Assistant Professor Dr. Pirom Chenprakhon
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Education:

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

Awards and Distinctions:

2000-2011	Recipient of a scholarship from Project for the Promotion of Talented Science and Mathematics Teachers.
2004	Recipient of the Dr. Tap Nilaniti Graduate award.
2008	Recipient of the Young Traveler award from 16th International Symposium on flavin and flavoprotein 2008, Palacio de Congresos, Jaca, Spain.
2011	Recipient of the Young Traveler award from 17th International Symposium on flavin and flavoprotein 2011, University of California San Francisco, San Francisco, USA.
2012	Recipient of distinguished poster presentation award from 1st International Conference on Innovation in Education (ICIE 2012), Bangkok, Thailand.
2016	Recipient of distinguished poster presentation award from TRF-OHEC Annual congress. 2016, The Regent Cha Am Beach Resort, Phetchaburi, Thailand.

Professional Experiences:

2007-2008	Teaching assistant in Biomolecular and Spectroscopy Techniques (SCID 508) for graduate students, Mahidol University, Bangkok, Thailand.
2009-2010	- Research training in science education with Dr. Kevin Niemi, Center for Biology Education, Office for Science Outreach, and Wisconsin Teacher Enhancement Program, University of Wisconsin-Madison, USA. - Research training at Dr. Brian Fox's Laboratory, Department of Biochemistry, University of Wisconsin-Madison, USA.
2011-present	Lecturer, Institute for innovative learning, Mahidol University, Thailand

Area of Interests

1. Chemistry education
2. Biochemistry education
3. Enzyme kinetic, Enzyme catalysis, Enzyme mechanism, Enzyme engineering and Biocatalysis

Publications:

1. Tinikul, R., Lawan, N., Akeratchatapan, N., Pimviriyakul, P., Chinantuya, W., Suadee, C., Sucharitakul, J., **Chenprakhon, P**., Ballou, D.P., Entsch, B. and Chaiyen, P., Protonation Status and Control Mechanism of Flavin-Oxygen Intermediates in the Reaction of Bacterial Luciferase. The FEBS Journal. (inpress)
2. Phintha, A., Prakinee, K., Jaruwat, A., Lawan, N., Visitsatthawong, S., Kantiwiriyawanitch, C., Songsungthong, W., Trisrivirat, D., **Chenprakhon, P**., Mulholland, A.J. and van Pee, K.H., 2020. Dissecting the low catalytic capability of flavin-dependent halogenases. Journal of Biological Chemistry, pp.jbc-RA120. (inpress)
3. **Chenprakhon, P*.**, Pimviriyakul, P., Tongsook, C., & Chaiyen, P. (2020). Phenolic hydroxylases; Enzyme: ISSN 1874-6047, 2020 Elsevier Inc, Academic Press. (Inpress)
4. 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)
5. 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 pKa values activates substrates in flavin-dependent aromatic hydroxylases. Journal of Biological Chemistry, 295(12), pp.3965-3981. (IF =4.32)
6. 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= 1.758)
7. **Chenprakhon, P***., Wongnate, T., Chaiyen, P. **(2019)** Monooxygenation of Aromatic Compounds by Flavin-Dependent Monooxygenases. *Protein Science*. 28: 8–29. (IF= 2.41)
8. Tinikul, R., **Chenprakhon, P**., Maenpuen, S., Chaiyen, P. **(2018)** Biotransformation of Plant Derived Phenolic Acids. *Biotechnology Journal*. 13, 1700632. *(*IF= 3.507)
9. 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.
10. 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)

11. **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)
12. 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)
13. 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)
14. 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)
15. **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)
16. **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)
17. Thotsaporn, K., **Chenprakhon, P.**, Sucharitakul, J., Mattevi, A., Chaiyen, P. **(2011)** Stabilization of C4a-hydroperoxy-flavin in a two-component flavin-depedent monooxygenase is achieved through interaction at flavin N5 and C4a atoms. *The Journal of Biological Chemistry*. 286(32), 28170-80. (IF= 4.125)
18. **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)
19. 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. Choda J., **Chenprakhon, P*** (2015) a hands-on physical model for teaching quantum numbers and rules for writing electron configuration , Proceeding of the 3 rd Global Summit on Education GSE 2015 , Kuala Lumpur, MALAYSIA .
2. 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.