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Education:

- 2005- 2011 Ph.D. (Science and Technology Education)
Mahidol University, Bangkok, Thailand.
- 2004-2005 Diploma of Science Teaching Profession,
Department of Curriculum and Instruction, Silpakorn University,
Nakhon Pathom, Thailand.
- 2000-2004 B.SC. (First-Class Honours) Chemistry,
Ubon Ratchathani University, Ubon Ratchathani, Thailand.

Awards and Distinctions:

- 2022 Best number of citation per article award, Institute for innovative
learning, Mahidol University
- 2021 Best number of citation per article award, Institute for innovative
learning, Mahidol University
- 2020 Outstanding Thesis Awards (Major advisor), Mahidol University
- 2019 Distinguished Thesis Awards (Major advisor), Mahidol University
- 2016 Recipient of distinguished poster presentation award from TRF-
OHEC Annual congress. 2016, The Regent Cha Am Beach Resort,
Phetchaburi, Thailand.
- 2012 Recipient of distinguished poster presentation award from 1st
International Conference on Innovation in Education (ICIE 2012),
Bangkok, Thailand.
- 2011 Recipient of the Young Traveler award from 17th International
Symposium on flavin and flavoprotein 2011, University of
California San Francisco, San Francisco, USA.
- 2010 Recipient of Outstanding poster award from Pure and Apply
Chemistry International Conference 2010 (PACCON), Ubon
Ratchathani, Thailand.
- 2008 Recipient of the Young Traveler award from 16th International

Symposium on flavin and flavoprotein 2008, Palacio de Congresos, Jaca, Spain.

2004 Recipient of the Dr. Tap Nilaniti Graduate award.

2000-2011 Recipient of a scholarship from The Promotion of Science and Mathematics Talented Teacher Project (PATM).

Professional Experiences:

2017-present Assistant professor, Institute for innovative learning, Mahidol University, Thailand

2011-2016 Lecturer, Institute for innovative learning, Mahidol University, Thailand

2009-2010 -Science education research training with Dr. Kevin Niemi, Center for Biology Education, Office for Science Outreach, and Wisconsin Teacher Enhancement Program, University of Wisconsin-Madison, USA.

-Scientific research training with Prof. Dr. Brian G. Fox, Department of Biochemistry, University of Wisconsin-Madison, USA.

Area of Interest

1. Chemistry Education
2. The nature of learning in chemistry and how to enhance student learning
3. Inquiry-based laboratory and activities for chemistry teaching and learning
4. Using technology to enhance teaching and learning in chemistry
5. Green chemistry Education
6. Biocatalysis
7. Enzyme kinetic; pre-steady state kinetic

Publications:

1. Duangpummet, P., Yodyingyong, S., **Chenprakhon, P.*** (2022) Fruit Puzzle: An Inquiry-Based Activity to Investigate High School Students Understanding of the Relationship between the Concepts of Density and Concentration of Solution at the Submicroscopic Level. *Journal of Chemical Education*. 99, 12, 4175–4180 (IF= 3.208)
2. Pinthong, C., Chaiyen, P., Maenpuen, S., **Chenprakhon, P.*** (2022) Inquiry-based laboratories for students to investigate the concepts of acid-base titration,

- pK_a , equivalence points, and molar absorption coefficients. *Journal of Chemical Education*. 99, 12, 4008–4015. (IF= 3.208)
3. Tinikul, R., Lawan, N., Akeratchatapan, N., Pimviriyakul, P., Chinantuya, W., Suadee, C., Sucharitakul, J., **Chenprakhon, P.**, Ballou, D.P., Entsch, B. and Chaiyen, P. (2021) Protonation Status and Control Mechanism of Flavin-Oxygen Intermediates in the Reaction of Bacterial Luciferase. *The FEBS Journal*, 288 (10), 3246-3260
 4. Phintha, A., Prakinee, K., Jaruwat, A., Lawan, N., Visitsatthawong, S., Kantiwiriyawanitch, C., Songsunghong, W., Trisrivirat, D., **Chenprakhon, P.**, Mulholland, A.J. and van Pee, K.H. (2021). Dissecting the low catalytic capability of flavin-dependent halogenases. *Journal of Biological Chemistry*, 296.
 5. **Chenprakhon, P***, Pimviriyakul, P., Tongsook, C., & Chaiyen, P. (2020). Phenolic hydroxylases; Enzyme: ISSN 1874-6047, 2020 Elsevier Inc, Academic Press.
 6. Trisrivirat, D., Lawan, N., **Chenprakhon, P.**, Matsui, D., Asano, Y. and Chaiyen, P., (2020). Mechanistic Insights into the Dual Activities of the Single Active Site of L-Lysine Oxidase/Monooxygenase from *Pseudomonas* sp. AIU 813. *Journal of Biological Chemistry*, 295, 11246-11261. (IF =4.32)
 7. Pitsawong, W., **Chenprakhon, P.**, Dhammaraj, T., Medhanavyn, D., Sucharitakul, J., Tongsook, C., van Berkel, W.J., Chaiyen, P. and Miller, A.F., (2020). Tuning of pK_a values activates substrates in flavin-dependent aromatic hydroxylases. *Journal of Biological Chemistry*, 295(12), pp.3965-3981. (IF =4.32)
 8. Duangpummet, P., Chaiyen, P., **Chenprakhon P***. (2019) Lipase-Catalyzed Esterification: An Inquiry-Based Laboratory Activity To Promote High School Students' Understanding and Positive Perceptions of Green Chemistry. *Journal of Chemical Education*. 96(6), 1205-1211 (IF= 3.208)
 9. **Chenprakhon, P***, Wongnate, T., Chaiyen, P. (2019) Monooxygenation of Aromatic Compounds by Flavin-Dependent Monooxygenases. *Protein Science*. 28: 8–29. (IF= 2.41)
 10. Tinikul, R., **Chenprakhon, P.**, Maenpuen, S., Chaiyen, P. (2018) Biotransformation of Plant Derived Phenolic Acids. *Biotechnology Journal*. 13, 1700632. (IF= 3.507)
 11. Maenpuen, S., Tinikul, R., **Chenprakhon, P.**, Chaiyen, P. (2018) Production of Valuable Phenolic Compounds from Lignin by Biocatalysis: State of the Art

Perspective. *Emerging Areas in Bioengineering* (editor. Ho Nam Chang), Wiley-VCH's.

12. Pinthong, C., Phoopraintra, P., Chantiwas, R., Pongtharangkul, T., **Chenprakhon, P.**, Chaiyen, P. (2017) Green and sustainable biocatalytic production of 3,4,5-trihydroxycinnamic acid from palm oil mill effluent. *Process Biochemistry*. 63, 122-129. (IF= 2.616)
13. **Chenprakhon, P.*.**, Dhammaraj, T., Chantiwas, R., Chaiyen, P. (2017) Hydroxylation of 4-Hydroxyphenylethylamine Derivatives by R263 Variants of the Oxygenase Component of p-Hydroxyphenylacetate-3-Hydroxylase, *Archives of Biochemistry and Biophysics*. 620, 1-11. (IF=3.165)
14. Thotsaporn, K., Tinikul, R., Maenpuen, S., Phonbuppha, J., Watthaisong, P., **Chenprakhon, P.**, Chaiyen, P. (2016) Enzymes in the p-hydroxyphenylacetate degradation pathway of *Acinetobacter baumannii*. *Journal of Molecular Catalysis B: Enzymatic*. 134(B), 353–366. (IF= 2.269)
15. Visitsatthawong, S., **Chenprakhon, P.**, Chaiyen, P., Surawatanawong, P. (2015) Mechanism of Oxygen Activation in a Flavin-Dependent Monooxygenase: A Nearly Barrierless Formation of C4a-Hydroperoxyflavin via Proton-Coupled Electron Transfer. *J. Am. Chem. Soc.* 137, 9363-9374. (IF= 13.853)
16. Dhammaraj, T., Phintha, A., Pinthong, C., Medhanavyn, D., Tinikul, R., **Chenprakhon, P.**, Sucharitakul, J., Vardhanabhuti, N., Jiarpinitnun, C., Chaiyen, P. (2015) p-Hydroxyphenylacetate 3-Hydroxylase as a Biocatalyst for the Synthesis of Trihydroxyphenolic Acids. *ACS Catal.* 5, 4492-4502. (IF= 10.614)
17. **Chenprakhon, P.**, Trisrivirat, D., Thotsaporn, K., Sucharitakul, J., Chaiyen, P. (2014) Control of C4a-Hydroperoxyflavin Protonation in the Oxygenase Component of p-Hydroxyphenylacetate-3-hydroxylase. *Biochemistry*. 53, 4084-4086. (IF= 2.938)
18. **Chenprakhon, P.**, Panijpan, B., and Chaiyen, P. (2012) An Experiment Illustrating the Change in Ligand pK_a upon Protein Binding, *Journal of Chemical Education*. 2012, 89, 791–795. (IF= 1.419)
19. Thotsaporn, K., **Chenprakhon, P.**, Sucharitakul, J., Mattevi, A., Chaiyen, P. (2011) Stabilization of C4a-hydroperoxy-flavin in a two-component flavin-dependent monooxygenase is achieved through interaction at flavin N5 and C4a atoms. *The Journal of Biological Chemistry*. 286(32), 28170-80. (IF= 4.125)

20. **Chenprakhon, P.**, Sucharitakul, J., Panijpan, B., and Chaiyen, P. (2010) Measuring Binding Affinity of Protein-Ligand Interaction Using Spectrophotometry: Binding of Neutral Red to Riboflavin Binding Protein. *Journal of Chemical Education*. 87, 829–831. (IF= 1.419)
21. Baron, R., Riley, C.*, **Chenprakhon, P.***, Thotsaporn, K., Winter, R., Alfieri, A., Forneris, F., van Berkel, W. J. H., Chaiyen, P., Fraaije, M. W., Mattevi, A., and McCammon, J. A. (2009) Multiple pathways guide oxygen diffusion into flavoenzyme active sites. *Proceedings of the National Academy of Sciences of the United States of America*. 106, 10603-10608. (Cited in *Research Highlights, Nature Chemistry, 2009*) (*Contributed equally to this article) (IF= 9.661)

Conference Proceedings:

1. Duangpummet, P., **Chenprakhon P.** (2020) Students' Perceptions of a Designed Online Asynchronous Learning Activity Regarding the Community of Inquiry (COI) Framework. Proceeding of the Osaka Conference on Education (2020). Japan.
2. Ratriphruek, A., **Chenprakhon, P*** (2020) Assessing Students' Conceptual Understanding of the Relationship between Solubility and Polarity of Organic Compounds. Proceedings of RSU International Research Conference (2020), Thailand
3. Choda J., **Chenprakhon, P*** (2015) a hands-on physical model for teaching quantum numbers and rules for writing electron configuration , Proceeding of the 3rd Global Summit on Education GSE 2015 , Kuala Lumpur, MALAYSIA .
4. Che-Leah, M., **Chenprakhon, P*** (2015) Development of a Laboratory Experiment for Teaching Concept of Transesterification Catalyzed by Lipase for Undergraduate Students , Proceedings of the 2nd International Conference on Innovation in Education , Thailand.