Assoc. Prof. Dr. Chanat Chokejaroenrat

(*h*-index = 12; as of July, 2021)

Current Address:
Kasetsart University
50 Ngamwongwan Rd.,
Ladyao, Chatuchak,
Bangkok, 10900, THAILAND
Office: (66)-2579-3877 Ext.414

Local Address:
503 Petkasame Rd.,
Bangwa Paseejaroen
Bangkok, 10160 Thailand
Mobile: (66)-89-893-1017
Email: chanat.c@ku.ac.th;
eccnc@ku.ac.th

Educational Background:

2008 – 2012	**Ph.D. in Engineering** University of Nebraska – Lincoln, Nebraska, USA
2005 – 2008	**M.S. Major: Environmental Engineering** University of Nebraska – Lincoln, Nebraska, USA
1996 – 2000	**B.Eng. Civil Engineering (2nd Honor)** King Mongkut's University of Technology Thonburi, Bangkok, Thailand

Research Interests:

- Develop the remediation technology for treating emerging contaminants in water and the subsurface
- Remediation and restoration of contaminated soils and water by chemical and biological processes
- Fate and transport of chemical contaminants in soil and water
- Chemical and biological treatment processes of drinking water and wastewater

Professional Experience:

Nov, 2019 – Present: **Associate Professor in Environmental Science**
Department of Environmental Technology and Management, Faculty of Environment, Kasetsart University (Bangkhen Campus), Bangkok, THAILAND

Feb, 2017 – Nov, 2019: **Assistant Professor in Environmental Science**
Department of Environmental Technology and Management, Faculty of Environment, Kasetsart University (Bangkhen Campus), Bangkok, THAILAND

Feb, 2016 – Feb, 2017: **Lecturer**,
Department of Environmental Technology and Management, Faculty of Environment, Kasetsart University (Bangkhen Campus), Bangkok, THAILAND

Mar, 2013 – Jan, 2016: **Lecturer**,

School of Environmental Engineering, Institute of Engineering
Suranaree University of Technology, Nakhon Ratchasima, THAILAND

Aug, 2005 – Dec, 2012: **Research Assistant in Environmental Engineering**,
Department of Civil Engineering
University of Nebraska-Lincoln, NE, USA

Jan, 2001 - Aug, 2005: **Civil Engineer**,
Sino-Thai Engineering & Construction Public Company Limited, Bangkok, Thailand

May, 2000 – Jan, 2001: **Civil Engineer**,
Arun Chaiseri Consulting Engineers Company Limited, Bangkok, Thailand

International Publications (*h*-index = 12; as of Jul, 2021):

(27) 2021 Imman, S., Khongchamnan, P., Wanmolee, W., Laosiripojana, N., Champreda, V., Suriyachai, N., Kreetachat, T., Sakulthaew, T., ***Chokejaroenrat, C.*** (2021) Solvothermal-based lignin fractionation from corn stover: process optimization and product characteristics. Frontiers in Chemistry, doi:10.3389/fchem.2021.697237. (In press).

(26) 2021 Jutarvutikul, K., Sakulthaew, C., ***Chokejaroenrat, C.***, Pattanateeradetch, A., Imman, S., Suriyachai, N., Satapanajaru, T. Kreetachat, T., (2021) Practical use of response surface methodology for optimization of veterinary antibiotic removal using UV/H_2O_2 process. Aquacultural Engineering, 94, 102174.

(25) 2021 Angkaew, A., ***Chokejaroenrat, C.***, Sakulthaew, C., Mao, J., Watcharatharapong, T., Watcharenwong, A., Imman, S., Suriyachai, N., Kreetachat, T. (2021) Two facile synthesis routes for magnetic recoverable $MnFe_2O_4$/g-C_3N_4 nanocomposites to enhance visible light photo-Fenton activity for methylene blue degradation. Journal of Environmental Chemical Engineering, 9(4), 105621.

(24) 2021 Yoo-iam, M., Satapanajaru, T., ***Chokejaroenrat, C.***, Sakulthaew, C., Comfort, S., Kambhu, A. (2021) Developing persulfate-activator soft solid (PASS) as slow release oxidant to remediate phenol-contaminated groundwater. Environmental Technology & Innovation, 22, 101396.

(23) 2021 Sakulthaew, C., Watcharenwong, A., ***Chokejaroenrat, C.***, Rittirat, A. (2021) Leonardite-Derived Biochar Suitability for Effective Sorption of Herbicides. Water, Air, and Soil Pollution 232, 36.

(22) 2020 Yoo-iam, M., Satapanajaru, T., ***Chokejaroenrat C.***, Sakulthaew, C., Comfort., S. (2020) Remediating phenol-contaminated groundwater and aquifer using persulfate oxidation. Desalination and Water Treatment 208, 159-171.

(21) 2020 ***Chokejaroenrat, C.***, Watcharenwong, A., Sakulthaew, C., Rittirat, A. (2020) Immobilization of Atrazine Using Oxidized Lignite Amendments in Agricultural Soils. Water, Air, and Soil Pollution 231, 249.

(20) 2020 Sakulthaew, C., ***Chokejaroenrat, C.***, Satapanajaru, T., Chirasatienpon, T., Angkaew, A. (2020) Removal of 17β-Estradiol Using Persulfate Synergistically Activated Using Heat and Ultraviolet Light. Water, Air, and Soil Pollution 231, 247.

(19) 2020 Poapolathep, S., Giorgi, M., Chaiyabutr, N., ***Chokejaroenrat, C.***, Klangkaew, N., Phaochoosak, N., Wongwaipairote, T., Poapolathep, A. (2020) Pharmacokinetics of enrofloxacin and its

metabolite ciprofloxacin in freshwater crocodiles (Crocodylus siamensis) after intravenous and intramuscular administration. Journal of Veterinary Pharmacology and Therapeutics 43(1), 19-25.

(18) 2019 Angkaew, A., Sakulthaew, C., Satapanajaru, T., Poapolathep, A., ***Chokejaroenrat, C.*** (2019) UV-activated persulfate oxidation of 17β-estradiol: Implications for discharge water remediation. Journal of Environmental and Chemical Engineering 7(2), 102858.

(17) 2019 ***Chokejaroenrat, C.***, Sakulthaew, C., Angkaew, A., Satapanajaru, T., Poapolathep, A., Chirasatienpon, T. (2019) Remediating sulfadimethoxine-contaminated aquaculture wastewater using ZVI-activated persulfate in a flow-through system. Aquacutural Engineering 84, 99-105.

(16) 2019 Susakate, S., Poapolathep, S., ***Chokejaroenrat, C.***, Tanhan, P., Hajslova, J., Giorgi, M., Saimek, K., Zhang, Z., Poapolathep, A. (2019) Multiclass analysis of antimicrobial drugs in shrimp muscle by ultra-high performance liquid chromatography-tandem mass spectrometry. Journal of Food and Drug Analysis 27(1), 118-134.

(15) 2018 Satapanajaru, T., ***Chokejaroenrat, C.***, Pengthamkeerati, P. (2018) Removal of reactive black 5 and its degradation using combined treatment of nano-zerovalent iron activated persulfate and adsorption processes. Desalination and Water Treatment 102, 300-311.

(14) 2018 Rittirat, A., ***Chokejaroenrat, C.***, Watcharenwong, A. (2018) Atrazine Adsorption Potential of Leonardite from Mae Moh Power Plant. IOP Conference Series: Earth and Environmental Science 112(1), 012005.

(13) 2017 Puangkham, S., Poapolathep, A., Jermnak, U., Imsilp, P., Tanhan, P., ***Chokejaroenrat, C.***, Poapolathep, S. (2017) Monitoring and health risk of mycotoxins in imported wines and beers consumed in Thailand. World Mycotoxin Journal 10(4), 401-409.

(12) 2017 Satapanajaru, T., ***Chokejaroenrat, C.***, Sakulthaew, C., Yoo-iam, M. (2017) Remediation and restoration of petroleum hydrocarbon containing alcohol-contaminated soil by persulfate oxidation activated with soil minerals. Water, Air, & Soil Pollution 228-345

(11) 2017 Sakulthaew, C., ***Chokejaroenrat, C.***, Poapolathep, A., Satapanajaru, T., Poapolathep, S. (2017) Hexavalent chromium adsorption from aqueous solution using carbon nano-onions (CNOs). Chemosphere 184, 1168-1174.

(10) 2016 Sakulthaew, C., ***Chokejaroenrat, C.*** (2016) Oxidation of 17β-estradiol in water by slow-release permanganate candles. Environmental Engineering Science 33(4): 224-234.

(9) 2015 Sakulthaew, C., Comfort, S.D., ***Chokejaroenrat, C.***, Li, X., Harris, C.E. (2015) Removing PAHs from urban runoff water by combining ozonation and carbon nano-onions. Chemosphere 141, 265-273.

(8) 2015 ***Chokejaroenrat, C.***, Sakulthaew, C., Satapanajaru, T., Tikhamram, T., Pho-Ong, A., Mulseesuk, T. (2015) Treating methyl orange in a two-dimensional flow tank by in situ chemical oxidation using slow-release persulfate activated with zero-valent iron. Environmental Engineering Science 32(12): 1007-1015.

(7) 2015 Kananizadeh, N., ***Chokejaroenrat, C.***, Li, Y., Comfort, S. (2015) Modeling Improved ISCO treatment of low permeable zones via viscosity modification: Assessment of system variables. Journal of Contaminant Hydrology 173: 25-37.

(6) 2014 ***Chokejaroenrat, C.***, Comfort, S., Sakulthaew, C., Dvorak, B. (2014) Combined chemical and biological approach to transforming and mineralizing PAHs in runoff water. Chemosphere 117: 1 – 9.

(5) 2014 Sakulthaew, C., Comfort, S., ***Chokejaroenrat, C.***, Harris, C., Li, X. (2014) Improving the treatment of non-aqueous phase TCE in low permeable zones with permanganate. Journal of Hazardous Material 268:177 – 184.

(4) 2013 ***Chokejaroenrat, C.***, Kananizadeh, N., Sakulthaew, C., Comfort, S., Li, Y. (2013) Improving the sweeping efficiency of permanganate into low permeable zones to treat TCE: Experimental results and model development. Environmental Science and Technology 47:13031-13038.

(3) 2012 Kambhu, A., Comfort, S., ***Chokejaroenrat, C.***, Sakulthaew, C. (2012) Developing slow-release persulfate candles to treat BTEX contaminated groundwater. Chemosphere 89:656–664.

(2) 2011 ***Chokejaroenrat, C.***, Comfort, S.D., Harris, C.E., Snow, D., Cassada, C., Sakulthaew, C., Satapanajaru, T. (2011) Transformation of Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) by permanganate. Environmental Science and Technology 45:3643-3649.

(1) 2010 Albano, J., Comfort, S.D., Zlotnik, V., Halihan, T., Burbach, M., ***Chokejaroenrat, C.***, Onanong, S., Clayton, W. (2010) In situ chemical oxidation of RDX-contaminated ground water with permanganate at the Nebraska Ordnance Plant. Ground Water Monitoring & Remediation 30:96-106.

Research Grants:

(16) 2020 Project Leader - Ozonation enhancement using metal ferrite to treat four types of paraben Graduate School Kasetsart University Fund ***(200,000 THB)***

(15) 2019 Project Leader - Practical use of response surface methodology for optimization of veterinary antibiotic removal using UV/H_2O_2 process. Graduate School Kasetsart University Fund ***(200,000 THB)***

(14) 2019 Co-PI - . Developing innovation to remediate water quality and treat chemical residues in aquaculture area ***(1,803,000 THB)***

(13) 2019 Project Leader/Advisor -. An innovative eco-floating device for aquacultural farming to remove antibiotic using ferrate(IV,V) -photocatalytic synergistic reaction activated with modified graphene-metal oxide nanocomposites. The Royal Golden Jubilee Fund (#22)

(12) 2017 Project Leader - Steroid removal by UV-light activated persulfate of discharge water from animal farming. Graduate School Kasetsart University Fund ***(200,000 THB)***

(11) 2018 Project Leader - Developing a low-cost remediation technology for sulfonamide contaminated water from aquaculture wastewater. The Thailand Research Fund ***(600,000 THB)***

(10) 2017 Co-PI - Development of multi-class antibiotic residue analysis in animal products. Graduate School Kasetsart University Fund ***(200,000 THB)***

(9) 2017 Project Leader - Developing sulfuroxyanion reductant plume to remediate pesticide-contaminated subsurface. Kasetsart University Capital Budget for fiscal year 2558 ***(600,000 THB)***

(8) 2017 Co-PI - Developing application for environmental friendly pesticide usage in rice field (CLEAN RICE FIELD). Thailand 4.0 Government fund ***(500,000 THB)***

(7) 2017 Co-PI – Researching and developing food products that can control dog population by using Thai herb. Her Royal Highness Princess Chulabhorn (valayaluk) Research Fund ***(1,014,800THB)***

(6) 2017 Co-PI - Test kits for inspection of heavy metals, residues, and antibiotics in the environment and animal products, Thailand 4.0 Government fund ***(1,200,000 THB)***

(5) 2016 Co-PI - Studies and utilization of an immature coal (Leonardite) to adsorb residual pesticides, Suranaree University of Technology Capital Budget for fiscal year 2558 ***(390,000 THB)***

(4) 2015 Project Leader - Removing a potent natural hormone (17b-Estradiol) from water by ultraviolet (UV) light-activated persulfate oxidation, Suranaree University of Technology Capital Budget for fiscal year 2558 ***(394,000 THB)***

(3) 2014 Co-PI - Using combined approach between slow-release permanganate candles and biodegradation to remediate 17β-Estradiol (E2) in contaminated water, National Science and Technology Development Agency ***(250,000 THB)***

(2) 2014 Co-PI - Treatment of chromium (VI) from contaminated water by chemical and biological approaches, Department of Veterinary technology, Faculty of Veterinary Technology, Kasetsart University ***(250,000 THB)***

(1) 2013 Project Leader - Evaluation of enhanced persulfate-ISCO performance by using controlled-release activated persulfate to remove chemical residuals in the subsurface, Institute of Research and Development, Suranaree University of Technology ***(100,000 THB)***