

1. Curriculum Vitae

Education:

Ph.D. Science (Nanobiotechnology) (2008)

Institute for Nanoscale Technology, University of Technology Sydney, Australia

Thesis: Selective targeting and thermal destruction of live cells using antibody functionalised gold nanoparticles

M.Sc. Applied Microbiology (1999)

King Mongkut's University of Technology Thonburi, Thailand

B.Sc. Microbiology (1994)

Srinakharinwirot University, Thailand

Work Experience:

- Head of School of Materials Science and Innovation

Faculty of Science, Mahidol University (August 2023 – Present)

-Program Secretary (Materials Science and Engineering PhD/M.Sc. Program)

Faculty of Science, Mahidol University (February 2024 – Present)

-Acting Head of School of Materials Science and Innovation

Faculty of Science, Mahidol University (October 2022 – July 2023)

-Program Director (Materials Science and Engineering PhD Program)

Faculty of Science, Mahidol University (October 2019 – February 2024)

-Head of Nanobiotechnology and Nanobiomaterials Research Laboratory

Faculty of Science, Mahidol University (April 2015- Present)

-Head of Program Cluster: Advanced Innovation for precision Medicine and Better Health and Wellness

Center of Excellence on Medical Biotechnology (CEMB) (April 2018 – March 2020)

-Associate Professor (in Nanotechnology)

Materials Science and Engineering Graduate Program, Faculty of Science, Mahidol University (October 2017 - Present)

-Head of Multidisciplinary Unit

Multidisciplinary Unit, Faculty of Science, Mahidol University (April 2016-March 2018)

-Assistant Professor (in Nanotechnology)

Materials Science and Engineering Graduate Program, Multidisciplinary Unit, Faculty of Science, Mahidol University (April 2015-September 2017)

-Lecturer

Materials Science and Engineering Graduate Program, Multidisciplinary Unit, Faculty of Science, Mahidol University (April 2014-March 2015)

-Receiving the invitation to join Kyushu University as Assistant Professor in 2013

Declining the offer to take a lecturer position at Mahidol University

-Specially Appointed Researcher

WPI Immunology Frontier Research Center, Osaka University, Japan (2011-2014)

-Research Associate

School of Biotechnology and Biomolecular Sciences University of New South Wales, Australia (2008-2009)

-Working in Seafood Industry

Working in seafood industry as QC Supervisor for 1 year and Production Supervisor for ~ 4 years

Honour, Award, and Scholarship:

Invited Speaker in International Conference on Biotechnological Approaches to Mitigate the Current Challenges-2025 (BIOTA2.0-2025), September 25-26, 2025, Sona College of Arts and Science, Salem, TN, India

Talk entitled “Gold nanorods with light: The promising move for biomedical applications”

Senior Fellow PSF2023 (Advance HE, 2024)

Invention Award from NRCT (Honorable Mention Level, Year 2023)

Metal nanoparticles with antibacterial property for industrial use

Senior lecturer in AUT Winter School “Inorganic Nanocarriers for delivery of therapeutic agents: diagnosis and treatment ” Amirkabir University of Technology, Iran 2022

One of recipient members of a consolation prize of a research entitled “The study of the use of gold nanoparticles in the thermosyphon heat pipe system”

Recipient of Attending China-ASEAN Education Cooperation Week 2019 (July 22 – July 24, 2019)

Recipient of funding support from the 25th Science and Technology Research Grant from Thailand Toray Science Foundation (TTSF)

Invited Speaker in TSB2018 The 30th Annual Meeting of the Thai Society for Biotechnology and International Conference (Thailand-Japan Joint Seminar), Bangkok, Thailand 2018

Talk entitled “The forthcoming applications of gold nanoparticles in diagnostics and therapeutics”

Australia-APEC Women in Research in Fellowship 2018

Host Institute: School of Mathematical and Physical Science, University of Technology Sydney (Honorary Appointment)

Keynote Speaker in International Workshop on Health Risk Assessment of Nanoparticles, K.S. Rangasamy College of Technology, India 2017

Lecturer entitled “Nanotoxicology: Biological and cellular effects of different nanoparticles”

Recipient of Attending Bristol Tackle Global Challenges Workshop, Bristol UK, 2017

Fully funding support by Bristol Tackle Global Challenge, Bristol University, UK (March 13-17, 2017)

Award Winner in Tech Plan Demo Day (Leave a Nest) in Thailand 2016

Project: Innovative application of gold nanoparticles for wound healing

Third Prize (Oral Presentation: Theme Bio-nanomaterials for Biomedical Technology) in NANO-15, India 2015

Title: TiO₂ nanoparticles and their impact on mouse and human immune cells

Invited Speaker in Photonics Global Conference, Singapore 2012

Talk entitled “Nanotoxicology: Biological and cellular effects of different nanoparticles”

JSPS Postdoctoral Fellowship 2009

Host Institute: Department of Applied Chemistry, Faculty of Engineering, Kyushu University, Japan (2009-2011)

First Prize Poster Presentation on UTS Science’s Day 2008

Faculty of Science, University of Technology Sydney, Australia

Institute for Nanoscale Technology Doctoral Scholarship 2005-2008

Faculty of Science, University of Technology Sydney, Australia

Vice-Chancellor's Postgraduate Research Student Conference Fund 2007-2008

University of Technology Sydney, Australia

Postgraduate Grant from Shell (Thailand) Co., Ltd 1998

Research Project: Keratinase enzyme from chicken feathers

Research exchange student scholarship 1998

Faculty of Engineering, The University of Melbourne, Australia (1998)

2.Grants Acquired from the Past to Present

17. Mahidol-Sussex Seed Fund 2025 (1 Year)

Principal investigator of a project entitled “Sustainable coating and nanomaterials” in collaboration with Sussex University’s Investigator (400,000 B)

16.Government budget under Mahidol University 2022 (FF66: 1 Year)

Principal investigator of a project entitled “Surfaced modified gold nanoparticles for wound healing treatment in zebrafish” (1,666,000 B)

15.Research Cluster: Integrated and Multidisciplinary, Mahidol University (FY2022: 1 Years)

Principal investigator of a project entitled “Biological/Nano materials and materials technology (3D-printing and encapsulation) for value-added food products (2,000,000 B)

14.Mid Career Research Grant (FY2022: 3 Years)

Principal investigator of a project entitled “Combination of calcined green mussel shells and nanoshells for inhibiting microbial growth in cement-based tile grout” Grant Code: N42A650347 (2,500,000 B)

13. Government budget under Mahidol University 2022 (FF65: 1 Year)

Principal investigator of a project entitled “Nanotechnology-based drug delivery system for targeted cell destruction” Grant Code: 864092101000 (1,300,000 B)

12. Fundamental Fund (Frontier Research) under Mahidol University 2021 (FF64: 1 Year)

Principal investigator of a project entitled “The use of gold nanoparticles in tissue engineering and regenerative medicine” Grant Code: 864092101000 (1, 000,000 B)

11. Government budget under Mahidol University 2019 (1 Year)

Principal investigator of a project entitled “Preparation of metal nanoparticles for agricultural and medical applications”

10. S&T Postgraduate Education and Researcher Development Office: PERDO Center of Excellent on Medical Biotechnology (CEMB) (FY2018, FY2019, FY2020, 3 Years)

Principal investigator of a project entitled “Detection of circulating tumour cells (CTCs) in metastatic breast cancer using magnetic and gold nanoparticles”

9. Center of Excellent on Environmental Health and Toxicology (EHT) (FY2018, FY2019, FY2020, 3 Years)

Principal investigator of a project entitled “Detection of trace arsenic (III) in aqueous solution using different forms of nanoparticles”

8. Thailand Research Fund (TRF; RSA) (FY2015, FY2016, FY2017, 3 Years)

Principal investigator of sub-project “Golden cytotoxic T cell capsule for cancer treatment”

7. International Research Network Grant (IRN, TRF) (FY2016, FY2017, FY2018, 3 Years)

Associate researcher on the research project entitled “Foodborne pathogen detection using nanoparticles”

6. New Potential Lecturer Grant, Faculty of Science, Mahidol University (FY2016, FY2017, 2 Years)

Principal investigator of a project entitled “Nanomaterials in Therapeutic Applications: Potentiality and Peril”

5. NANOTEC Center of Excellence at Mahidol University, National Nanotechnology Center, Thailand (FY2015, FY2016, FY2017, 2.5 Years)

Principal investigator of a sub-project entitled “Growth activation of fibroblast cells using gold nanoparticles”

4. Talent Management Program, Mahidol University (FY2014, 1 Year)

Principal investigator of a project entitled “The thermal effect of heating by short-wavelength NIR irradiation on different surface modified gold nanorods”

3. Japan Science and Technology (JST) A-Step (FY2013, 8 Months)

Principal investigator of a project entitled “In vitro study of bacteria destruction and wound healing of skin using gold nanoparticles”

2. Grant in Aid for Young Scientist B JSPS (FY2012, FY2013, 2 Years)

A principal investigator of a project entitled “Early detection of disease using surface enhance Raman scattering (SERS)-dynamic gold nanoparticles to detect inflammatory response in cells”

1. Grant-in-Aid for JSPS Fellows supported by JSPS (FY2009, FY2010, 2 Years)

Co-principal investigator with Prof. Takuro Niidome of a project entitled “The efficiency of gold nanoparticles conjugated to antibiotics for destruction *Toxoplasma gondii* tachyzoites and transdermal drug delivery”

3. List of Achievements

Peer Review journals: (h-index = 19)

47. Poomrattanagoon, S., Pissuwan, D. Synergistic effect of gold nanorods coated with type I collagen and LED irradiation on wound healing in human skin fibroblast cells, 2025, Vol.7, 3867-3880. [corresponding author](#)

46. Sathiensathaporn, S., Porta, A. S., Baowan, D., Pissuwan, D., Wongtrakoongate, P., Roig, A., Katewongsa, P.K. Nanoencapsulation of vitamin B₂ using chitosan-modified poly(lactic-co-glycolic acid) nanoparticles: Synthesis, characterization, and in vitro studies on simulated gastrointestinal stability and delivery, 2025, Vol.90, e171631.

45. Nair, A. J., Pissuwan, D. Improving the aqueous solubility and antibacterial activity of triclosan using re-dispersible emulsion powder stabilized with gold nanoparticles, Nanoscale Advances, 2025, Vol.7, 1421-1431. (I. F. 4.6) [corresponding author](#)

44. Kasemsuk, N., Rungsiyakull, P., Pissuwan D. Biogenic gold nanoparticles stabilized with silk sericin and their impacts on osteogenic induction and surface modification of polymethyl methacrylate, Applied Surface Science, 2025, Vol. 681, Article number 161591. (I. F. 6.3) [corresponding author](#)

43. Sathiensathaporn, S., Porta, A.S., Baowan, D., Pissuwan, D., Wongtrakoongate, P., Roig, Katewongsa, K.P. Nanoencapsulation of vitamin B₂ using chitosan-modified poly(lactic-co-glycolic acid) nanoparticles: Synthesis, characterization, and in vitro studies on simulated gastrointestinal stability and delivery, Journal of Food Science, 2025, Vol.90 (1), e17631. (I. F. 3.2)

42. Poomrattanagoon, S., Ounkaew, A., Pissuwan, D., Narain, R. Photochemical synthesis of sericin-coated gold nanorods and their antibacterial activity under low-level near-infrared light, Langmuir, 2024, Vol.40 (41), 21795-21803 (I.F. 3.7)

41. Jongrungsomran, S., Pissuwan, D., Yavirach, A., Rungsiyakull, C., Rungsiyakull, P. The integration of gold nanoparticle into dental biomaterials as a novel approach for clinical advancement: A narrative review, Journal of Functional Biomaterials, 2024, Vol.15, 291. (I.F. 5.0)

40. Wattanakul, P., Pissuwan, D. Breast Cancer cell destruction using individually encapsulated cytotoxic T lymphocytes in polyelectrolyte layer coated with dual nanoparticles in combination with magnetic exposure and laser irradiation, Nano Select, In Press. [corresponding author](#)

39. Romphosri, S., Pissuwan, D., Wattanavichean, N., Buabthong, P., Waritanant, T. Rapid alignment-free bacteria identification via optical scattering with LEDs and YOLOv8, Scientific Reports, 2024, Vol.14, 20498 (I.F. 3.8)

37. Kamble, M. T., Soowannayan, C., Chaicherd, S., Medhe, S. V., Rudtanatip, T., Pissuwan, D., Wongprasert, K. Bimetallic nanoparticles with sulfated galactan eliminate *Vibrio parahaemolyticus* in shrimp *Penaeus vannamei*, *Fish and Shellfish Immunology*, 2004, Vol.151, 109753. (I.F. 4.1)
36. Poomrattanagoon, S., Pissuwan, D. Gold nanoparticles coated with collagen-I and their wound healing activity in human skin fibroblast cells, *Heliyon*, 2024, Vol.10(13), E33302 (I.F. 3.45)
corresponding author
35. Payomhom, P., Panyain, N., Sakonsinsiri, C., Wongtrakoongate, P., Lertsuwan, K., Pissuwan, D. & Katewongsa, K. P., Chitosan-Coated Poly(lactic-co-glycolic acid) Nanoparticles loaded with ursolic acid for breast cancer therapy, *ACS Applied Nano Materials*, 2024, Vol.7(5), 5383-5395 (I.F. = 5.9)
34. Pipatwatcharadate, C., Iyer, P.R., Pissuwan, D. Recent update roles of magnetic nanoparticles in circulating tumor cell (CTC)/non-CTC separation, *Pharmaceutics* 2023, .Vol.15(10), 2482
corresponding author
33. Chotithammakul, S., Pissuwan, D. Colorimetric sensing of Gram-negative and Gram-positive bacteria using 4-mercaptophenylboronicacid-functionalized gold nanoparticles in the presence of polyethylene glycol, *ACS Omega*, 2023, Vol. 8 (14), 13456–13464 (I.F. = 4.132) *corresponding author*
32. Jiracheewanun, S., Cortie, M. B., Pissuwan, D. Thermal effect during laser-induced plasmonic heating of polyelectrolyte-coated gold nanorods in well plates, *Nanomaterials*, 2023, Vol. 13 (5), 845 (I.F. = 5.719) *corresponding author*
31. Wiranchana, S., Pissuwan, D. Micro/Nano structural investigation and characterization of mussel shell waste in Thailand as a feasible bioresource of CaO, *Materials*, 2023, Vol. 16, 805 (I.F. = 3.748)
corresponding author
30. Pissuwan, D., Poomrattanang, S., Chungchaiyart, P. Trends in using gold nanoparticles for inducing cell differentiation: A Review, *ACS Applied Nano Materials*, 2022, Vol.5(3)3, 3110-3120 (I.F. = 5.097) *corresponding author*
29. Chotithammakul, S., Cortie, M. B., Pissuwan, D. Comparison of single-and mixed-sized gold nanoparticles on lateral flow assay for albumin detection, *Biosensors*, 2021, 11(7), 209 (I.F. = 5.52)
corresponding author
28. Pissuwan, D., Gazzana, C., Mongkolsuk, S., Cortie, M.B. Single and multiple detections of foodborne pathogens by gold nanoparticle assays, *WIREs Nanomedicine & Nanobiotechnology*, 2020, 12(1), e1584 (I.F. = 6.14) *corresponding author*
27. Chaicherd, S., Killingsworth, M.C., Pissuwan, D. Toxicity of gold nanoparticles in a commercial dietary supplement drink on connective tissue fibroblast cells, *SN Applied Sciences*, 2019, 1, article number 336 *corresponding author*
26. Sowmiya, R., Osotchan, T., Pissuwan, D. The impact of gold nanoparticles with low energy irradiation treatment on temperature induction and cell viability of breast cancer cell, *Springer Proceedings in Materials*, 2019, 86-93
25. Wattanakul, P., Pissuwan, D. Evaluation of T cells individually encapsulated within polyelectrolyte-coated gold nanorod shell after cryopreservation or –80 °C preservation, *The International Journal of Polymeric Materials and Polymeric Biomaterials*, 2019, In Press (I. F. = 2.127) *corresponding author*

24. Wattanakul, P., Killingworth, M., Pissuwan, D. Biological response of T cells encapsulated with polyelectrolyte coated gold nanorods and their cellular activities in a co-culture system, *Applied Nanoscience*, 2017, Vol.7(8), pp.667-679 (I.F. =2.951) [corresponding author](#)
23. Sukwong, P., Kongseng, S., Chaicherd, S. Yoovathaworn, K., Tubtimkuna, S., Pissuwan, D. Comparison effects of titanium dioxide nanoparticles on immune cells in adaptive and innate immune system, *IET Nanobiotechnology*, 2017, Vol.11(7), pp. 759-765 (I. F. = 2.059) [corresponding author](#)
22. Pissuwan, D., Hattori, Y. Detection of adhesion molecules on inflamed macrophages at early stages using SERS probe gold nanorods, *Nano-Micro Letter*, 2017, Vol.9(1), UNSP8 (I.F. = 7.381) [corresponding author](#)
21. Kongseng, S., Yoovathaworn, K., Wongprasert, K., Chunhabundit, R., Sukwong, P., Pissuwan, D. Cytotoxic and inflammatory responses of TiO₂ nanoparticles on human peripheral blood mononuclear cells, *Journal of Applied Toxicology*, Vol.36(10), pp. 1364-1373 (I.F. 2.909) [corresponding author](#)
20. Sukwong, P., Somkid, K., Kongseng, S., Pissuwan, D., Yoovathaworn, K. Respiratory tract toxicity of titanium dioxide nanoparticles and multi-walled carbon nanotubes on mice after intranasal exposure, *Micro & Nano Letters*, 2016, 11(4), pp.183-187 (I.F. = 0.841)
19. Pissuwan, D. , Niidome, T. Polyelectrolyte-coated gold nanorods and their biomedical applications, *Nanoscale*, 2014, Vol.7, pp.59-65 (I.F. = 7.233) [co-corresponding author](#)
18. Dowd A., Pissuwan D., Cortie B. M. Optical readout of the intracellular environment using nanoparticle transducers, *Trends in Biotechnology*, Vol. 32, pp.571–577 (I.F. = 13.578)
17. Pissuwan, D., Hobro, A., Pavillon, N., Smith, N. Distribution of label free cationic polymer-coated gold nanorods in live macrophage cells reveals formation of groups of intracellular SERS signals of probe nanoparticles, *RSC Advances*, 2014, Vol.4, pp.5536-5541 (I.F. = 2.936) [corresponding author](#)
16. Pissuwan, D., Kumagai, Y., Smith, N. Effect of surface-modified gold nanorods on the inflammatory cytokine response in macrophage cells, *Particle & Particle Systems Characterization*, 2013, Vol. 30, pp. 427-433 (I.F. = 4.384) [corresponding author](#)
15. Nose, K., Pissuwan, D., Goto, M., Katayama, Y., Niidome, T. Gold nanorods in an oil-base formulation for transdermal treatment of Type 1 diabetes in mice, *Nanoscale*, 2012, Vol.4, pp. 3776-3780 (I. F. = 7.233) [corresponding author](#)
14. Kurihara, R., Pissuwan, D., Mori, T., Katayama, Y., Niidome, T. Biodistribution and tumor localization of PEG-modified dendritic poly(L-lysine) oligonucleotide complexes, *Journal of Biomaterials Science-Polymer Edition*, Vol.23, pp.2369-2380 (I.F. = 1.911)
13. Pissuwan, D., Nose, K., Kurihara, R., Kaneko, K., Tahara, Y., Kamiya, N., Goto, M., Katayama, Y., Niidome, T. A solid-in-oil dispersion of gold nanorods can enhance transdermal protein delivery and skin vaccination, *Small*, 2011, Vol. 7, pp. 215-220 (I.F. = 9.958) [corresponding author](#)
12. Pissuwan, D., Niidome, T., Cortie, M.B. The forthcoming applications of gold nanoparticles in drug and gene delivery systems, *Journal of Controlled Release*, 2011, Vol. 149,(1), pp.65-71 (I. F. = 7.877)

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11. Niidome, T. Shiotani, A., Akiyama, Y., Akira, O., Keisuke, N., Pissuwan, D., Niidome, Y. Theragnostic approaches using gold nanorods and near infrared light, *Yakugaky Zasshi*, Vol.130(12), 1671-1677 (I. F. = 0.293)
 10. Pissuwan,D., Cortie,C.H., Valenzuela,S.M., Cortie,M.B. Functionalised gold nanoparticles for controlling pathogenic bacteria, *Trends in Biotechnology*, 2010, Vol.28(4), pp.207-213 (I. F. = 13.578)
 9. Pissuwan, D., Boyer, C., Gunasekaran, K., Davis, T. P., Bulmus, V. *In vitro* cytotoxicity of RAFT polymers, *Biomacromolecules*, 2010, Vol.11(2), pp.412-420 (I. F. = 5.738)
 8. Boyer, C., Priyanto, P., Davis, T. P., Pissuwan, D. , Bulmus, V. , Kavallaris, M. , Teoh, W. Y., Amal, R. , Carroll, M. , Woodward, R. , St Pierre, T. Anti-fouling magnetic nanoparticles for siRNA delivery, *Journal of Materials Chemistry*, 2010, Vol.20, pp.255-265 (I. F. = 6.626)
 7. Pissuwan, D., Stokes, N. Putting gold nanorods to work, *Gold Bulletin*, 2008, Vol.41(1), pp.NTGN4-NTGN4 (I. F. = 1.767)
 6. Pissuwan, D., Valenzuela,S.M., Miller. C.M., Killingsworth, M.C., and Cortie, M.B. Destruction and control of *Toxoplasma gondii* tachyzoites using gold nanoparticle/antibody conjugates, *Small*, 2009, Vol.5(9), pp.1030-1034 (I. F. = 9.958)
 5. Pissuwan, D., Valenzuela,S.M., and Cortie,M.B. Prospects for gold nanorod particles in diagnostic and therapeutic applications, *Biotechnology & Genetic Engineering Reviews* (BGER), 2008, Vol.25, pp.93-112 (I. F. = 1.700)
 4. Pissuwan,D., Cortie, C.H, Valenzuela,S, Cortie,M.B. Gold nanosphere-antibody conjugates for therapeutic applications, *Gold Bulletin*, 2007, Vol.40(2), pp.121-129 (I. F. = 1.767)
 3. Pissuwan, D., Valenzuela, S.M., Miller, C.M., and Cortie, M.B. Golden bullet? Selective targeting of *Toxoplasma gondii* tachyzoites using antibody-functionalized gold nanorods, *Nano Letters*, 2007, Vol.7(12), pp.3808 – 3812 (I. F. = 12.080)
 2. Pissuwan, D., Valenzuela, S.M., Killingsworth M.C., Xu X.,and Cortie, M.B. Targeted destruction of murine macrophage cells with bioconjugated gold nanorods, *Journal of Nanoparticle Research*, 2007, Vol.6, pp.1109-1124 (I. F. = 2.127)
 1. Pissuwan, D., Valenzuela, S.M., Cortie, M.B. Therapeutic possibilities of plasmonically heated gold nanoparticles, *Trends in Biotechnology*, 2006, Vol.4(2), pp.62-67 (I. F. = 13.578)

Book Chapter:

3. Pissuwan, D. Injectable hydrogel. *Natural and Synthetic Hydrogels*, Chapter 10, 2025, pp.241-253
2. Pissuwan, D. Monitoring and tracking metallic nanobiomaterials *in vivo* . *Monitoring and Evaluation of Biomaterials and Their Performance in Vivo*, Chapter 7, 2017, pp. 135-149
1. Pissuwan D. and Niidome T. Gold nanoparticles for the development of transdermal delivery systems. *Functional Nanoparticles for Bioanalysis, Nanomedicine, and Bioelectronic Devices (ACS publication)*, Vol. 2, Chapter 5, 2013, pp.69-80

Patent:

A Japanese patent (patent application number JP2012001461-A).

Journal and Magazine Reports

1. Pissuwan, D. Valenzuela, S. M., Cortie, M. B. Gold nanoparticles for photothermal therapeutics, *Material Australia*, Vol.39(4), 2006, p.20

Interviewed by a Journalist:

1. Drug delivery: from needles to nanorods? , Royal Society of Chemistry (RSC) Chemistry World
<http://www.rsc.org/chemistryworld/News/2010/December/17121001.asp>

Invited Lecturer/Seminar:

Invited Lecturer

14. Bio/Nano-Materials in Regenerative Medicine, SIBS514 Regenerative Medicine, March 27, 2025, Siriraj Medical Research Center (SiRM), Bangkok, Thailand
13. Bio/Nano-Materials in Regenerative Medicine, SIBS514 Regenerative Medicine, April 10, 2024, Siriraj Medical Research Center (SiRM), Bangkok, Thailand
12. Mediation of Gold Nanoparticles in Photothermal Therapy in AUT Winter School (Inorganic Nanocarriers for Delivery of Therapeutic Agents: Diagnosis and Treatment), March 5, 2022, Amirkabir University of Technology, Iran
11. Bio/Nano-Materials in Regenerative Medicine, SIBS514 Regenerative Medicine, April 8, 2022, Siriraj Medical Research Center (SiRM), Bangkok, Thailand
10. Bio/Nano-Materials in Regenerative Medicine, SIBS514 Regenerative Medicine, March 31, 2021, Siriraj Medical Research Center (SiRM), Bangkok, Thailand

9. Bio/Nano-Materials in Regenerative Medicine, SIBS514 Regenerative Medicine, March 31, 2020, Siriraj Medical Research Center (SiRM), Bangkok, Thailand
8. Bio/Nano-Materials in Regenerative Medicine, SIBS514 Regenerative Medicine, March 31, 2019, Siriraj Medical Research Center (SiRM), Bangkok, Thailand
7. Nanoparticles in Biology and Medicine, BIO100 Class, August 28, 2018, King Mongkut's University of Technology Thonburi, Bangkok, Thailand
6. Nanoparticles and Environment (Lecture and workshop), STEM Workshop for high school teachers, March 4, 2018, Chulabhorn Graduate Institute, Bangkok, Thailand
5. Nanotechnology: Applications in Food and Nutrition, NUNU608 Class, Nutritional Program, April 2017, 2018, Mahidol University, Bangkok, Thailand
4. Biological applications of gold nanoparticles, March 5, 2011, Saga Prefectural Chienkan Senior High School, Saga, Japan
3. Tiny gold in biological/biomedical applications, September 14, 2010, Kumamoto Prefectural Daini High School, Kumamoto, Japan
2. Selective targeting of *Toxoplasma gondii* tachyzoites using antibody-functionalised gold nanorods, Bionanotechnology Class for undergraduate students, November 4, 2008, Faculty of Science, University of Technology Sydney, Australia
1. Selective targeting of *Toxoplasma gondii* tachyzoites using antibodyfunctionalised gold nanorods, Bionanotechnology Class for undergraduate student class, Faculty of Science, March 17, 2008, University of Technology Sydney, Australia

Invited Seminar (Sharing Research)

9. Nanomaterials in therapeutic applications: Potentiality and peril, December 25, 2017, Department of Microbiology, Faculty of Science, Mahidol University, Bangkok, Thailand
8. Gold nanoparticles: How they can involve in biomedical applications, January 20, 2017, National Cancer Institute (NCI), Bangkok, Thailand
7. Sharing experiences of Tech Planter in Thailand 2016, March 9, 2017, Faculty of Science, Mahidol University
6. The role of gold nanoparticles in biomedical applications, February 26, 2016, Faculty of Pharmacology, Silpakorn University, Nakorn-Pathom, Thailand
5. Gold nanoparticles in diagnostic therapeutic, and theranostic applications, November 5, 2015, Department of Biotechnology, Faculty of Science, Mahidol University, Bangkok, Thailand
4. A solid in oil dispersion of gold nanorods for enhanced transdermal delivery, October 17, 2012, Faculty of Science, Mahidol University, Bangkok, Thailand

3. A solid in oil dispersion of gold nanorods to enhance protein delivery and immune response through the skin, June 13, 2011, Immunology Frontier Research Center, Osaka University, Japan
2. Gold nanorod for transdermal delivery, August 17, 2011, Faculty of Science, Department of Microbiology, King Mongkut's University of Technology Thonburi, Bangkok, Thailand
1. Selective targeting of *Toxoplasma gondii* tachyzoites using antibodyfunctionalised gold nanorods, April 3, 2008, Nanomechanics Group, School of Mathematics and Applied Statistics, University of Wollongong, Australia

Scientific conferences: Oral presentation

10. Pissuwan, D., Chotithammakull, S., Chaicherd, S., The potential use of gold nanoparticle-based assay for target molecule detection, Materials Oceania 2019 Conference, September 16-18, 2019, Melbourne, Australia
9. Pissuwan, D., Wattanakull, P., Killingsworth, M., Biological responses to encapsulating layers and cellular activities in a co-culture system of T cells encapsulated with PSS-coated gold nanorods, Gold 2018, July 15-18, 2018, Paris, France
8. Pissuwan, D., Wattanakull, P., Killingsworth, M., Cellular activity of human T-cells encapsulated with polyelectrolytes and gold nanorods and their function on cancer destruction, The 17th TRF-OHEC Annual Congress 2018 (TOAC 2018), January 10-12, 2018, The Regent Cha-Am Beach Resort, Phetchaburi, Thailand
7. Pissuwan, D., Kongseng, S., Chaicherd, S., Wattanakul, P., Tubtimkuna, S., Sukwong, P., Yoovathaworn, K., Wongprasert, K., and Chunhabundit, R. Biological effects of titanium dioxide nanoparticles on human immune cells, The 8th Princess Chulabhorn International Science Congress, Shangri-La HorteL, November 13-17, 2016, Bangkok Thailand
6. Pissuwan, D., Kongseng, S., Sukwong, P., Yoovathaworn, K. TiO₂ nanoparticles and their impact on mouse and human immune cells, International Conference on Nanomaterials and Nanotechnology (NANO-15), Dcember 7-10, 2015, KSR Campus, Tiruchengode, Tamil Nadu, India
5. Pissuwan, D., Hobro, A., Pavillon, N., Smith, N. The uptake and intracellular signal monitoring in macrophage cells of different surface modified gold nanorods using surface enhanced Raman scattering spectroscopy, 7th International Conference on Advanced Vibrational Spectroscopy (ICAVS), August 25-30, 2013, Kobe, Japan
4. Pissuwan, D., Smith, N., Gold nanorods: Tool to detect early stage inflammation and their surface effects on inflammatory response in macrophage cells, The 4th International Nanomedicine Conference, July 1-3, 2013, Sydney, Australia
3. Pissuwan, D., Nose, K., Kurihara, K., Kaneko, K., Tahara, Y., Kamiya, N., Goto, M., Katayama, Y., Nidome, T., Enhancement of protein delivery and immune response through the skin using a solid-in-oil dispersion of gold nanorods, Material Research Society Fall Meeting, November 29-December 3, 2010, Boston, USA

2. Pissuwan, D., Valenzuela, S.M, Cortie, M.B., Selective targeting of *Toxoplasma gondii* tachyzoites using antibody-functionalised gold nanorods, The 9th Annual Cross Disciplinary Postgraduate Student Conference, August 17, 2007, University of Technology Sydney, Australia

1. Pissuwan, D., Valenzuela, S.M, Cortie, M.B., Gold antibody conjugates for therapeutic applications, ECR/Postgraduate Student Symposium on Nanotechnology, December 8-9, 2005, Brisbane, Australia

Invited Seminar in Laboratory Safety

3. The concept of using TIS No. 2667-2558 for safety management of laboratory, Workshop: ESPReL trainer, December 22, 2021, Faculty of Science, Mahidol University, Bangkok, Thailand

2. A panel discussion on safety improvement in the laboratory to reach safety standard (ESPreL Peer Evaluation & TIS 2677-2558), October 5, 2021, Mahidol University, Bangkok, Thailand

1. How to do ESPReL checklist for Laboratory Safety, August 19, 2019, Faculty of Science, Mahidol University, Bangkok, Thailand

Public services:

-Editorial board member:

Editorial advisory board of APL Photonics (2023 -present)

Editorial board members of Vocational Institute of Southern Part Zone 3 (KRIS journal) (2021-present)

Editorial board member of ISRN Nanomaterial (2011-2012)

- Early Career Advisory Board

Early career advisory board for APL Photonics (2021)

-Associate Editor

ISI Journal *Micro & Nano Letters* (2016-2018)

-Manuscript reviewer

Reviewed manuscripts for ISI journals: *ACS Medicinal Chemistry Letters*, *Small*, *Future Nanomedicine*, *Advanced Functional Materials*, *International Journal of Nanomedicine*, *Journal of Biomedical Nanotechnology*, *Langmuir*, *Micro&Nano Letters*, *Journal of Chemistry B*, *Colloids and Surfaces B: Biointerfaces*, *Journal of Nanoparticle Research*, *IET Nanobiotechnology*, *ACS Applied Nanoscience*, *Coatings* etc.

-Selected Project/Grant/Career Evaluator

9. Outstanding researcher Thammasat University evaluator (2024)
8. Career evaluator (NSTDA-NANOTEC) (January 31, 2024)
7. RGN research project evaluator (September 27, 2024)
6. Research proposal evaluator for National Vaccine Institute (September 14, 2023)
5. Biomedical Innovation and Technologies Doctoral Program (BIOTIN), a Horizon Europe project granted under Marie-Sklódowska Curie (MSCA) COFUND 2021 programme (March 13, 2023)
4. Research proposal evaluator, The National Science Center, Poland (March 18, 2019)
3. STEM project, Chulabhorn Graduate Institute, Bangkok, Thailand (August 18, 2018)
2. Research proposal evaluator, The National Science Center, Poland (September 16, 2017)
1. Innovation and Technology Assistance Program, NSTDA, Bangkok, Thailand (May 9, 2017)

-Selected Conference/Meeting Committee

4. The 7th Asian Symposium on Emulsion Polymerization and Functional Polymeric Microspheres (ASEPFPM) 2024, June 20-22, 2024, Chiang Mai, Thailand
3. International Advisory Committee ICGSCE-2018, September 5-6, 2018, Kuala Lumpur, Malaysia
2. Chair session in International Conference on Nanomaterials and Nanotechnology (NANO-15) (Advance Nanomaterials: Synthesis), December 7-10, 2015, KSR Campus, Tiruchengode, Tamil Nadu, India
1. Chair session and committee in NanoThailand2014 International conference, November 25-28, 2014, The Thailand Science park Convention Center, Bangkok, Thailand

- International PhD thesis examiner:

An external examiner for a Ph.D. thesis of a student at Wollongong University, Australia (2014)

-Long distance mentor:

For a research student under mentoring program of University of Technology Sydney (2012)