 6th International Postharvest Symposium*, Antalya, Turkey, 8-12 April.
- 2.5.20. **Pornchai Rachtanapun**, Palida Simasatitkul, Wantana Chaiwan and Yaowalak Watthanaworasakun, "Effect of NaOH Concentration on Synthesis and Characterizations of Carboxymethyl Rice Starch", *The Proceedings of The 5th International Conference on Starch Technology (Starch Update 2009)*, September 24-25, 2009, Bangkok, Thailand.
- 2.5.21. **Pornchai Rachtanapun**, Palida Simasatitkul, Wantana Chaiwan and Yaowalak Watthanaworasakun, "Relationship of Morphology, Mechanical Properties, and Water Vapor Permeability of Carboxymethyl Rice Starch Films", *The 5th International Conference on Starch Technology (Starch Update 2009)*, September 24-25, 2009, Bangkok, Thailand.
- 2.5.22. C. Chaiwong, **P. Rachtanapun**, P. Wongchaiya , D. Boonyawan, (2009) " Effect of Plasma Treatment on Hydrophobicity and Barrier Properties of Polylactic Acid", *10th International Workshop on Plasma-Based Ion Implantation & Deposition*, September 7-11, 2009, Brazil.
- 2.5.23. D. Boonyawana, A. Wattananan, and **P. Rachtanapun**, (2009). "DLC Coating on Food Packaging Film Using PIII-D Technique", *Proceedings of International Workshop on Plasma Diagnostics and Applications (IWPDA 2009)*, July 2-3, 2009, National Institute of Education, Nanyang Technological University, Singapore.
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- 2.5.25. Jurmkwan Sangauwan, Nithiya Rattanapanone, Bruce Harte and **Pornchai Rachtanapun** (2008) "Antimicrobial Effect and Migration of Vanillin in Chitosan-methyl Cellulose Films", *Proceedings of IAPRI World Conference on Packaging* -June 8-12, 2008, Bangkok, Thailand.
- 2.5.26. **Pornchai Rachtanapun**, Suphat Kumthai, Natthasuang Mulkarat, and Noppamad Pintajam (2007) "Effect of Sodium Hydroxide Concentration on Mechanical Properties of Carboxymethylcellulose Films from Waste of Mulberry Paper" *Proceedings of 5th International Packaging Congress and Exhibition*, Turkey, November 22-24, 2007, Bayrakli-Izmir-Türkiye chamber of chemical engineers-ege branch.
- 2.5.27. Vanee Chonhenchob, Sukasem Sittipod, Supoj Pratheepthinthong, **Pornchai Rachtanapun**, and S. Paul Singh (2006) "Measurement and Analysis of Distribution Environment in Thailand: The Case of Produce Distribution", *Proceedings of 15th IAPRI World Conference on Packaging*, Tokyo Big Sight, Japan.
- 2.5.28. W. Kaewmesri, J. Pumchusak, and **P. Rachtanapun** (2006) "Chloroform-Swollen Softening Effect on Cell Morphology of Polyethylene Foams", *Proceedings of 22nd Annual Meeting of Polymer Processing Society (PPS-22)* Yamagata, Japan, July 2-6, 2006.
- 2.5.29. **P. Rachtanapun**, S. E. M. Selke and L. Matuana (2003) "Effect of Melt Index of HDPE on Microcellular foaming of HDPE/PP blends", *Proceedings of 5th National Graduate Research Polymer Conference*, Lehigh University, Bethlehem, PA, June 22-25, 2003.
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- 2.5.31. **P. Rachtanapun**, L. Matuana and S. E. M. Selke (2003) "Characterization of Microcellular Foam Polyolefin Blend Composites with Wood Fiber", *Proceedings of ACS's 225th National Meeting in New Orleans, LA, March 23-27, 2003*.
- 2.5.32. **P. Rachtanapun**, S. E. M. Selke and L. Matuana, "Microcellular Foam of Polymer Blends of HDPE/PP and Their Composites with Wood Fiber", *Proceedings of WorldPak 2002, June 23-28, 2002, East Lansing, Michigan, USA*.

International Poster Presentation

- 2.5.33. 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.
- 2.5.34. **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.
- 2.5.35. **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.
- 2.5.36. 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.

- 2.5.37. 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.
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- 2.5.39. 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.
- 2.5.40. **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.
- 2.5.41. **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.
- 2.5.42. R. Suriyatem and **P. Rachtanapun** (2014) “Characterization of rice starch/carboxymethyl chitosan blend films”. *The 5th International Conference on Natural Products for Health and Beauty (NATPRO 5)*, May 6-8, 2014, Phuket, Thailand.
- 2.5.43. **Rachtanapun, P**, Suriyatem, R and Chaimanee, P. (2014) “Study on properties of xyloglucan/carboxymethyl cellulose blend film”. *The*

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- 2.5.44. R. Suriyatem and P. **Rachtanapun** (2013). "Water vapour Permeability and Moisture Sorption Isotherm of Rice Starch/Carboxymethyl Cellulose from Durian Rind Composite Films", *The Fourth International Conference & Exhibition on Bioplastics and Biobased Materials*, (InnoBioPlast 2013), January 24-26, 2013, Queen Sirikit National Convention Centre, Bangkok, Thailand.
- 2.5.45. P. **Rachtanapun** and R. Suriyatem (2012). "Characterization of Soy Protein Isolate/carboxymethyl Cellulose/Nanoclay Bionanocomposite Film", *The 28th International Conference of Polymer Processing Society (PPS-28)*, December 11-15, 2012, Pattaya, Thailand.
- 2.5.46. Dang Thi Mong Quyen, Joomwong Adisak and **Pornchai Rachtanapun** (2012) "Storage Temperature and High Relative Humidity Affect the Ethanol Content and Physico-Chemical Properties of 'Queen' Pineapple Fruit", *7th International Postharvest Symposium 2012 (IPS2012)*, June 25-29, 2012, Kuala Lumpur, Malaysia. p172.
- 2.5.47. **Pornchai Rachtanapun** and Saranya Boonkob and Siririn Horjaren (2012) "Shelf life of oven dried spirulina with green chilly paste snack in different packages and prediction models based on its moisture content, *the 5th Shelf Life International Meeting (SLIM 2012)*, May 30-June 1, 2012, Changwon, Korea.
- 2.5.48. Juthamas Tantala, Masubon Thongngam, **Pornchai Rachtanapun** and Chitsiri Rachtanapun (2012) "Antimicrobial activity of chitosan and carboxymethyl chitosan from different types and sources of chitosan" *the 5th Shelf Life International Meeting (SLIM 2012)*, May 30-June 1, 2012, Changwon, Korea.
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- 2.5.51. **Pornchai Rachtanapun**, Rungsiri Suriyatem and Porntip Chaimanee (2012) "Preliminary Study on Properties of Xyloglucan Film from Tamarind Seed", *International Conference of Food and Applied Bioscience*, February 6-7, 2012, Chiang Mai, Thailand.
- 2.5.52. **Pornchai Rachtanapun**, Dheerawan Boonyawan, Panchat Wongchaiya (2012) "Effects of Sulphur Hexafluoride (SF₆) Plasma on Barrier, Mechanical, Thermal Properties and Morphology of Methyl Cellulose Film", *Pure and Applied Chemistry International Conference (PACCON 2012)*, January 11-13, 2012, The Impress Hotel, Chiang Mai, Thailand
- 2.5.53. **Pornchai Rachtanapun**, Teerarat Sattayarak and Nisachon Katsamak (2012) "Effect of Polymeric Diphenylmethane Diisocyanate on Physical and Mechanical Properties of Particleboard from Coffee Waste" *Pure and Applied Chemistry International Conference (PACCON 2012)*, January 11-13, 2012, The Impress Hotel, Chiang Mai, Thailand.
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- 2.5.60. (Third Prize Award) A. Jaidee, S. Luangkamin, **P. Rachtanapun**. (2011). “¹H-NMR Analysis of Degree of Substitution in N,O-Carboxymethyl Chitosans from Various Sources and Types”, *Chiang Mai International Conference on Biomaterials & Applications (CMICBA 2011)*, 9-10 August 2011, Chiang Mai, Thailand.
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- 2.5.62. **Pornchai Rachtanapun** and Rungsiri Suriyatem (2010) " Prediction Models for Moisture Sorption Isotherms of Soy Protein Isolate/Carboxymethyl Chitosan Blend Films" *International Conference on Agriculture and Agro-Industry (ICAAI2010), Food, Health and Trade* 19-20 November 2010, Mea Fah Luang University, Chiang Rai, Thailand.
- 2.5.63. Dheerawan Boonyawan, Chanokporn Chaiwong, Somruthai Tunma, **Pornchai Rachtanapun** "Fluorinated Diamond-like Carbon Coating on Polylactic Acid Film Prepared by Plasma-enhanced Chemical Vapor Deposition" *Twelfth International Conference on Plasma Surface Engineering*, September 13 - 17, 2010, in Garmisch-Partenkirchen, Germany
- 2.5.64. Wirongrong Tongdeesoontorn Lisa J. Mauer, Sasitorn Wongruong and **Pornchai Rachtanapun** "Effect of Antioxidant Contents on Water Vapor Transmission Rate and Sorption Isotherm of Cassava Starch-Carboxymethyl cellulose (CMC) Films" *International Conference and Exhibition InnoBioplast 2010*, September 9-11, 2010, Bangkok, Thailand.
- 2.5.65. **P. Rachtanapun**, S., Eitssayeam and K. Pengpat, "Study of Carboxymethyl Cellulose from Papaya Peels Binder in Ceramics", *The Proceedings of Functional and Sensing Materials (FuSeM 2009)*, Dec 7-9, 2009, Bangkok, Thailand.
- 2.5.66. **P. Rachtanapun**, P. Wongchaiya, D. Boonyawan, "Effect of Sulphur Hexafluoride (SF_6) Plasma on Hydrophobicity of Methylcellulose Film", *The Proceedings of Functional and Sensing Materials (FuSeM 2009)*, Dec 7-9, 2009, Bangkok, Thailand.
- 2.5.67. W. Tongdeesoontorn, L. Mauer, S. Wongruong, P. Sriburi and **P. Rachtanapun**, "Study of chemical interaction, melting temperature and morphology of cassava starch based films with gelatin and carboxymethyl cellulose", *The Proceedings of Functional and Sensing Materials (FuSeM 2009)*, Dec 7-9, 2009, Bangkok, Thailand.

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- 2.5.69. W. Tongdeesoontorn, L. Mauer, S. Wongruong, P. Sriburi and **P. Rachtanapun**, "Effect of Antioxidant Concentrations and Relative Humidity on Mechanical Properties of Cassava Starch/ Gelatin Films", *The Proceedings of The 5th International Conference on Starch Technology (Starch Update 2009)*, September 24-25, 2009, Bangkok, Thailand.
- 2.5.70. **Pornchai Rachtanapun**, Dararat Panyakun and Darin Srisawat, "Edible Films of Blended Cassava Starch and Rice Starch with Plasticizers and Their Mechanical Properties", *The Proceedings of The 5th International Conference on Starch Technology (Starch Update 2009)*, September 24-25, 2009, Bangkok, Thailand.
- 2.5.71. **Pornchai Rachtanapun** and Wirongrong Tongdeesoontorn, "Effect of Glycerol Concentration on the Sorption Isotherm and Water Vapor Permeability of Carboxymethyl Cellulose Films from Waste of Mulberry Paper", *The Proceedings of Food Innovation Asian Conference 2009*, Bangkok, Thailand June 18-19, 2009.
- 2.5.72. **Pornchai Rachtanapun** and Wirongrong Tongdeesoontorn, "Moisture Sorption Isotherm and Water Vapor Permeability of Carboxymethyl Cellulose from Papaya Peel / Cornflour Blended Films" *The Proceedings of Food Innovation Asian Conference 2009*, Bangkok, Thailand June 18-19, 2009.
- 2.5.73. Wirongrong Tongdeesoontorn, Lisa J. Mauer, Sasitorn Wongruong and **Pornchai Rachtanapun**, "Water Vapor Permeability and Sorption Isotherm of Cassava Starch Based Films Blended with Gelatin and Carboxymethyl Cellulose", *The Proceedings of Food Innovation Asian Conference 2009*, Bangkok, Thailand June 18-19, 2009.

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- 2.5.77. W.Kaewmesri, **P.Rachtanapun**, and J. Pumchusak. (2006) "The Ease of Thick PP Sheet Foaming by Including Solvent-Swelling Step", *Proceedings of Asian Workshop on Polymer Processing (AWPP) 2006*, Bangkok, Thailand.
- 2.5.78. **Pornchai, Rachtanapun**, Nantaporn, Kumsuk, Kasameand Thipo, Panicha, Lorwatcharasupaporn "Effects of Moisture Content on Pumpkin Crackers in Different Packages", *Proceedings of 15th IAPRI World Conference on Packaging*, October 3-5, 2006, Tokyo Big Sight, Tokyo, Japan.

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- 2.5.79. R. Suriyatem and **P. Rachtanapun** (2012). "Preparation and Characterization of Rice Starch/Carboxymethy Cellulose from Durian Rind Composite Films", *The 1st National Rice Research Conference*, December 21-23, 2012, Swissotel Le Concorde Hotel, Bangkok.

- 2.5.80. **Pornchai Rachtanapun** and Rungsiri Suriyatem (2011) "Effect of Monochloroacetic Acid on Properties of Carboxymethyl Chitosan Powder", 2nd Polymer Conference of Thailand, Bangkok, October 20-21, 2011, Thailand.
- 2.5.81. Duangjai Noiwan, Panuwat Suppakul, Jamnong Uthaibutra and **Pornchai Rachtanapun**, "Effect of temperatures on physiological, physical and biochemical changes of mango fruit (*Mangifera indica* cv. Namdokmai-Sitong) during storage (2011) " *Proceedings of 9th National Technical Seminar on Postharvest Technology*, June 23-24, 2011, Pataya, Thailand.
- 2.5.82. Nopadon Luangpirom and **Pornchai Rachtanapun** (2010) "Innovation Management the New Approach for Small Medium Enterprise (SME)", *The 1st National Conference on Entrepreneurship and Innovation*, December 2-3, 2010, The Far Eastern University, Chiang Mai, Thailand.
- 2.5.83. **Pornchai Rachtanapun**, Teerarat Sattayarak and Nisachon Katsamak (2010) "Effect of Urea Formaldehyde on Physical and Mechanical Properties of Particleboard from Coffee Waste" *The Sixth Thailand Materials Science and Technology Conference*, Miracle Grand Hotel, Bangkok, Thailand, August 26-26, 2010.
- 2.5.84. Titima Sukmark, **Pornchai Rachtanapun**, Chitsiri Rachtanapun, (2010) "Antimicrobial Activity of Oligomer and Polymer Chitosans from Different Sources against Foodborne Pathogenic Bacteria", *the Proceeding of 48th Kasetsart University Annual Conference*, February 3-5, 2010, Bangkok, Thailand, 27-33.
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