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Date of Birth 17 April 1977

Place of Birth Phuket, THAILAND

Nationality THAILAND

EDUCATION:

Degree title **Doctorate of Philosophy (Sep 1999 – Jan 2004)**
Subject Materials Engineering with Bio-Engineering minor (Cumulative GPA of 4.9/5.0)
Institution **Massachusetts Institute of Technology** (Cambridge, MA, USA)

Degree title **Bachelor of Science, with Honors and Magna cum Laude (Sep 1995 – May 1999)**
Subject Engineering with Economics minor (GPA of 4.0/4.0)
Institution **Brown University** (Providence, RI, USA)

AWARDS

Jul 2018 Rewarded 2018 ASEAN Science and Technology Fellowship

Jun 2016 Rewarded by Global Young Academy to participate in 1st ASEAN Science Leadership Program

Oct 2015 Rewarded by The Engineering Academy of Japan (EAJ) to participate in “Young Engineering Leaders Symposium” (YELS) during the Science and Technology in Society (STS) forum held in Kyoto, Japan

Aug 2013 Elected as judge for 2013 ProSPER.Net-Scopus Young Scientist Award in the Sustainable Development focusing on Water, Transport and ICT, organized by United Nations University-Institute of Advanced Studies (UNU-IAS)

Jun 2010 Elected as Deutscher Akademischer Austausch Dienst (**DAAD**) scholar to work at Institute for Combustion Engine (VKA), RWTH Aachen University, Germany

Sep 2009 Green Talents 2009: The International Forum for High Potentials in Green Technologies by Federal Ministry of Education and Research (BMBF), Germany
15 Green Talents 2009 were selected by renowned German scientists from 156 young researchers who applied from 43 different countries (<http://www.greentalents.de/>)

EXPERIENCES

Date Oct 2020 – present
Institution National Energy Technology Center (**ENTEC**), THAILAND
Subject **Leader**, Renewable Energy and Energy Efficiency Research Team

- Supervise energy research topics: System Integration & Energy Management, Energy Efficiency and Energy Policy/Resilience
- Conduct researches on sustainable mobility, sustainable bioenergy, energy demand modeling and energy resilience

Date Aug 2004 – Sep 2020
Institution National Metal and Materials Technology Center (**MTEC**), THAILAND
Subject **Lab Head**, Renewable Energy Laboratory (formerly known as Bioenergy Laboratory)

- Supervise Biofuel Testing Lab and Automotive and Alternative Fuel Lab
- Conduct researches on biofuel production/characterization and its effect on engine performance/emission

Date Nov – Dec 2011
Institution Graduate School of Environment and Energy Engineering, **Waseda University**, JAPAN
Subject **Exchanged Researcher**, Science and Technology Research Partnership for Sustainable Development (SATREPS) funded by Japan Science and Technology Agency (**JST**) and the Japan International Cooperation Agency (**JICA**)
Conduct research under JICA training course: J-11-22409 (Engine Performance of Biodiesel)

Date Jun – Aug 2010
Institution Institute for Combustion Engines (VKA), RWTH-Aachen University, Germany
Subject **Invited Researcher**, DAAD Research Short Stay 2010

Conduct research collaboration under Cluster of Excellence, “Tailor-Made Fuels from Biomass (TMFB)” in the field of “Combustion engine and Optical diagnostics” under funding by Deutscher Akademischer Austausch Dienst (DAAD)

- Date Nov – Dec 2009
 Institution National Institute of Advanced Industrial Science and Technology (AIST), JAPAN
 Subject **Invited Researcher**, Asia Biomass Energy Researchers Invitation Program 2009
 Conduct research collaboration in the field of “Quality Control and Standardization” at Research Center for New Fuels and Vehicle Technology (NFV) under funding by New Energy Foundation (NEF), <http://www.asiabiomass.jp/english/receipt.html>
- Date Nov 2008 – present
 Institution Economic Research Institute for ASEAN and East Asia (ERIA)
 Subject **Country Expert** for the Working Group on
 ➤ Benchmarking of Biofuels in East Asia Summit Countries, operated by NFV, AIST, <http://www.eria.org/research/y2008-no7.html>
 ➤ Sustainable Automobile Society in East Asia, operated by JARI (Japan Automotive Research Institute), <http://www.eria.org/research/y2008-no8-3.html>
- Date Jan 2007
 Institution National Institute of Advanced Industrial Science and Technology (AIST), JAPAN
 Subject **Visiting Researcher**, Energy Technology Research Institute (ETRI)
 Conduct research collaboration in the field of “Standardization and Upgrading of Biodiesel Fuel Quality” under funding by NEDO (New Energy and Industrial Technology Development Organization) of Japan during 2005-2007

SELECTED PUBLISHED WORKS (h-index = 18 from scopus database: author ID 8222872100)

International journal

2021

- ✓ P. Udomsap, A. Eiad-Ua, S-Y Chen, T. Mochizuki, **N. Chollacoop**, Y. Yoshimura, M. Nishi, H. Tateno and H. Takagi, “Effect of Pd Precursor Salts on the Chemical State, Particle Size, and Performance of Activated Carbon-Supported Pd Catalysts for the Selective Hydrogenation of Palm Biodiesel,” *International Journal of Molecular Sciences* (2021), 22, 1256

2020

- ✓ A. Na Rungsi, A. Luengnaruemitchai, **N. Chollacoop**, S-Y Chen, T. Mochizuki, H. Takagi and Y. Yoshimura, “Preparation of MCM-41-supported Pd–Pt catalysts with enhanced activity and sulfur resistance for partial hydrogenation of soybean oil-derived biodiesel fuel,” *Applied Catalysis A, General* (2020), 590, 117351

2019

- ✓ M. Tongroon, P. Saisirirat, A. Suebwong, J. Aunchaisri, M. Kanannot and **N. Chollacoop**, “Combustion and emission characteristics investigation of diesel-ethanol-biodiesel blended fuels in a compression-ignition engine and benefit analysis,” *Fuel* (2019), 255 115728
- ✓ S.M. Krishna, P.A. Salam, M. Tongroon and **N. Chollacoop**, “Performance and emission assessment of optimally blended biodiesel-diesel-ethanol in diesel engine generator,” *Applied Thermal Engineering* (2019), 115, 525-533
- ✓ S-Y Chen, L. Attanatho, A. Chang, T. Laosombut, M. Nishi, T. Mochizuki, H. Takagi, C-M Yang, Y. Abe, M. Toba, **N. Chollacoop** and Y. Yoshimura, “Profiling and catalytic upgrading of commercial palm oil-derived biodiesel fuels for high-blend fuels,” *Catalysis Today* (2019), 332, 122-131
- ✓ E. Sukjit, M. Tongroon, **N. Chollacoop**, Y. Yoshimura, P. Poapongsakorn, M. Lapuerta and K.D. Dearn, “Improvement of the tribological behaviour of palm biodiesel via partial hydrogenation of unsaturated fatty acid methyl esters,” *Wear* (2019), 426-427, 813-818
- ✓ T. Prakoso, A. Tanaka, T. Hirotsu, P. Udomsap, **N. Chollacoop**, S. Goto and A. Indarto, “Oxidation stability of biodiesel fuel produced from *Jatropha Curcas L* using Rancimat and PetroOXY method,” *Energy Sources: Part A* (2019), 41(4), 501-506
- ✓ S. Eaimsumang, S. Wongkasemjit, S Pongstabodee, S.M. Smith, S. Ratanawilai, **N. Chollacoop**, A. Luengnaruemitchai, “Effect of synthesis time on morphology of CeO₂ nanoparticles and Au/CeO₂ and their activity in oxidative steam reforming of methanol,” *Journal of Rare Earths* (2019), 37, 819-828

2018

- ✓ C. Thunyaratchatanon, A. Luengnaruemitchai, J. Jitjamnong, **N. Chollacoop**, S-Y Chen and Y. Yoshimura, “Influence of Alkaline and Alkaline Earth Metal Promoters on the Catalytic Performance of Pd–M/SiO₂ (M = Na, Ca, or Ba) Catalysts in the Partial Hydrogenation of Soybean Oil-Derived Biodiesel for Oxidative Stability Improvement,” *Energy Fuels* (2018), 32(9), 9744-9755
- ✓ C. Thunyaratchatanon, A. Luengnaruemitchai, **N. Chollacoop**, S-Y Chen and Y. Yoshimura, “Catalytic hydrogenation of soybean oil-derived fatty acid methyl esters over Pd supported on Zr-SBA-15 with various Zr loading levels for enhanced oxidative stability,” *Fuel Processing Technology* (2018), 179, 422-435
- ✓ A. Na Rungsi, A. Luengnaruemitchai, S. Wongkasemjit, **N. Chollacoop**, S-Y Chen and Y. Yoshimura, “Influence of silica sources on structural property and activity of Pd-supported on mesoporous MCM-41 synthesized with an aid of

microwave heating for partial hydrogenation of soybean methyl esters,” Applied Catalysis A, General (2018), 563, 80-90

- ✓ P. Srichai, P-P Ewphan, C. Charoenphonphanich, P Karin, M. Tongroon and **N. Chollacoop**, “*Injection Characteristics of Palm Methyl Ester Blended with Diesel using Zuech’s Chamber,*” *International Journal of Automotive Technology* (2018), 19(3), 535-545

2017

- ✓ P. Hongmanorom, A. Luengnaruemitchai, **N. Chollacoop** and Y. Yoshimura, “*Effect of Pd/MCM-41 pore size on catalytic activity and cis-trans selectivity for partial hydrogenation of canola biodiesel,*” *Energy and Fuels* (2017) , 31(8), 8202-8209
- ✓ C. Thunyaratchatanon, A. Luengnaruemitchai, T. Chaisuwan, **N. Chollacoop**, S-Y Chen and Y. Yoshimura, “*Synthesis and characterization of Zr incorporation into highly ordered mesostructured SBA-15 material and its performance for CO₂ adsorption,*” *Microporous and Mesoporous Materials* (2017), 253, 18-28
- ✓ M. Tongroon, A. Suebwong, M. Kananont, J. Aunchaisri and **N. Chollacoop**, “*High quality jatropha biodiesel (H-FAME) and its application in a common rail diesel engine,*” *Renewable Energy* (2017), 113, 660-668
- ✓ P. Hunpinyo, P. Narataruksa, S. Tungkamani, K. Pana-Suppamassadu, **N. Chollacoop**, H. Sukkathanyawat and P. Jiamrittivong, “*A comprehensive small and pilot fixed bed reactor approach for testing Fischer-Tropsch catalyst activity and performance on BTL route,*” *Arabian J. of Chem.*, (2017), 10, S2806-S2828

2016

- ✓ C. Thunyaratchatanon, J. Jitijamnong, A. Luengnaruemitchai, **N. Chollacoop** and Y. Yoshimura, “*Influence of Mg modifier on cis-trans selectivity in partial hydrogenation of biodiesel using different metal types,*” *Applied Catalysis A: General* (2016), 520, 170-177
- ✓ C. Thunyaratchatanon, A. Luengnaruemitchai, **N. Chollacoop** and Y. Yoshimura, “*Catalytic Upgrading of Soybean Oil Methyl Esters by Partial Hydrogenation using Pd Catalysts,*” *Fuel* (2016), 163, 8-16
- ✓ M. Assawadithalerd, **N. Chollacoop**, J. Mungkalasiri and C. Tongcumpou, “*Optimizing Jatropha Biodiesohol Composition for a Suitable Kinematic Viscosity by a Phase Diagram and Mixture Design,*” *Fuel*, 164 (2016), 134-140
- ✓ P. Asawaworarit, **N. Chollacoop**, N. Viriya-Empikul and A. Eiad-Ua, “*Effect of alkaline activation on low grade natural kaolin for synthesis of zeolite A,*” *Materials Science Forum* (2016), 872, 206-210
- ✓ P. Srichai, **N. Chollacoop**, C. Chareonphonphanich, M. Tongroon and P. Karin, “*Injection Pressure Characteristics of Palm Methyl Ester and Diesel in Solenoid Injector under Common-Rail System,*” *SAE Technical Paper 2016-01-1729* (2016)
- ✓ M. Tongroon, A. Suebwong, M. Kananont, S. Panassorn, P. Bhandhubanyong and **N. Chollacoop**, “*50,000km On-Road Durability Test of Common-Rail Vehicle with 20% Blend of High Quality Palm Biodiesel (H-FAME),*” *SAE Technical Paper 2016-01-1736* (2016)

2015

- ✓ P. Karin, M. Borhanipour, Y. Songsaengchan, S. Laosuwan, C. Charoenphonphanich, **N. Chollacoop** and K. Hanamura, “*Oxidation Kinetics of Small CI Engines Biodiesel Particulate Matter,*” *International Journal of Automotive Technology*, 16(2), 2015, 211-219
- ✓ R. Chumueang, Y. Laoonual and **N. Chollacoop**, “*Effects of Injection Timing and Injection Pressure on Combustion Characteristics and Emissions of Ethanol ED95 under Partially Premixed Combustion Condition*”, *SAE Technical Paper 2015-32-0826* (2015)
- ✓ K. Siricholathum, P. Karin, C. Charoenphonphanich, K. Hanamura and **N. Chollacoop**, “*Characterization of Biodiesel Particle Emission in Trapping and Regeneration Processes on Cordierite Diesel Particulate Filter,*” *SAE Technical Paper 2015-32-0821* (2015)
- ✓ **N. Chollacoop**, M. Tongroon, M. Kananont, A. Suebwong, P. Saisirirat, S. Panassorn and P. Bhandhubanyong, “*50,000km On-Road Durability Test of Common-Rail Vehicle with 10% Blend of High Quality Biodiesel (H-FAME) from Jatropha,*” *SAE Technical Paper 2015-01-0115* (2015)

2014

- ✓ Y. Yoshimura, **N. Chollacoop** and M. Oguma, “*Biodiesel Usage and Governmental Support in Thai Transportation,*” *Journal of Society of Automotive Engineers of Japan*, 68(10), 2014, 56-62
- ✓ P. Srichai, C. Charoenphonphanich, P. Karin and **N. Chollacoop**, “*Spray visualization of biodiesel and diesel in a high pressure chamber,*” *Advanced Materials Research* (2014), 931-932, 1043-47
- ✓ P. Hunpinyo, P. Cheali, P. Narataruksa, S. Tungkamani, and **N. Chollacoop**, “*Alternative route of process modification for biofuel production by embedding the Fischer-Tropsch plant in existing stand-alone power plant (10MW) based on biomass gasification – Part I: A conceptual modeling and simulation approach (a case study in Thailand),*” *Energy Conversion and Management*, 88 (2014), 1179-1192
- ✓ M. Borhanipour, P. Karin, M. Tongroon, **N. Chollacoop** and K. Hanamura, “*Comparison Study on Fuel Properties of Biodiesel from Jatropha, Palm and Petroleum Based Diesel Fuel,*” *SAE Technical Paper 2014-01-2017* (2014)
- ✓ S. Jaroenjitsathian, P. Saisirirat, K. Sivara, M. Tongroon and **N. Chollacoop**, “*Effects of GTL and HVO Blended Fuels on Combustion and Exhaust Emissions of a Common-Rail DI Diesel Technology,*” *SAE Technical Paper 2014-01-2763* (2014)

2013

- ✓ P. Srichai, C. Charoenphonphanich, P. Karin and **N. Chollacoop**, “*Spray visualization of biodiesel and diesel in a high pressure chamber,*” *Advanced Materials Research* (2014), 931-932, 1043-47

- ✓ P. Hunpinyo, P. Narataruksa, S. Tungkamani, K. Pana-Supphamassadu and **N. Chollacoop**, “*Evaluation of Techno-economic feasibility Biomass-to-energy by Using ASPEN Plus®: A Case Study of Thailand*,” Energy Procedia, 42 (2013), 640-649
- ✓ P. Saisirirat, **N. Chollacoop**, M. Tongroon, Y. Laoonual and J. Pongthanaisawan, “*Scenario Analysis of Electric Vehicle Technology Penetration in Thailand: Comparisons of Required Electricity with Power Development Plan and Projections of Fossil fuel and Greenhouse Gas Reduction*,” Energy Procedia, 34 (2013), 459-470
- ✓ P. Karin, Y. Songsaengchan, S. Laosuwan, C. Charoenphonphanich, **N. Chollacoop** and H. Katsunori, “*Nanostructure Investigation of Particle Emission by Using TEM Image Processing Method*,” Energy Procedia, 34 (2013), 757-766
- ✓ N. Numwong, A. Luengnaruemitchai, **N. Chollacoop** and Y. Yoshimura, “*Effect of Metal Type on Partial Hydrogenation of Rapeseed Oil-Derived FAME*,” J. Am Oil Chem Soc, 90 (2013), 1431-1438
- ✓ B. Pidtasang, P. Udomsap, S. Sukkasi, **N. Chollacoop** and A. Pattiya, “*Influence of alcohol addition on properties of bio-oil produced from fast pyrolysis of eucalyptus bark in a free-fall reactor*,” Journal of Industrial and Engineering Chemistry, 19 (2013), 1851-1857
- ✓ **N. Chollacoop**, P. Saisirirat, S. Sukkasi, M. Tongroon, T. Fukuda, A. Fukuda and S. Nivitchanyong, “*Potential of Greenhouse Gas Emission Reduction in Thai Road Transport by Ethanol Bus Technology*,” Applied Energy, 102 (2013), 112-123

2012

- ✓ N. Numwong, A. Luengnaruemitchai, **N. Chollacoop** and Y. Yoshimura, “*Effect of Support Acidic Properties on Sulfur Tolerance of Pd Catalysts for Partial Hydrogenation of Rapeseed Oil-Derived FAME*,” J. Am Oil Chem Soc, 89 (2012), 2117-2120
- ✓ N. Numwong, A. Luengnaruemitchai, **N. Chollacoop** and Y. Yoshimura, “*Partial hydrogenation of polyunsaturated fatty acid methyl esters over Pd/activated carbon: Effect of type of reactor*,” Chemical Engineering Journal, 210 (2012), 173-181
- ✓ N. Numwong, A. Luengnaruemitchai, **N. Chollacoop** and Y. Yoshimura, “*Effect of SiO₂ Pore Size on Partial Hydrogenation of Rapeseed Oil-Derived FAMES*,” Applied Catalysis A: General, 441-442 (2012), 72-78

2011

- ✓ C. Charoenphonphanich, P. Ornman, P. Karin, H. Kosaka and **N. Chollacoop**, “*Experimental Investigation in Combustion Characteristics of Ethanol-Gasoline Blends for Stratified Charge Engine*,” (JSAE 20119551, SAE 2011-32-0551), 17th Small Engine Technology Conference (SETC 2011), November 8-10, 2011, Sapporo, Japan
- ✓ C. Charoenphonphanich, W. Imerb, P. Karin, **N. Chollacoop** and K. Hanamura, “*Low Temperature Starting Techniques for Ethanol Engine without Secondary Fuel Tank*,” (JSAE 20119552, SAE 2011-32-0552), 17th Small Engine Technology Conference (SETC 2011), November 8-10, 2011, Sapporo, Japan
- ✓ **N. Chollacoop**, P. Saisirirat, T. Fukuda and A. Fukuda, “*Scenario Analyses of Road Transport Energy Demand: A Case Study of Ethanol as a Diesel Substitute in Thailand*,” Energies, 4 (2011), 108-125

2010

- ✓ S. Sukkasi, **N. Chollacoop**, W. Ellis, S. Grimley and S. Jai-In, “*Challenges and considerations for planning toward sustainable biodiesel development in developing countries: Lessons from the Greater Mekong Subregion*,” Renewable and Sustainable Energy Reviews, 14 (2010), 3100-3107
- ✓ N. Viriya-empikul, P. Krasae, B. Puttasawat, B. Yoosuk, **N. Chollacoop** and K. Faungnawakij, “*Waste shells of mollusk and egg as biodiesel production catalysts*,” Bioresource Technology, 101 (2010), 3765-3767
- ✓ S. Topaiboul and **N. Chollacoop**, “*Biodiesel as a lubricity additive for ultra low sulfur diesel*,” Songklanakarin Journal of Science and Technology, 32 (2010), 153-156

HIGHLIGHT INTERNATIONAL RESEARCH PROJECTS

Date	2019 – 2021
Institution(s)	APEC Energy Working Group (EWG)
Subject	Consultant of “Exploring Co-Benefit Opportunities for Renewable Energy and Energy Efficiency Projects in the APEC Region” (EWG04/2019A)
Date	2019 – 2020
Institution(s)	United Nations Environment Programme
Subject	Project Leader of “Mainstreaming Electric Mobility (focusing on 2&3 wheelers) in Thailand”
Date	2019
Institution(s)	United Nations Environment Programme
Subject	Facilitator of “Accelerating National Adaptation Plans and Integrating Transboundary Climate Risks into the NAP Process Asia LDCs Regional Training Workshop”
Date	2017 – 2019
Institution(s)	APEC Policy Partnership on Science, Technology and Innovation (PPSTI)
Subject	Project Overseer of “Policy Dialogue on Fuel Economy Platform” (PPSTI03/2017A)
Date	2016 – 2019
Institution(s)	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

- Subject **Project Leader** of “**Fuel efficiency polices** in the land transport sector in Thailand (Phase 1-3)”, which led to ASEAN Fuel Economy Roadmap endorsed in 24th ASEAN Transport Ministers Meeting on 8-9 Nov 2018 in Bangkok
- Date 2016 – 2018
Institution(s) APEC Energy Working Group (**EWG**)
Subject **Consultant** of “Guidelines toward High Biodiesel Blend Diesel (eg B20) Specification in the APEC Region” (EWG20/2016A)
- Date 2011 – 2013
Institution(s) APEC Energy Working Group (**EWG**)
Subject **Project Overseer** of “Best Practices in Energy Efficiency and Renewable Energy in Industry” (EWG19/2011A)
- Date Jul 2009 – Mar 2016
Institution(s) National Institute of Advanced Industrial Science and Technology (**AIST**), Waseda University, Thailand Institute of Scientific and Technological Research (**TISTR**) and King Mongkut’s University of Technology North Bangkok (**KMUTNB**)
Subject **MTEC Project Leader** of “Innovation on Production and Automotive Utilization of Biofuels from Non-food Biomass”, under Science and Technology Research Partnership for Sustainable Development (SATREPS) funded by Japan Science and Technology Agency (**JST**) and the Japan International Cooperation Agency (**JICA**)
- Date 2009 - 2010
Institution(s) Institut de Recherches sur la Catalyse et l’Environnement de Lyon (**IRCELYON**) and Laboratoire de Catalyse en Chimie Organique (**LACCO**)
Subject **MTEC Project Leader** of “Valorisation of Asian Tropical Non-Food Vegetable Oils as Alternative Fuels”
- Date May – Jun 2009
Institution(s) Asian and Pacific Centre for Transfer of Technology (**APCTT**) of United Nations Economic and Social Commission for Asia and the Pacific (**UNESCAP**)
Subject **National Expert** under the development of an institutional cooperation mechanism for strengthening capacity of member countries to promote the adoption and utilization of renewable energy technologies (RETs)
- Date Nov 2008 – Mar 2009
Institution(s) New Energy and Industrial Technology Development Organization (**NEDO**), Asian Representative Office
Subject **Project Leader** of “Investigation to Build up Technological Capability for Design, Scaling Up and Construction of Biodiesel Plant in Thailand, Phase 2: Glycerin Purification”, funded by **NEDO** (New Energy and Industrial Technology Development Organization), Asian Representative Office
- Date Apr – Sep 2008
Institution(s) GMS Environment Operations Center (**EOC**) of Asian Development Bank (**ADB**)
Subject **Project Researcher** of “Exploring CEP-Private Sector Partnership for developing Biodiesel as alternative fuel in the GMS”, TA 6289–REG: Greater Mekong Subregion – Core Environment Program (CEP) and Biodiversity Conservation Corridors Initiative (BCI) Phase 1 (2006 – 2009)
- Date Dec 2007 – Feb 2008
Institution(s) New Energy and Industrial Technology Development Organization (**NEDO**), Asian Representative Office
Subject **Project Leader** of “Investigation to Build up Technological Capability for Design, Scaling Up and Construction of Biodiesel Plant in Thailand”, funded by **NEDO** (New Energy and Industrial Technology Development Organization), Asian Representative Office
- Date Aug 2007 – Feb 2008
Institution(s) Toyota Motor Asia Pacific Engineering & Manufacturing Company (**TMAP-EM**)
Subject **Project Leader** of “Effectiveness of Oxidation Additives in biodiesel”, funded by Toyota Motor Corporation (**TMC**)
- Date Aug 2007 – Dec 2008
Institution(s) Ministry of Foreign Affairs, Thailand
Subject **Project Researcher** under Foreign Mission Integrated Projects (**FMIP**) on
 - Collaboration on biofuel development between USA and Thailand (Aug 07 – Feb 08)

- Collaboration on renewable energy from Brazil for Thailand renewable energy strategic plan (Sep 07 – Dec 08)

Date Jul 2005 – Feb 2007
 Institution(s) National Institute of Advanced Industrial Science and Technology (AIST)
 Thailand Institute of Scientific and Technological Research (TISTR)
 Subject **Project Researcher** of “Standardization and Upgrading of Biodiesel Fuel Quality”, funded by NEDO (New Energy and Industrial Technology Development Organization)

HIGHLIGHT NATIONAL RESEARCH PROJECT

Date 2019 – 2020
 Institution(s) National Energy Technology Center (ENTEC)
 Subject **Project Advisor** of “Development of **Energy Resilience** Assessment on Electricity Generation”

Date 2019 – 2020
 Institution(s) Energy Conservation (ENCON) Fund via Department of Alternative Energy Development and Efficiency (DEDE)
 Subject **Project Leader** of “Feasibility Study on **Energy Efficiency** in Bus Transport”

Date 2019 – 2020
 Institution(s) Energy Conservation (ENCON) Fund via Office of Transport and Traffic Policy and Planning (OTP)
 Subject **Project Researcher** of “**Tracking** of Energy Consumption Reduction from Transport Policy on **Metropolitan Rapid Transit**”

Date 2019 – 2020
 Institution(s) Energy Conservation (ENCON) Fund via Office of Transport and Traffic Policy and Planning (OTP)
 Subject **Project Researcher** of “**Tracking** of Energy Consumption Reduction from Transport Policy on **Double Rail Train Track**”

Date 2018 – 2019
 Institution(s) Energy Conservation (ENCON) Fund via Office of Transport and Traffic Policy and Planning (OTP)
 Subject **Project Researcher** of “Study and Development of **Marginal Abatement Cost** (MAC) Tool in Green house Gas Emission under Measures and Policies on **Energy Efficient Transport**”

Date 2017 – 2018
 Institution(s) National Science and Technology Development Agency (NSTDA) – Electricity Generating Authority of Thailand (EGAT) Joint Fund
 Subject **Project Researcher** of “Feasibility Study on **Trolley Electric Bus** in Pattaya City”

Date 2017 – 2018
 Institution(s) Energy Conservation (ENCON) Fund via Department of Alternative Energy Development and Efficiency (DEDE)
 Subject **Project Leader** of “Investigation on Appropriate Blending of Diesohol Fuel”

Date 2016 – 2017
 Institution(s) Energy Conservation (ENCON) Fund via Office of Transport and Traffic Policy and Planning (OTP)
 Subject **Project Researcher** of “**Tracking** of Energy Consumption Reduction from **Transport Policy**”

Date 2016 – 2017
 Institution(s) Road Safety Fund via Office of Land Transport (DLT)
 Subject **Project Researcher** of “Study on Safety Regulation Draft for **Electric Vehicle** Usage in Thailand”

Date 2015 – 2016
 Institution(s) National Science and Technology Development Agency (NSTDA) – Electricity Generating Authority of Thailand (EGAT) Joint Fund
 Subject **Project Researcher** of “Feasibility Study on **Electric Motorcycle** and Small Electric Vehicle in Thailand”