

# BUI XUAN THANH, Ph.D.

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## Research Interest

- Membrane separation processes, water and wastewater treatment processes, biological processes, advanced oxidation processes, biofuels, solid waste treatment and management, treatment technology for climate change adaptation.

## Professional Experience

- 2014 – present: Head, Dept. of Water Science & Technology, Faculty of Environment and Natural Resources, HCMC University of Technology (HCMUT), Viet Nam.
- 2013 (Nov): Associate Professor, HCMC University of Technology (HCMUT), Viet Nam.
- 2011-2013: Deputy Head, Environmental Technology Laboratory, Faculty of Environment, HCMUT
- 2009-2013: Assistant Professor, Faculty of Environment, HCMUT, Viet Nam.
- 2006-2008: Team Leader, research group under Prof. C. Visvanathan, AIT, Thailand.
- 2001-2005: Researcher, Institute for Environment and Resources, HCMC, Viet Nam.
- 2001-2002: Lecturer, Chemical Engineering Dept., Industry University, HCMC, Viet Nam.
- 2001-2005: Independent Consultant - Design of waste treatment systems; consultancy/training for environmental projects.

## Education

- 2006-2009: Ph. D, Environmental Engineering (French Government Scholarship, exchange program), Asian Institute of Technology (AIT), Thailand & Institut National des Sciences Appliquées de Toulouse (INSA-Toulouse), France.
- 2003-2005: ME, Environmental Engineering (The Netherlands Government Scholarship), AIT, Thailand.
- 1996-2001: Engineer Degree, Chemical Engineering, HCMUT, Viet Nam.

## Selected Publications

*International peer-reviewed Journals:*

a. SCI/SCIE Journals: (\*Corresponding author)

- 1) Nguyen T.T., Do T.B.N., **Bui X.T\***, Cao N.D.T, Vo H.N.P., Dao T.S. (2017). Effect of N:P ratios on biomass growth of *Chlorella* sp. in bubble column photobioreactor, *Journal of Applied Phycology*, submitted. (SCI, IF = 2.372, ISSN: 0921-8971).
- 2) Nguyen D.D., Yoon Y.S., Kim S., **Thanh B.X.**, Chang S.W., Guo W., Ngo H.H. (2017). Influences of

- operational parameters on phosphorus removal in batch and continuous electrocoagulation process performance, *Environmental Science and Pollution Research*, Submitted. (SCIE, IF = 2.760, ISSN: 0944-1344)
- 3) Phong V.H.N., Tin N.T., Phuoc N.T., **Thanh B.X.\*** (2017). An in-situ transesterification of municipal activated sludge for biodiesel production, *Renewable Energy*, submitted x.x. (SCI, IF = 4.068, ISSN: 0960-1481).
  - 4) Hien V.T.D., Ngoc D.T.B., **Thanh B.X.\***, Truc N.V., Duc N.D., Sthiannopkao, S. & Lin, C. (In Press). Improvement of septic tank effluent and green coverage by shallow bed wetland roof system, *International Biodeterioration & Biodegradation*, xx-xx (SCIE, IF = 2.593, ISSN: 0964-8305).
  - 5) Tin N.T., **Thanh B.X.\***, Phuc L.V., Dan N.P., Guo W., Ngo H.H. (2017). Removal of antibiotics in sponge membrane bioreactors treating hospital wastewater: Comparison between hollow fiber and flat sheet membrane systems, *Bioresource Technology*, in press. (SCI, IF: 5.352, ISSN: 0960-8524).
  - 6) Chen C., Guo W., Ngo H.H., Chang S.W., Nguyen, D.D., Nguyen, P.D., **Thanh B.X.**, Wu, Y. (2017). Impact of reactor configurations on the performance of a granular anaerobic membrane bioreactor for municipal wastewater treatment, *International Biodeterioration & Biodegradation*, 121, 131-138 (SCIE, IF = 2.593, ISSN: 0964-8305)
  - 7) Son N.T., Chen C.F., Chen C.R., **Thanh B.X.**, Vuong T.H. (2017). Assessment of urbanization and urban heat islands in Ho Chi Minh City, Vietnam using Landsat data, *Sustainable Cities and Society*, 30, 150-161. (SCIE, IF = 1.044, ISSN: 2210-6707)
  - 8) Nhat P.T., Van T.T.T., Biec H.N., Dan N.P., **Thanh B.X.**, Trong D.B., Tuan D.V., Park J., Guo W. Hao N.H. (2017). High rate nitrogen removal by ANAMMOX internal circulation reactor (IC) for old landfill leachate treatment, *Bioresource Technology*, 234, 281-288. (SCI, IF: 5.352, ISSN: 0960-8524).
  - 9) Nguyen D.D., Yoon Y.S., Nguyen N.D., Bach Q.V., **Thanh B.X.**, Chang, S.W., Le H.S., Guo W., Ngo H.H. (2017). Enhanced efficiency for better wastewater sludge hydrolysis conversion through ultrasonic hydrolytic pretreatment, *Journal of the Taiwan Institute of Chemical Engineers*, 71, 244-252. (SCI, IF: 2.848; ISSN: 1876-1070)
  - 10) Hien V.T.D., **Thanh B.X.\***, Thanh C.N.D., Phuc L.V., Tin N.T., Trong D.B., Quan T.M., Duc N.D., Son N.T., Tuc D.Q., Son D.T (2016). Investigation of antibiotics in health care wastewater in Ho Chi Minh city – Vietnam, *Environmental Monitoring and Assessment*, 188(12), 686-695. (SCIE, IF = 1.633, ISSN: 0167-6369). DOI: 10.1007/s10661-016-5704-6.
  - 11) Son N.T., **Thanh B.X.**, Da C.T. (2016). Monitoring mangrove forest changes from multi-temporal Landsat data in Can Gio Biosphere Reserve, Vietnam, *Wetlands*, 36(3), 565-576 (SCIE, IF = 1.572; ISSN: 0277-5212). DOI 10.1007/s13157-016-0767-2.
  - 12) **Thanh B.X.**, Tram V.T.P., Guo W., Tin N.T., Ngo H.H. (2016). Multicriteria assessment of advanced treatment technologies for micropollutants removal at large-scale applications, *Science of Total Environment*, 563–564, 1050–1067. (SCI, IF: 4.414, ISSN: 0048-9697).
  - 13) Tin N.T., **Thanh B.X.**, Duyen P.M., Wenshan G. & Ngo H.H. (2016). Effect of Tris-(hydroxymethyl)-amino methane on microalgae biomass growth in a photobioreactor, *Bioresource Technology*, 208, 1-6. (SCI, IF: 5.352, ISSN: 0960-8524).
  - 14) Tuyet N.T., Dan N.P., Vu N.C., Trung N.L.H., **Thanh B.X.**, De Wever H., Goemans M. and Ludo D. (2016). Laboratory-scale membrane up-concentration and co-anaerobic digestion for energy recovery from sewage and kitchen waste, *Water Science & Technology*, 73(3), 597-606 (SCIE, IF = 1.106; ISSN: 0273-1223).
  - 15) Tin N.T., **Thanh B.X.\***, Hien V.T.D., Dat N.D., Dan N.P., Chi D.H.L., Ngo H.H. & Guo W. (2016). Performance and membrane fouling of two lab-scale sponge membrane bioreactors for hospital wastewater treatment at low flux condition, *Separation & Purification Technology*, 165, 123-129. (SCIE, IF = 3.494; ISSN: 1383-5866)
  - 16) Thanh C.N.D., Tin N.T., **Thanh B.X.\***, Hien V.T.D., Son T.C.H., Son N.T., Son D.T., Duc P.A., Chi N.T.L., Huong N.L. & Visvanathan C. (2016). Low Cost Spiral Membrane for Improving Effluent Quality of Septic Tank, *Desalination and Water Treatment*, 57, 12409-12414 (SCIE, IF = 1.173; ISSN: 1944-3994)
  - 17) T.A.H. Nguyen, H.H. Ngo, W.S. Gui, T.Q. Pham, F.M. Li, T.V. Nguyen & **Bui X.T.** (2015). Adsorption of phosphate from aqueous solutions and sewage using zirconium loaded okara (ZLO): Fixed-bed column study, *Science of Total Environment*, 523, 40-49 (SCI, IF: 4.414, ISSN: 0048-9697).
  - 18) Vo P.T., Ngo H.H., Guo W., Zhou J.L., Listowski A., Du B., Wei Q., **Bui X.T.** (2015). Stormwater

- Quality Management in Rail Transportation – Past, Present and Future, *Science of Total Environment*, 512-513, 353-363 (SCI, IF: 4.414, ISSN: 0048-9697).
- 19) Son N.T., Chen C.F., Chang N.B., Chen C.R., Chang L.Y., **Thanh B.X.** (2015). Mangrove Mapping and Change Detection in Ca Mau Peninsula, Vietnam Using Landsat Data and Object-Based Image Analysis, *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 8(2), 503-510 (SCI, IF: 3.026, ISSN: 1939-1404).
  - 20) Van P.T.H., Tin N.T., Hien V.T.D., Quan T.M., **Thanh B.X.\***, Hang V.T., Tuc D.Q., Dan N.P., Khoa L.V., Phu V.L., Son N.T., Luong N.D., Kwon E., Park C., Jung J., Yoon I. & Lee S. (2015). Nutrient removal by different plants in wetland roof systems treating domestic wastewater, *Desalination and Water Treatment*, 54(4-5), 1344-1352 (SCIE, IF = 1.173; ISSN: 1944-3994).
  - 21) T.A.H. Nguyen, H.H. Ngo, W.S. Guo, J. Zhang, S. Liang, D.J. Lee, P.D. Nguyen, **X.T. Bui.** (2014). Modification of agricultural waste/by-products for enhanced phosphate removal and recovery: Potential and obstacles, *Bioresource Technology*, 169, 750-762 (SCI, IF: 5.352, ISSN: 0960-8524).
  - 22) Vijayalayan P., **Thanh B.X.** & Visvanathan C. (2014). Simultaneous Nitrification Denitrification in a Batch Granulation Membrane Airlift Bioreactor, *International Biodeterioration & Biodegradation*, 95, 139-143. (SCIE, IF: 2.377, ISSN: 0964-8305)
  - 23) Nhat P.T., Biec H.N., Mai N.T.T., **Thanh B.X.\***, Dan N.P. (2014). Application of a Partial nitritation and Annamox System for the Old landfill leachate treatment, *International Biodeterioration & Biodegradation*, 95(Part A), 144-150. (SCIE, IF: 2.377, ISSN: 0964-8305)
  - 24) Trang V.N., Dan N.P., Phuong L.D., **Thanh B.X.\*** (2014). Pilot study on the removal of TOC, THMs and HAAs in drinking water using ozone/UV – BAC, *Desalination and Water Treatment*, 52(4-6), 990-998 (SCIE, IF = 1.173; ISSN: 1944-3994).
  - 25) **Thanh B.X.\***, Tin N.T., Van P.T.H., Hien V.T.D., Dan N.P., Koottatep T. (2014). Performance of wetland roof with *Melampodium paludosum* treating septic tank effluent, *Desalination and Water Treatment*, 52(4-6), 1070-1076 (SCIE, IF = 1.173; ISSN: 1944-3994).
  - 26) Noh S., Choi M., Kim E. Dan N.P., **Thanh B.X.**, Ha N.T.V., Sthiannopkao S., Han S. (2013). Influence of salinity intrusion on the speciation and partitioning of mercury in the Mekong River Delta, *Geochimica et Cosmochimica Acta*, 106, 379-390. (SCI, IF: 4.933, ISSN: 0016-7037).
  - 27) **Thanh B.X.**, Dan N.P., Visvanathan C. (2013). Low flux submerged membrane bioreactor treating high strength leachate from a solid waste transfer station, *Bioresource Technology*, 141, 25-28. (SCI, IF: 5.352, ISSN: 0960-8524).
  - 28) **Thanh B.X.**, Visvanathan C., Ben Aim R. (2013). Fouling characterization and nitrogen removal in a batch granulation membrane bioreactor, *International Biodeterioration & Biodegradation*, 85, 491-498. (SCIE, IF: 2.377, ISSN: 0964-8305).
  - 29) **Thanh B.X.\***, Berg H., Nguyen L.N.T, Da C.T (2013). Effects of hydraulic retention time on organic and nitrogen removal in sponge membrane bioreactor treating catfish farm wastewater in the tropics, *Environmental Engineering Science*, 30(4), 194-199. (SCIE, IF: 1.154, ISSN: 1092-8758)
  - 30) Son N.T., Chen C.F., Chen C.R., Chang L.Y., **Thanh B.X.** (2012). Urban growth mapping from Landsat data using linear mixture model in Ho Chi Minh City, Vietnam, *Journal of Applied Remote Sensing (JARS)*, 6(01), 063543. (SCIE, IF=1.309, ISSN: 1931-3195).
  - 31) Hung C.D., Han H.N., Dan N.P., **Thanh B.X.**, Kwon J.C., Shin H.S. and Lee E.T. (2012). Application of upflow multi-layer bioreactor (UMBR) for domestic wastewater treatment in HCMC, *Membrane Water Treatment*, 3(2), 77-85. (SCIE, IF: 0.625; ISSN: 2005-8624).
  - 32) **Thanh B.X.\***, Dan N.P., Binh N.T. (2012). Fouling mitigation in submerged membrane bioreactor treating dyeing and textile wastewater, *Desalination and Water Treatment*, 47(1-3), 150-156. (SCIE, IF = 1.173; ISSN: 1944-3994).
  - 33) **Thanh B.X.**, Sperandio M., Guigui C., Ben Aim R., Wan J.F., Visvanathan C. (2010). Coupling sequencing batch airlift reactor (SBAR) and membrane filtration: Influence of nitrate removal on sludge characteristics, effluent quality and filterability, *Desalination*, 250(2), 850-854. (SCI, IF = 3.756; ISSN: 0011-9164).
  - 34) **Thanh B.X.**, Visvanathan C., Ben Aim R. (2009). Characterization of aerobic granules at various organic loading rates, *Process Biochemistry*, 44(2), 242-245. (SCI, IF = 3.393; ISSN: 1359-5113).
  - 35) **Thanh B.X.**, Visvanathan C., Spérandio M., Ben Aim R. (2008). Fouling characterization in aerobic granulation coupled baffled membrane bioreactor, *Journal of Membrane Science*, 318(1-2), 334-339. (SCI, IF = 5.323; ISSN: 0376-7388)

b. *Scopus Journals:*

- 1) **Thanh B.X.\***, Hien V.T.M., Trung T.C., Da C.T., Berg H. (2015). Reuse of sediment from catfish pond through composting with water hyacinth and rice straw, *Sustainable Environment Research*, 25, (1), 59-63. (Scopus, IF = 1.000, ISSN: 1022-7630).
- 2) **Thanh B.X.\***, Thy L.L., Dan N.P., Visvanathan C. (2014). Industrial wastewater reuse by airlift external membrane bioreactor, *Sustainable Environment Research*, 24(1), 41-47. (Scopus, IF = 1.000, ISSN: 1022-7630).
- 3) Phuong D.T.T., **Thanh B.X.\***, Dan N.P. (2012). Impact of nitrogen loading rates on nitrogen transformation for anaerobic effluent from latex processing industry, *International Journal of Global Environmental Issues*, 12(2-4), 179-189. (Scopus, ISSN: 1741-5136).
- 4) Le N., **Thanh B.X.\***, Dan N.P. (2012). Study of swim-bed technology for cod removal and nitrification for latex wastewater treatment, *International Journal of Global Environmental Issues*, 12(2-4), 190-203. (Scopus, ISSN: 1741-5136).

*Book/Book chapter:*

- 1) Hai V.P., Dan N.P., **Thanh B.X.\***. (2016): Membrane Bioreactor for Decentralized Wastewater Treatment: A Case Study, p.1-5 in the book of *Encyclopedia of Membranes*: Springer-Verlag Berlin Heidelberg 2015 (Editors: Drioli & E., Giorno, L). DOI 10.1007/978-3-642-40872-4\_2006-1.
- 2) Triet L.M. & Nhue T.H. (2015). Xử lý nước thải – Vol. 1 [Wastewater treatment - Vol. 1]. NXB Xây Dựng [Construction Publisher, Vietnam] – **Thanh B.X.\***, Tin N.T. & Tam N.D. Chương 8: Xử lý nitơ và photpho [Chapter 8: Nitrogen and phosphorus removal], p.290-342. ISBN: 978-604-82-1609-2.
- 3) Triet L.M. & Nhue T.H. (2015). Xử lý nước thải – Vol. 1 [Wastewater treatment - Vol. 1]. NXB Xây Dựng [Construction Publisher, Vietnam] – **Thanh B.X.\***, & Tin N.T. Chương 1: Màng lọc và công nghệ sinh học màng ứng dụng trong xử lý nước thải [Chapter 1: Membrane and application of membrane bioreactor for wastewater treatment], p.9-38. ISBN: 978-604-82-1609-8.
- 4) **Thanh B.X.** & Dan N.P. (2014). Book of Abstract “The 4<sup>th</sup> Regional Conference on Membrane Technology”, December 3<sup>rd</sup>-6<sup>th</sup>, 2014, Ho Chi Minh City, Vietnam. The International Water Association. ISBN: ISBN: 978-604-73-2958-8 (Co-chairman of Organizer).
- 5) **Thanh B.X.** & Khoa L.V. (2013). Thuật ngữ chuyên ngành kỹ thuật và quản lý nước-nước thải [Technical terms for water engineering and management], NXB Đại Học Quốc Gia TPHCM [Ho Chi Minh City National University Publisher], Viet Nam. ISBN: 978-604-73-1807-0.
- 6) **Thanh B.X.** (2012). Manual for design of biological treatment processes [So Tay Huong Dan Thiet Ke Cac Cong Trinh Xu Ly Sinh Hoc], Ho Chi Minh City National University, Viet Nam. ISBN: 978-604-73-1409-6.
- 7) **Thanh B.X.** (2009). Fouling behaviour and nitrogen removal in aerobic granulation Membrane Bioreactor, PhD Dissertation, *Asian Institute of Technology (AIT)*, Bangkok, Thailand.
- 8) Jegatheesan V., Shu L., Visvanathan C., **Thanh B.X.** (2008). Aerobic Environmental Process: Chapter 23 in *Advances in Fermentation Technology*, Ed. Ashok Pandey et al., pp. 622-654, *Asiatech Press*, New Delhi. ISBN: 81-87680-18-0.
- 9) Dan N.P., Ha N.T.V., **Thanh B.X.**, Khoa L.V. (2007). Chapter 3: Water resources management in Ho Chi Minh City, Sustainable Groundwater Management in Asian Cities. International Global Environmental Strategy (IGES) Hayama, Japan, IGES, pp. 68-92. ISBN: 4-88788-039-9.
- 10) Dan N.P., **Thanh B.X.**, Khoa L.V., Truong B.D. (2006). Case study: Groundwater resources management in HCMC, Part III, pp. 81-87: Chapter in *Sustainable groundwater management in Asian cities - A summary report of Research on Sustainable Water Management in Asia*, Fresh Water Resources Management Project, IGES, Japan. ISBN 4-88788-029-4.
- 11) **Thanh B.X.** (2005). Aerobic granulation in Membrane Bioreactor, Master Thesis, *Asian Institute of Technology (AIT)*, Bangkok, Thailand.

## Patents/Technical Solutions

- Technical solution: Ứng dụng công nghệ MBR kết hợp giá thể di động nâng cao hiệu quả xử lý nước thải y tế [Application of membrane bioreactor with sponge media treating hospital wastewater; Code: 2-2015-00034, Cục Sở hữu trí tuệ [Intellectual property], registered on February 06<sup>th</sup>, 2015.

## Research grants and Technology transfer projects

No	Research projects	Code	Time	Funding organization
1)	Study on the pilot-scale LENA membrane process treating domestic wastewater and microbial rejection test using Kolon membrane.	Korea-KOLON-2017	6/2017-12/2017	Kolon central research park, Kolon industry, Republic of Korea
2)	Potential nutrient recovery from Urine as agricultural products [Đánh giá tiềm năng thu hồi dinh dưỡng từ nước tiểu để sản xuất sản phẩm phân bón]	Tc-MTTN-2017-01/University - Care	4/2017-12/2017	University's Research Project - CARE
3)	H2Ospital project: Water supply and hygiene for district hospitals in rural area – Vietnam & Tarzania	H2Ospital-2017	3/2017-3/2018	EPFL, Switzerland
4)	Operation of Pilot Scale Groundwater Treatment System in Ho Chi Minh City, Vietnam	Korea-JIU-2017	3/2017-9/2017	KEITI-Korea
5)	Nghiên cứu điều chế kết tủa struvite từ nước tiểu làm sản phẩm phân bón [Study on the struvite formation from Urine for agricultural fertilizer]: Student research project – Le Thi Hong Hanh (Supervisor)	VBL04-2017	3/2016-3/2017	Vietnam Brewery Co. Ltd
6)	Survey, performance evaluation and proposing appropriate technology improvement for 15 wastewater treatment systems of Saigon-Coop super market chain [Danh gia hien trang 15 HTXLNT, de xuat va giam sat cong nghe chuan, xay dung tieu chi HTXLNT cho he thong sieu thi COOPMART]	COOP-RECTIE	6/2016-10/2017	COOP
7)	KARG Research grant between Kurita Water and Environmental Foundation (KWEF) and Asian Institute of Technology (AIT) [Research supervisor of Mr. Luu Vinh Phuc – Project “Membrane Bioreactor for reduction of antibiotics in hospital wastewater”]	KARG-2016	6/2016-6/2017	KWEF-AIT
8)	Microfiltration kết hợp quá trình keo tụ/hấp phụ và quá trình oxy hóa bậc cao loại bỏ ô nhiễm hữu cơ vi lượng trong nước mặt	Tc-MTTN-2016-01/University - Care	3-12/2016	University's Research Project - CARE
9)	Nghiên cứu ứng dụng công nghệ màng MBR kết hợp giá thể sponge khử kháng sinh trong nước thải y tế [Study on the MBR with sponge media treating hospital wastewater]: Student research project – Nguyen Thanh Tin	VBL01-2016	1/2016-1/2017	Vietnam Brewery Co. Ltd
10)	Thu hồi dinh dưỡng và phát triển sinh khối tảo bằng mô hình Membrane Photobioreactor [Recovery of nutrients and algae biomass cultivation by membrane photobioreactor]: Student research project – Vo Thi Kim Quyen	VBL03-2016	1/2016-1/2017	Vietnam Brewery Co. Ltd
11)	Nghiên cứu loại bỏ kháng sinh trong nước thải bệnh viện bằng công nghệ màng Sponge MBR kết quá trình Ozone	NAFOSTED:105.9	1/2016-1/2018	NAFOSTED, Ministry of

	[Antibiotic removal in hospital wastewater by Sponge MBR coupling with Ozonation]	9-2015.16		Science & Technology – Viet Nam
12)	Reduction of Antibiotics in hospital wastewater by Sponge Membrane Bioreactor	GIST-2016	1/2016-12/2016	GIST, Korea
13)	Ung dung cong nghe khuay tron be mat advanced SBR xu ly nuoc thai nhiem hoa chat cong nghiep do su co tai tai kenh 6, khu cong nghiep Le Minh Xuan [Application of Advanced In Situ Sequencing Batch Reactor for treatment of canal water due to chemical waste discharge accident]	HCMC People's Committee	2014-2015	Ho Chi Minh City People Committee – Tan Hong Thai Co.
14)	Reduction of Antibiotics in hospital wastewater by Sponge Membrane Bioreactor: Case study in Ho Chi Minh City – Vietnam	GIST-2015	1/2015-12/2015	Gwangju Institute of Science & Technology (GIST), Korea
15)	Đánh giá chất lượng nước cấp sử dụng và phát triển mô hình xử lý nước cấp an toàn phù hợp cho các cơ sở y tế của TPHCM và vùng Đồng Bằng Sông Cửu Long [Assessment of clean drinking water quality and Developing an essential water treatment kit for hospitals in Ho Chi Minh City and Mekong Delta]	T-MTr-2014-82/University - Care	2014-2015	University's Research Project - CARE
16)	Nghiên ứng dụng công nghệ màng MBR kết hợp công nghệ oxy hóa bậc cao loại bỏ chất kháng sinh trong nước thải y tế [Study on removal of antibiotic in hospital wastewater by Membrane Bioreactor coupling with advanced oxidation process]	B2014-20-03 (B-type research project)	2014-2016	Vietnam National University-HCM
17)	Thai Ngoc Phuong company provides two BIOGILL wastewater treatment systems for research in water treatment and domestic wastewater treatment.		4/2013-3/2015	Thai Ngoc Phuong Co.
18)	Toward green city through application of a wetland roof system coupling with domestic wastewater treatment	KECO	9/2013-8/2014	Korea Environment Corporation (KECO), Ministry of Environment, South Korea
19)	Design, manufacturing and trial operation of Upflow multimedia Bioreactor coupling with membrane bioreactor treating hospital wastewater in Ho Chi Minh city	169/2012/HĐ-SKHCN	8/2012-8/2013	Dept. Science and Technology – HCMC, Viet Nam
20)	Review on available sanitation technology in Vietnam, AIT	AIT-BMGF	1/2013-8/2013	AIT - Bill and Melinda Gates Foundation (BMGF)
21)	Ứng dụng mô hình đất ngập nước trên mái (mái xanh) xử lý nước thải sinh hoạt: Một giải pháp giảm thiểu ảnh hưởng của biến đổi khí hậu [Application of wetland roof for domestic wastewater treatment: A solution for climate change mitigation]	NAFOSTED: 105.99-2011.03	11/2011-11/2013	NAFOSTED, Ministry of Science & Technology – Viet Nam
22)	Nghiên cứu ứng dụng màng Woven Fiber Microfiltration (WFMF) xử lý nước thải bể tự hoại [Study on application of woven fibre membrane filtration treating septic tank effluent]	B2012-20-28	4/2012-4/2013	HCMUT-Vietnam National University-

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23)	Ung Dung Cong Nghe Mang Loc Co Gia The (Attached Growth Membrane Bioreactor) Xu Ly Nuoc Thai Ao Nuoi Ca Tra [Application of attached growth membrane Bioreactor treating catfish farm wastewater]	TSDH-2011-MTr-07	2011-2012	University's Research Project – Master student research
24)	Landscape Analysis and Business Model Assessment in Fecal Sludge Management: Extraction and Transportation Models in Viet Nam	BMGF	2012	Hanoi University of Civil Engineering - BMGF
25)	Application of Respirometer to monitor biological treatment processes [Nghien cuu ung dung mo hinh ho hap ke de giam sat chat luong cac cong trinh xu ly sinh hoc]	B2011-20-30	4/2011-3/2012	HCMUT-Vietnam National University-HCM
26)	Application of aerobic granule for nitrogen removal in seafood processing wastewater [Ung Dung Bun Hat Hieu Khi Khu Nito Trong Nuoc Thai Thuy San]	B2010-20-13/	4/2019-3/2010	HCMUT-Vietnam National University-HCM
27)	Wastewater Treatment for Textiles and Dyeing Industries by Membrane Bioreactor Coupling with Advanced Oxidation Processes (B2-12)	SUPREM-HCMUT-JICA B2-12	8/2010-7/2011	JICA-HCMUT
28)	Xu Ly Nuoc Thai Det Nhuom Ung Dung Cong Nghe Mang (MBR) Ket Hop Oxi Hoa bac Cao (Advanced Oxidation Processes)	B2-12 (counterpart)	8/2010-7/2011	University's research project
29)	Sustainable water management in urban fringe areas through industrial wastewater reuse	AIT-HCMUT-INSA	2009-2010	FRANCE/AIT - Network Regional Programme Project
30)	Development of low cost water treatment system through co-precipitation between iron and arsenic for Mekong Delta province, Viet Nam.	GIST-2012	1/2012-12/2013	Gwangju Institute of Science & Technology (GIST), Korea
31)	Monitoring of Arsenic in groundwater of Tien Giang, Mekong Delta province, Viet Nam. \$9,000, funded by Gwangju Institute of Science and Technology (GIST), Korea (Project Investigator).	GIST-2011	1/2011-12/2011	Gwangju Institute of Science & Technology (GIST), Korea
32)	Monitoring of Arsenic in groundwater of Long An, Mekong Delta province, Viet Nam	GIST-2010	1/2010-12/2010	Gwangju Institute of Science & Technology (GIST), Korea
33)	Monitoring of water quality of Mekong Delta provinces and South-east Provinces of Ho Chi Minh City, Viet Nam (Technology transfer project)	METAWATER	2010	MEATWATER Co. Ltd, Japan
34)	Improvement of Water Environment of Trang Bang Industrial Park, Tay Ninh Province (2011), Economic contract with Industrial Park, Viet Nam (Technology	RECTIE-2011	2011-2012	Trang Bang Industrial Park

	transfer project)			
35)	Improvement of Water Environment of Le Minh Xuan Industrial Park, Binh Chanh District, HCMC (2009), Economic contract with Industrial Park, Viet Nam (Technology transfer project)	DITAGIS-2009	2009-2010	BCCI – Le Minh Xuan Industrial Park
36)	Improving the local community environment through development communities action plan of Water & Sanitation (WATSAN) (2009)	WWF-2009	2009	World Wildlife Fund
37)	Sustainable water management policy project (2006), HCMUT	IGES-2006	2006	Institute for Global Environmental Strategies (IGES), Japan
38)	Eco-industrial clusters in the rural urban fringe areas of Viet Nam (2007)	AIT-HCMUT-IGES	2007	IGES, Japan
39)	CIDA-AIT partnership Southeast Asia Urban environmental management applications (SEA-UEMA) project (2006)	SEA-UEMA	2006	CIDA-AIT, Thailand
40)	Public awareness for residents in area of Tan Hoa–Lo Gom canal (2003), CBEM project	Asia Foundation-USA	2003-2004	Asia Foundation, USA
41)	Improvement of Water Environment of Xuyen A Industrial Park, Binh Chanh District, HCMC (2009), Economic contract with Industrial Park, Viet Nam (Technology transfer project)	DITAGIS-2013	2013-2014	Ngoc Phong Industrial Park, Long An Province
42)	Investigation and survey on residue pollution of pesticides in Tay Ninh province [Điều tra, khảo sát xử lý, phòng ngừa ô nhiễm môi trường do hóa chất và thuốc bảo vệ thực vật tồn lưu trên địa bàn tỉnh Tây Ninh] (Technology transfer project)	DONRE – Tay Ninh: 2785/QĐ-STNMT	11/2013-11/2014	Dept. of Natural Resources & Environment – Tay Ninh Province
43)	Trihalomethanes (THMs) and its forming potential in water treatment plants in Mekong Delta Provinces	GIST-2014	1/2014-12/2014	Gwangju Institute of Science & Technology (GIST), Korea

### Invited Speakers/Trainers

- 1) Invited Speaker - The 7<sup>th</sup> International Forum on Industrial Bioprocesses – International Bioprocesses Association (IFIBiop), May 21-25, 2017, Jiangnan University, Wuxi, China. Topic title *“Investigation of Domestic Wastewater Treatment Capacity & Nutrient Accumulation by Wetland Roof with Different Local Plants”*.
- 2) Trainer - The 3<sup>rd</sup> Franco-Vietnamese School on “Membrane Separation and Renewable Energy for Drinking Water Production and Wastewater Reuse”, April 24<sup>rd</sup>-26<sup>th</sup>, 2017, Institute of Environmental Technology, Vietnam Academy of Science and Technology & UNESCO – SIMEV.
- 3) Invited Speaker – International Conference on Environmental Issue in Asian Countries, January 13<sup>rd</sup>-14<sup>th</sup>, 2017, Myongji University, Yongin, Republic of Korea. Topic title *“Pollution and Management of Water Environment in Vietnam: Challenges and Opportunity”*.
- 4) Invited Speaker – The Fourth Korea-ASEAN Engineering Forum: Korea-ASEAN Engineering Nexus for Better Tomorrow organized by National Academy of Engineering of Korea & ASEAN Academy of Engineering and Technology, July 29<sup>th</sup>, 2016, Westin Chosun Hotel, Seoul, Republic of Korea. Topic title *“Water management issues in Ho Chi Minh City”*.
- 5) Invited Speaker – Department of Science and Technology of Dong Nai province, November 25<sup>th</sup>, 2016. Topic title: *“Current situation and suitable technology solutions for the field of wastewater*



*treatment technologies of Dong Nai province”.*

- 6) Trainer - The 2<sup>nd</sup> Franco-Vietnam training course on “Membrane Technology for wastewater treatment in Agricultural and Food Industry”, March 23<sup>rd</sup>-27<sup>th</sup>, 2014, Institute of Environmental Technology, Vietnam Academy of Science and Technology & UNESCO – SIMEV.
- 7) Trainer - Training workshop on operation and management for operators of wastewater treatment systems in Tra Noc I industrial zone, Can Tho, October 11<sup>th</sup>-12<sup>th</sup>, 2012. Funded by GIZ-Vietnam, Germany.
- 8) Trainer - Training workshop for inspector of Department of Natural Resource and Environment (DONRE), HCMC on monitoring and management for textile and dyeing industries, November 4<sup>th</sup>-5<sup>th</sup>, 2012. Funded by JICA, Japan.
- 9) Trainer - Training workshop on operation and control of Coopmart wastewater treatment systems, December 2012, HCMC.
- 10) Trainer - Training workshop for operators of Central wastewater treatment plant – Bien Hoa Sugar factory, 2011, Bien Hoa, Dong Nai province.
- 11) Trainer - Training workshop for Phu My Fertilizer (Dam Phu My), Calculation and Design of Wastewater Treatment Unit Processes, Le Thanh Ton Str., District 1, HCMC, May 9<sup>th</sup>-11<sup>th</sup>, 2011.
- 12) Trainer - Training workshop for Vina Kraft Paper Co. (SCG Paper), Operation and Management of Wastewater Treatment Plant, My Phuoc III Industrial Park, Ben Cat District, Binh Duong, 28-30 Aug & 30 Sep-2 Oct, 2009.
- 13) Trainer - Training workshop on operation and management of industrial wastewater treatment systems for Vung Tau industries, September, 2009.
- 14) Trainer - Training workshop for Viet Nam Brewery Factories, Operation and Management of Wastewater Treatment Plant, Asian Institute of Technology Center in Viet Nam (AITCV), 6-10 July 2009, HCMC.
- 15) Trainer - Training workshop for operators of Central wastewater treatment plant - Trang Bang Industrial Park, Tay Ninh Province (2011).
- 16) Trainer - Training workshop for operators of Central wastewater treatment plant – Amata industrial park, (2002), Bien Hoa, Dong Nai province.

#### **Conference/Workshop organizer:**

- [The 5<sup>th</sup> International Symposium of Environmental Analytical Chemistry \(ISEAC 5 – Asia\)](#), May 16<sup>th</sup>-20<sup>th</sup> 2017, Ho Chi Minh City, Vietnam. Supported by the [International Association of Environmental Analytical Chemistry \(IAEAC\)](#) - Switzerland (**Co-chairman of organizing committee**).
- International Conference on Environmental Quality Concern, Control and Conservation (EQC 2015), May 08-09, 2015 Kaohsiung, Taiwan (International Program Committee).
- [The 4<sup>th</sup> IWA Regional Conference on Membrane Technology](#), December 3<sup>rd</sup>-6<sup>th</sup>, 2014, REX hotel, Ho Chi Minh City, Vietnam. Supported by The [International Water Association](#) (2014) (**Co-chairman of organizing committee**).
- Workshop on “Sustainable management of ecosystem services for long term aquaculture production in the Mekong Delta”, March 20<sup>th</sup>-22<sup>nd</sup>, 2013, organized by HCMUT. Project funded by SIDA, Sweden.
- Workshop on “Environmentally Sound Treatment of Hazardous Chemicals in Asia”, January 16<sup>th</sup>-18<sup>th</sup>, 2013, jointly organized by HCMUT-AIT, HCMC, Viet Nam.
- International Forum for Green Technology and Management (IFGTM – 2012). Ho Chi Minh city University of Technology, July 30<sup>th</sup>-31<sup>st</sup>, 2012. Funded by Taiwan Universities (**Co-chairman of organizing committee**).
- Project kick-off workshop “Toward green city through application of a wetland roof system coupling with domestic wastewater treatment”, August 27<sup>th</sup>-28<sup>th</sup>, 2013. Project supported by Korea Environment Corporation (KECO), Ministry of Environment, South Korea (**Chairman of Organizing Committee**).
- Workshop on “Sustainable water management in urban fringe areas through industrial wastewater reuse”, December 21<sup>st</sup> 2010, Ngoc Lan hotel, Viet Nam. Project funded by FRANCE/AIT - Network Regional Programme.

- Training on “Application of membrane Technology for water and wastewater treatment”, December 22<sup>nd</sup> 2010, Ho Chi Minh City University of Technology, Viet Nam, organized by AIT-HCMUT.
- Workshop on “Sustainable water management policy project”, Renaissance Riverside Hotel Saigon, 2006, organized by HCMUT-Institute for Global Environmental Strategies (IGES), Japan.

## Awards

- The best poster award - Roland Frei Award: “*Effect of sludge retention time on antibiotics removal in hospital wastewater by sponge membrane bioreactor*” by Phuc L.V, Quyen VTK, Ngoc DTB & **Thanh BX**. The 5<sup>th</sup> International Symposium on Environmental Analytical Chemistry, May 16<sup>th</sup>-20<sup>th</sup>, 2017, REX hotel, Ho Chi Minh city, Vietnam.
- The best paper award: “Aerobic granulation in Sequencing Batch Airlift Reactor for Organic and nitrogen removal”. The 4<sup>th</sup> AUNSEED-Net Regional Conference on Global Environment and Seminar of NRCT-JSPS Asian Core Program, January 18<sup>th</sup>-19<sup>th</sup>, 2012, Emerald Hotel, Bangkok, Thailand.
- SASAKAWA Young Leader Fellowship award (Tokyo Foundation) - 2003.
- Certificate of model lecturer from the Rector of HCMC University for the school year of 2012; 2014.
- Certificate of satisfactory progress from the Rector of HCMC University of Technology for the excellent teaching and scientific research of year 2013.
- Consolation prize on individual scientific publication in year 2010, 2012, 2013, 2015, 2016. Viet Nam National University – Ho Chi Minh.

## Journal Editor/Reviewer

### *Role as Journal reviewer:*

- Environmental Technology & Innovation, Elsevier (2017-date)
- Ecological Engineering, Elsevier (2016-date).
- Chemosphere, Elsevier (2015-date).
- Applied Microbiology and Biotechnology (AMAB), Springer (Since 2009-date).
- Letters in Applied Microbiology (LAM), Blackwell Publishing (Since 2009-date).
- Bioresource Technology (BITE), Elsevier (Since 2009-date).
- International Biodeterioration and Biodegradation (IBB), Elsevier (Since 2010-date).
- Journal of Hazardous Materials, Elsevier (Since 2010-date).
- Desalination and Water Treatment (DWT), Taylor-Francis Publisher (Since 2010-date).
- Water Science and Technology, IWA Publisher (Since 2009-date).
- Environmental Technology, Taylor-Francis Publisher (Since 2015-date).
- Environmental Engineering Research, Korean Society of Environmental Engineers (Since 2014-date)
- Journal of Water Sustainability (JWS), University of Technology Sydney (Since 2011-date).
- International Journal of Environmental Engineering (IJEE), InderScience (Since 2011-date).
- Polish Journal of Chemical Technology (PJCT), VERSITA (Since 2012-date).
- Sustainable Environment Research, National Cheng Kung University-Elsevier, Taiwan (Since 2011-date).
- Journal of Science & Technology, Viet Nam Academy of Science & Technology (Since 2009-date).

## Membership/Credentials

- Member of American Geophysical Union (AGU), USA.
- Member of Membrane Bioreactor Center
- International Water Association – IWA (ID No. 01061086).
- **Life member** of The “International Forum on Industrial Bioprocesses (IFIBiop)” (ID No.: LM-112).
- European Desalination Society.
- MBR network forum, European Commission.
- European Federation of Biotechnology, Barcelona – Spain.
- UEM Network, Southeast Asia Urban Environmental Management Applications (SEA-UEMA)

Project, SERD, AIT, Thailand.

- Core member of the “International Forum on Green Technology and Management (IFGTM)” founded by Association of Technology Universities in Vietnam.
- Evaluation expert, Foundation of Science and Technology Development - Ton Duc Thang University

### **Partners with Industries: Research Application and Collaboration**

- KOLON Membrane, South Korea: Joint research collaboration and application on membrane bioreactors for energy saving.
- DAEYANG ENBIO : Joint training on operation and monitoring of wastewater treatment plant.
- JIU Corporation, South Korea: Joint research collaboration and application on ED water treatment system.
- Kyowakiden Industry Co.: Joint research collaboration and application on Oil-containing wastewater treatment.
- Hitachi Zosen - Vietnam, Japan: Joint research on anaerobic digestion of organic wastes for energy recovery.
- Hyosung Goodsprings, South Korea: Collaboration.
- Coopmart, Vietnam: Research application for supermarket wastewater treatment system.