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:

- 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*. (In press) (IF= 1.758)
- 2. <u>Chenprakhon, P</u>*., Wongnate, T., Chaiyen, P. **(2019)** Monooxygenation of Aromatic Compounds by Flavin-Dependent Monooxygenases. *Protein Science*. 28: 8–29. (IF= 2.41)
- 3. Tinikul, R., <u>Chenprakhon, P.</u>, Maenpuen, S., Chaiyen, P. (2018) Biotransformation of Plant Derived Phenolic Acids. *Biotechnology Journal*. 13, 1700632. (IF= 3.507)
- 4. Maenpuen, S., Tinikul, R., <u>Chenprakhon, P.</u>, 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.
- Pinthong, C., Phoopraintra, P., Chantiwas, R., Pongtharangkul, T., Chenprakhon, P., Chaiyen, P. (2017) Green and sustainable biocatalytic production of 3,4,5trihydroxycinnamic acid from palm oil mill effluent. *Process Biochemistry*. 63, 122-129. (IF= 2.616)
- 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)
- Thotsaporn, K., Tinikul, R., Maenpuen, S., Phonbuppha, J., Watthaisong, P., <u>Chenprakhon, P.</u>, 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)
- 8. Visitsatthawong, S., <u>Chenprakhon, P.</u>, 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)
- Dhammaraj, T., Phintha, A., Pinthong, C., Medhanavyn, D., Tinikul, R., <u>Chenprakhon, P.,</u> 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)
- 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)

- 11. <u>Chenprakhon, P.</u>, Panijpan, B., and Chaiyen, P. (2012) An Experiment Illustrating the Change in Ligand p *K*_a upon Protein Binding, *Journal of Chemical Education*. 2012, *89*, 791–795. (IF= 1.419)
- Thotsaporn, K., <u>Chenprakhon, P.</u>, 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)
- 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)
- Baron, R., Riley, C.*, <u>Chenprakhon, P.*</u>, 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:

- 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.