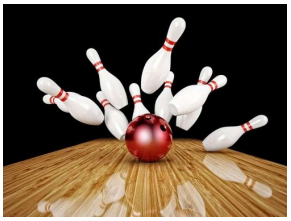
NEWSLETTER

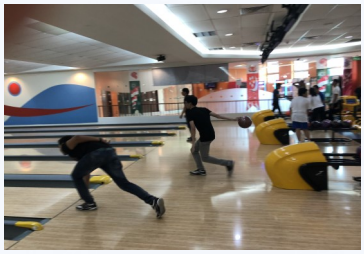
Issue 2
August 2019

E2S2 Family Bonding Event — Bowling!



E2S2 had bowling as the team bonding event at The Chevrons. The excitement was in the air when all the 7 teams reached the bowling center even before the tournament started. Everyone couldn't wait long so with a 5 minutes warm-up, the real tournament began. Along the game, a gutter ball can be disappointing but immediately overwhelmed by a strike in the team in the next round. Team spirit pulled everyone in and strived for excellence. Some went for the extra miles and walked around to "spy" on other teams' scores.

While we felt competitive and pressurized by other teams, we still applauded and cheered for their success. We get closer to our colleagues and cultivate the seeds of cooperation through the bonding activities. In that sense, we are all winners. It was a successful and memorable event filled with laughter, creating a chance for PIs, staff and students to interact and build rapport relationships. All participants enjoyed the event and are looking forward for the next one! Let's continue to work hard and play harder!



Lab Safety

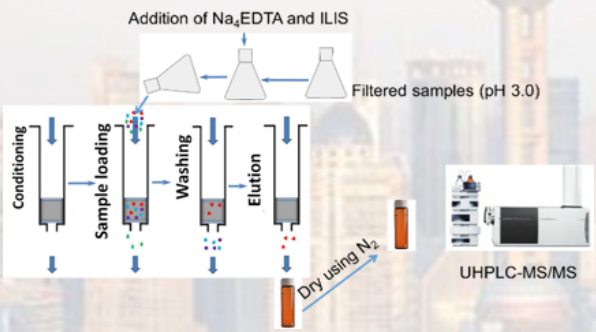
Labelling of chemicals

Labelling of chemicals is always important when working in the lab. The purpose of the labelling is to ensure the associated hazards can be identified. With the labelling, other lab users would know how to deal with it in case of spillage or leakage.

In E2S2 lab, labels are provided to label your reagent/sample/solution. The labels contain information of user name, content, nature of mixture, preparation date. GHS stickers are also required to be pasted on every chemical.

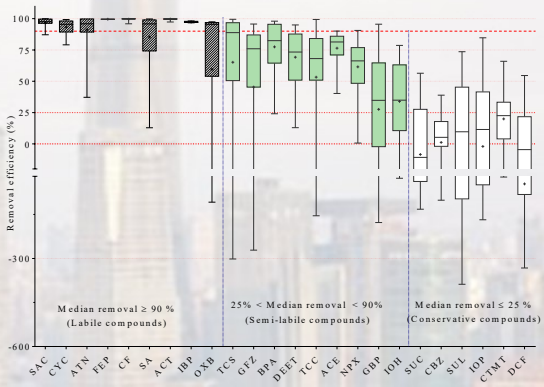
The people behind E2S2 and their contributions.

Dr. TRAN Ngoc Han is an environmental chemist with over 16 years experience working with universities and institutes. Dr. Tran graduated from Hanoi University of Science and Technology with B.E. (1st Hons) in 2002. He completed his PhD in 2010 at Tokyo Institute of Technology. Dr. Tran is currently working in E2S2-CREATE Program as a Senior Research Fellow. His current research interest is in the field of environmental analytical chemistry and environmental engineering, where his expertise lies in developing method for detection and quantification of a large number of emerging contaminants (e.g. antibiotics, pharmaceuticals and personal care products, endocrine disrupting chemicals, artificial sweeteners, nitrosamines, algal toxins, pesticides, etc.) in different environmental compartments.



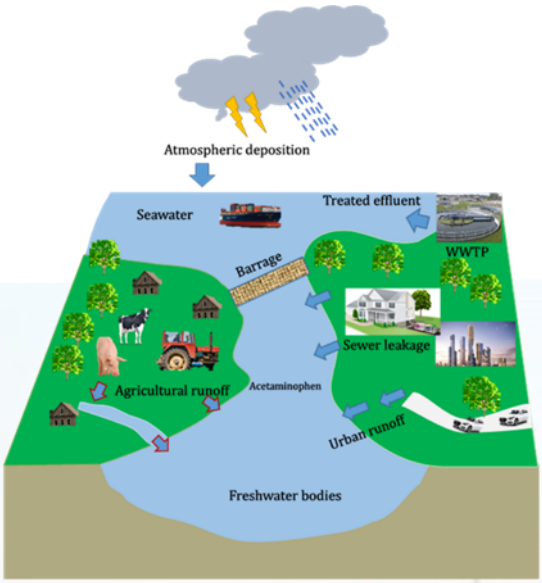
His research topics mainly focus on environmental occurrence, fate, and transport of emerging contaminants in engineered systems (i.e. drinking water treatment plants, wastewater treatment plants, and desalination plants) and natural systems (e.g. constructed wetlands).

Under E2S2-CREATE program, Dr. Tran has successfully developed analytical methods for the simultaneous determination of numerous classes of emerging contaminants in the environment. This helps to understand the occurrence, fate, and transformation of the emerging contaminants in urban water cycle in Singapore. For example, Tran et al. (2015, 2016, and 2017) have provided comprehensive data on the occurrence and fate of emerging contaminants (i.e. antibiotics, pharmaceuticals and personal care products, artificial sweeteners, and endocrine disrupting chemicals) in wastewater treatment plants, drinking water treatment plants and desalination plants in Singapore.



Dr. Tran has successfully established a suite of chemical markers for tracing diffuse pollution sources (i.e. sewage leakage, sewer overflows, and stormwater runoff) in surface waters bodies. These chemical markers provide water managers (PUB-Singapore) an action to reliably diagnose water quality impacts and develop water protection measures.

The people behind E2S2 and their contributions.



To date, Dr. Tran has published more than 30 papers in prestigious journals, in which he acts mainly as first-author/corresponding author. In particular, his recent paper (Tran et al. 2018) published in Water Research is valued as one of the most cited articles in this journal. Currently, Dr. Tran has the h-index of 19 and total citations of 1431. Following are selected journal articles related to E2S2-CREATE program:

1. **N. H. Tran***, L. Hoang, L. D. Nghiem, N.M.H Nguyen, H. H. Ngo, W. Guo, Q.T. Trinh, N.H. Mai, H. Chen, D. D. Nguyen, T. T. Ta, K.Y.H. Hoong Gin* (2019). Occurrence and risk assessment of multiple classes of antibiotics in urban canals and lakes in Hanoi, Vietnam. **Science of the Total Environment,** 692, 157–174 (CITATIONS: **N/A**; IF = 5.589).
2. T. Yin, **N.H. Tran**, H. Chen, Y. He, K.Y.H. Gin* (2019). Biotransformation of polyfluoroalkyl substances by microbial consortia from constructed wetlands under aerobic and anoxic conditions. **Chemosphere,** 233, 101-109 (CITATATION: N/A; IF = 5.108).
3. **N.H. Tran***, M. Reinhard, E.Khan, H. Chen, V.T. Nguyen, S. G. Goh, Q. B. Nguyen, N. Sadeli, K.Y.H. Gin * (2019). Emerging contaminants in wastewater, stormwater runoff, and surface water: Application as chemical markers for diffuse sources. **Science of the Total Environment**, 676, 252-267 (CITATIONS: **5**; IF = 5.589).
4. H. Chen, M. Reinhard, T. Yin, V.T. Nguyen, **N. H. Tran**, K.Y.H. Gin * (2019). Multi-compartment distribution of perfluoroalkyl and polyfluoroalkyl substances (PFASs) in an urban catchment system. **Water Research**, 154, 227–237 (CITATIONS **2**; IF = 7.913).
5. Y. Zhao, D. Liu, W. Huang, Y. Yang, M. Ji, L. D. Nghiem, Q.T. Trinh, **N. H. Tran*** (2019). Insights into biofilm carriers for biological wastewater treatment processes: Current state-of-the-art, challenges, and opportunities. **Bioresource Technology**, 288, 121619 (CITATIONS: N/A; IF = 6.669).
6. T.H. Le, C. Ng, **N. H. Tran**, H. Chen, K.Y.H. Gin * (2018). Removal of antibiotic residues, antibiotic resistant bacteria and antibiotic resistance genes in municipal wastewater by membrane bioreactor system. **Water Research,** 145, 498-508 (CITATIONS: **32**; IF = 7.913).
7. N. Saeidi, X. Gu, **N. H. Tran**, S.G. Goh, M. Kitajima, A. Kushmaro, B. Schmitz, K.Y.H. Gin* (2018). Occurrence of traditional and alternative fecal indicators in tropical urban environments under different land use patterns. **Applied and Environmental Microbiology**, 84 (14), e00287-18. (CITATIONS: **4**; IF = 3.633)
8. **N.H. Tran***, M. Reinhard, K.Y.H. Gin * (2018). Occurrence and fate of emerging contaminants in municipal wastewater treatment plants from different geographical regions-a review. **Water Research**, 133, 182–207 (CITATIONS: **138**; IF = 7.913).
9. **N. H. Tran**, K.Y.H. Gin * (2017). Occurrence and removal of pharmaceuticals, hormones, personal care products, and endocrine disrupters in a full-scale water reclamation plant. **Science of the Total Environment**, 599–600, 1503–1516 (CITATIONS: **43**; IF = 5.589).

The people behind E2S2 and their contributions.

10. X. Yi, **N. H. Tran** (Co-first author), T. Yin, Y. He, K.Y.H. Gin * (2017). Removal of selected PPCPs, EDCs, and antibiotic resistance genes in landfill leachate by a full-scale constructed wetlands system. **Water Research**, 121, 46–60 (CITATIONS: **54**; IF = 7.913).
11. **N. H. Tran**, H. Chen, M. Reinhard, F. Mao, K.Y.H. Gin* (2016). Occurrence and removal of antibiotics and antimicrobial agents in biological wastewater treatment processes. **Water Research**, 104, 461–472 (CITATIONS: **78**; IF = 7.913).
12. **N. H. Tran,** H. Chen, T.V. Do, M. Reinhard, H. H. Ngo, Y. He, K.Y.H. Gin * (2016). Simultaneous analysis of multiple classes of antimicrobials in environmental water samples using UHPLC-MS/MS coupled with isotope dilution. **Talanta,** 159, 163-173 (CITATIONS: **28**; IF = 4.916).
13. **N. H. Tran,** J. Gan, V.T. Nguyen, H. Chen, L. You, A. Duarah, L. Zhang, K.Y.H. Gin* (2015). Sorption and biodegradation of artificial sweeteners in activated sludge processes. **Bioresource Technology**, 197, 329 -338 (CITATIONS: **37**; IF = 6.669).
14. **N. H. Tran,** K.Y.H. Gin*, H.H. Ngo (2015). Fecal pollution source tracking toolbox for identification, evaluation and characterization of fecal contamination in receiving urban surface waters and groundwater. **Science of the Total Environment**, 538, 38-57 (CITATIONS: **69**; IF = 5.589).
15. **N. H. Tran,** H.H. Ngo, T. Urase, K.Y.H. Gin* (2015). A critical review on characterization strategies on organic matter for wastewater and water treatment processes. **Bioresource Technology**, 193, 523-533 (CITATIONS: **49**; IF = 6.669).

Professional activities

- Associate Editor, Environmental Chemistry Letters (Springer).
- Associate Editor, Trends in Environmental Analytical Chemistry (Elsevier).
- Associate Editor, Environmental Chemistry (CSIRO).
- Associate Editor, Water Science and Technology (IWA).
- Editorial Board Member, Science of the Total Environments (Elsevier).
- Advisory Board Member, Heliyon (Elsevier).
- Member, International Water Association (IWA).
- Member, Association of Environmental Engineering & Science Professors (AEESP).
- Member, American Chemistry Society (ACS).

Professional awards

Dr. Tran has been awarded ***Certificates of Outstanding Contribution in Reviewing*** for the following journals:

- Journal of Hazardous Materials (Jun, 2018).
- Science of the Total Environment (Mar, 2018).
- Water Research (Oct, 2017 & May, 2016).
- Environmental Nanotechnology, Monitoring & Management (Sept, 2017).
- Chemosphere (Feb, 2017).
- Bioresource Technology (Feb, 2017).
- Fungal Biology (Jul, 2016).
- Talanta (Jul, 2016).
- Environmental Pollution (Dec, 2015).

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