Sarawut Cheunkar, Ph.D.
Assistant Professor

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Education:

Ph.D. in Chemistry, Pennsylvania State University, Pennsylvania, USA	May 2013
B.S. in Chemistry (Honors), Mahidol University, Bangkok, Thailand	March 2004

Professional Experience:

Assistant Professor, Biotechnology, King Mongkut's University of Technology	2023-present
Lecturer, Biotechnology, King Mongkut's University of Technology	2013-2023
Staff Research Associate, University of California, Los Angeles, USA	2010-2012
Graduate Research Assistant, Pennsylvania State University	2006-2009
Teaching Assistant, Pennsylvania State University	2007-2008
Teaching Assistant, Mahidol University	2004-2005

Teaching

BIT 661: Nanobiotechnology
BIT 666: Trends in Modern Biotechnology
BIT 691: Seminar I
BIT 692: Seminar II
BIT 693: Seminar III
BIT 761: Selected Topics (Microbial Biofilm for Biogas Production)
BIT 763: Biointerfaces
BIT 697: Thesis
NST 601: Introduction to Nanoscience and Nanotechnology
NST 602: Fabrication and Characterization in Nanotechnology
MEN 312: Materials Engineering Research Tools
PHY 400: Principle of Instrumentation and Measurements
PHY 602: Advance Nanomaterials Processing

Honors and Awards:

Royal Thai Government Scholarship, SFR	2006-2011

Professional Service:

JSTP Panel Member, NSTDA	2013-2017
PACCON 2019, *"Together for the Benefit of Mankind"*: **Reviewer**	2019
Chemosphere, Invited Reviewer	2020

Symposium Organizing:

PACCON 2015, *"Innovative Chemistry for Sustainability of the AEC and Beyong"*: **Chair Committee**	2015
ASEAN plus 2013, "*The 2nd Regional Symposium on Biosensors, Biodiagnostics, and Biochips"*: **Committee**	2013

Funding:

Current:

Fundamental Fund/TSRI (GA_impedance), 460,735 THB	2023-2024
Fundamental Fund/TSRI (CHG_syntroph), 369,600 THB	2023-2024
Fundamental Fund/TSRI (Paper-based), 438,075 THB	2023-2024

Past:

KMUTT Funding, 200,000 THB/2 years	2013-2015
NRU Funding, 1,200,000 THB	2015-2017
ARDA, 1,726,894 THB	2016-2017
National Research Funding, 492,200 THB	2018-2019
Energy Policy and Planning Office, Ministry of Energy, 3,500,000 THB	2018-2019
The Asahi Glass Foundation, 600,000 Yen	2018-2019
TRF for Master Research Grants, 600,000 THB	2017-2019
ARDA, 1,871,211 THB	2020-2021
Fundamental Fund/TSRI, 469,800 THB	2021-2022

Publication:

(18) Yossawadee Sriondee, Pasara Vijitvarasan, Arunothai Rattanachata, Hideki Nakajima, Sukunya Oaew, **Sarawut Cheunkar**, Real-time kinetic analysis and detection of glycated hemoglobin A1c using quartz crystal microbalance-based aptasensor, *Analytical Methods* **2024**, accepted.

(17) Boonpala Thongcumsuk, Weerapong Woraprayote, Thitiphorn Janyaphisan, **Sarawut Cheunkar**, Sukunya Oaew, Microencapsulation and peptide identification of purified bioactive fraction from spirulina protein hydrolysates with dipeptidyl peptidase IV (DPP-IV) inhibitory activity, *Food Bioscience* **2023**, *56*, 103438.

(16) **Cheunkar S.**, Oaew S., Parnsubsakul A., Asanithi P. Reactive argon plasma activation of screen-printed carbon electrodes for highly selective dopamine determination, *Analytical Methods* **2022**, *14*, 4193-4201.

(15) Pasara Vijitvarasan, **Sarawut Cheunkar**, Sukunya Oaew, A point-of-use lateral flow apatsensor for naked-eye detection of aflatoxin B1, *Food Control* **2022**, *134*, 108767.

(14) Khanjanaporn Whanpueth, Pornpimol Wachiranimit, Warratas Narrator, Siriganya Kampanthong, Nant Nammahachak, Oraphan Chirayutthanasak, Nattarat Kengkla, Manisara Phiriyawirut, Pijarn Jornsanoh, **Sarawut Cheunkar**, Sutatch Ratanaphan, Relationships between microstructures and mechanical properties of selected woods, *KMUTT R&D Journal* **2021**, *44*, 395-408.

(13) Pattanan Oungkanitanon, **Sarawut Cheunkar**, Watchara Liewrian, Piyapong Asanithi, Detection of ascorbid acid in the interference of dopamine and uric acid using graphene oxide and amino serine, *Journal of Science and Technology, Ubon Ratchathani University* **2021**, *23*, 44-52.

(12) Arslan Siddique, Benjaphon Suraraksa, Mati Horprathum, Sukunya Oaew, **Sarawut Cheunkar**, Wastewater biofilm on self-assembled monolayer surfaces using elastomeric flow cells, *Anaerobe* **2019**, *57*, 11-18.

(11) Arslan Siddique, Benjaphon Suraraksa, Sukunya Oaew, **Sarawut Cheunkar**, Systematic investigation of biofilm formation of acetogens and methanogens derived from agro-industrial wastewater using microfluidic devices and fabricated biointerface, *Pure and Applied Chemistry International Conference* **2018** *proceeding* (p. EE89-94).

(10) Cao, H.H., Nakatsuka N., Liao W.S., Serino A.C., **Cheunkar S.**, Yang, H.Y., Weiss P.S., and Andrews A.M., Advancing Biocapture Substrates via Chemical Lift-Off Lithography *Chem. Mater.* **2017**, *29*, 6829-6839

(9) S. Muralikrisna, **Sarawut Cheunkar**, Benchaporn Lertanantawong, T. Ramakrishnappa, D. H. Nagaraju, Werasak Surareungchai, R. Geetha Balakrishna, K. Ramakrishna Reddy Graphene Oxide-Cu(II) Composite Electrode for Non-Enzymatic Determination of Hydrogen Peroxide *J. Electroanal. Chem.* **2016**, *776*, 59-65

(8) H. H. Cao, N. Nakatsuka, A. C. Serino, W.-S. Liao, **S. Cheunkar**, H. Yang, P. S. Weiss, and A. M. Andrews, Controlled DNA Patterning by Chemical Lift-Off Lithography: Matrix Matters. *ACS Nano* **2015**, *9*, 11439

(7) W.-S. Liao, H. Cao, **S. Cheunkar**, M. J. Shuster, S. C. Altieri, P. S. Weiss, and A. M. Andrews. Small-Molecule Arrays for Sorting G-Protein-Coupled Receptors. *J. Phys. Chem. C* **2013**, *117*, 22362.

(6) Claridge, S. A., Liao, W. –S., Thomas, J. C., Zhao, Y., Cao, H., **Cheunkar, S.**, Serino, A. C., Andrews, A. M., and Weiss, P. S. From the Bottom Up: Dimensional Control and Characterization in Molecular Monolayers. *Chem. Soc. Rev.* **2013**, *42*, 2725-2745.

(5) Liao, W. S., **Cheunkar, S.**, Cao, H. H., Bednar, H. R., Weiss, P. S., and Andrews, A. M. Subtractive Patterning via Chemical Lift-Off Lithography. *Science* **2012**, *337*, 1517-1521.

(4) Vaish, A., Shuster, M. J., **Cheunkar, S.**, Weiss, P. S., and Andrews, A. M. Tuning Stamp Surface Energy for Soft Lithography of Polar Molecules to Fabricate Bioactive Small-Molecule Microarrays. *Small* **2011**, *7*, 1471-1479.

(3) Zheng, Y. B., Payton, L., Chung, C. –H., Liu, R., **Cheunkar, S.**, Pathem, Y., Yang, Y., Jensen, L., and Weiss, P. S. Surface-Enhanced Raman Spectroscopy to Probe Reversibly Photoswitchable Azobenzene in Controlled Nanoscale Environments. *Nano Letters* **2011**, *11*, 3447-3452.

(2) Zheng, Y. B., Kiraly, B., **Cheunkar, S.**, Huang, T. J., and Weiss, P. S. Incident-Angle-Modulated Molecular Plasmonic Switches: A Case of Weak Exciton-Plasmon Coupling. *Nano Letters* **2011**, *11*, 2061-2065.

(1) Vaish, A., Shuster, M. J., **Cheunkar, S.**, Singh, Y. S., Weiss, P. S., and Andrews, A. M. Native Serotonin Membrane Receptors Recognize 5-Hydroxytryptophan-Functionalized Substrates: Enabling Small-Molecule Recognition. *ACS Chem. Neurosci.* **2010**, *1*, 495-504.