**Associate Professor (Professor) DONG Yahong, Caroline**
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## Academic Qualification

PhD, Department of Civil Engineering, The University of Hong Kong

MPhil, Department of Civil Engineering, The University of Hong Kong

BSc, Department of Environmental Science, Ocean University of China

## Teaching Area

Industrial Ecology, Sustainable Energy Systems, Introduction to Environmental Economics

## Research Area

Life cycle assessment, Water quality modeling, Carbon neutrality, Sustainable development, Green buildings

## Working Experience

Associate Professor, Department of Environmental Science and Engineering, Macau University of Science and Technology

Research Fellow (Distinguished), Institute of Low Carbon and Sustainable Development, Jinan University

Professor (Distinguished), Qingdao Research Center of Green Development and Ecological Environment, Qingdao University of Science and Technology

Teaching Fellow, Faculty of Science and Technology, Technological and Higher Education Institute ofHong Kong

Postdoctoral Fellow, Department of Architecture and Civil Engineering, City University of Hong KongPostdoctoral Fellow, Department of Civil Engineering, The University of Hong Kong

## Research Grants

Life cycle sustainability assessment modeling of buildings, General Project, Natural Science Foundationof Shandong Province, RMB 100,000, 2022-2024, Principal Investigator.

Action Plan for Carbon Neutrality of Lingshan Island Provincial Nature Reserve. Shandong ProvincialNature Conservation Fund, RMB 442,400, 2021-2022, Principal Investigator.

Life Cycle Sustainability Assessment of Biodiesel Produced in Hong Kong, THEi Seed Grant,HK$100,000, 2016-2017, Principal Investigator.

Research on theory and technology of large-scale seaweed carbon sequestration and sink enhancement, Southern Ocean Science and Engineering Guangdong Laboratory (Zhuhai) 2021 Independent ScientificResearch Project (Key Project), 4,000,000 RMB, 2022-2024, Participated.

Guangdong Marine Industry Carbon Emission Accounting and Assessment System, Department ofNatural Resources of Guangdong Province, 5,000,000 RMB, January 2022- December 2022, Participated.

Development of a HKGBC Green Building Product Labelling Scheme, Hong Kong Green BuildingCouncil (HKGBC), 2012-2014, Participated.

Establishing a Hong Kong based Carbon Labeling Framework for Construction Materials, Hong KongConstruction Industry Council Research Fund, 2012-2013, Participated.

Water Quality Forecast and Management System for Hong Kong (WATERMAN), Hong Kong JockeyClub Charities Fund, 2009-2011. Participated.

## Representative publications (Complete publication refer to my webpage)

**Selected peer-reviewed journal papers:**

- **Y Dong***, YT Zhao, J Zhang, P Liu, 2022. Development of a framework of carbon accounting and management on the township level in China. Journal of Environmental Management. (IF: 8.910)
- **Y Dong**, YT Zhao, H Wang, P Liu, Y He, GY Lin*, 2022. Integration of life cycle assessment and life cycle costing for the eco-design of rubber products. Scientific Reports. (IF: 4.996)
- **Y Dong**, MU Hossain, H Li, P Liu*, 2021. Developing Conversion Factors of LCIA Methods for Comparison of LCA Results in the Construction Sector. Sustainability. (IF: 3.889; Google Citation: 5)
- MU Hossain, **Y Dong**, ST Ng*, 2021. Influence of Supplementary Cementitious Materials in Sustainability Performance of Concrete Industry: A Case Study in Hong Kong, Case Studies in Construction Materials. (IF: 4.934; Google Citation: 7)

- **Y Dong**, ST Ng, P Liu*, 2021. A comprehensive analysis towards benchmarking of life cycle assessment of buildings based on systematic review. Building and Environment. (IF: 7.093; Google Citation: 8)
- MU Hossain, ST Ng*, **Y Dong**, B Amor, 2021. Strategies for mitigating plastic wastes management problem: A lifecycle assessment study in Hong Kong. Waste Management. (IF: 8.816)
- **Y Dong,** P Liu*, 2021. Evaluation of the completeness of LCA studies for residential buildings. Clean Technologies and Environmental Policy. (IF: 4.700)
- **Y Dong**, Y Zhao, MU Hossain, Y He, P Liu*, 2021. Life cycle assessment of vehicle tires: A systematic review. Cleaner Environmental Systems. (Google Citation: 9)
- **Y Dong**, P Liu, MU Hossain, Y Fang, Y He, H Li*, 2021. An Index of Completeness (IoC) of life cycle assessment: Implementation in the building sector, Journal of Cleaner Production. (IF: 11.072; Google Citation: 4)
- J Guo, **Y Dong,** JHW Lee*, 2020. A real time data driven algal bloom risk forecast system for mariculture management, Marine Pollution Bulletin. (IF: 7.001; Google Citation: 5)
- HY Li*, X Zhang, ST Ng, M Skitmore, **YH Dong**, 2019. Social sustainability indicators of public construction megaprojects in China, Journal of Urban Planning and Development. (IF: 2.361; Google Citation: 13)
- U Hossain, CS Poon*, **YH Dong**, 2018. Evaluation of environmental impact distribution methods for supplementary cementitious materials, Renewable & Sustainable Energy Reviews. (IF: 16.799; Google Citation: 86)
- U Hossain, CS Poon*, **YH Dong**, IMC Lo, JCP Cheng, 2018. Development of social sustainability assessment method and a comparative case study on assessing recycled construction materials, International Journal of Life Cycle Assessment. (IF: 5.257; Google Citation: 60)
- **YH Dong**, AK An*, YS Yan, S Yi, 2017. Hong Kong's Greenhouse Gas Emissions from the Waste Sector and its Projected Changes by Integrated Waste Management Facilities, Journal of Cleaner Production. (IF: 11.072; Google Citation: 16)
- **YH Dong**, ST Ng*, MM Kumaraswamy, 2016. Critical analysis of the life cycle impact assessment methods, Environmental Engineering and Management Journal, 2016, 15 (4): 879-890 (IF: 0.858; Google Citation: 11)
- **YH Dong**, ST Ng*, 2016. A modeling framework to evaluate sustainability of building construction based on LCSA, International Journal of Life Cycle Assessment, 2016, 21 (4): 555 –568. DOI: 10.1007/s11367-016-1044-6 (IF: 5.257; Google Citation: 63)
- **YH Dong**, L Jaillon*, P Chu, CS Poon, 2015. Comparing carbon emissions of precast and cast-in-situ construction methods–A case study of high-rise private building, Construction and

Building Materials, 2015, 99: 39 – 53. DOI: 10.1016/j.conbuildmat.2015.08.145 (IF: 7.693;

Google Citation: 114)

- **YH Dong**, ST Ng*, 2015. A social life cycle assessment model for building construction in Hong Kong, International Journal of Life Cycle Assessment, 2015, 20 (8): 1166 – 1180. DOI: 10.1007/s11367-015-0908-5 (IF: 5.257; Google Citation: 93)
- **YH Dong**, ST Ng*, 2015. A Life Cycle Assessment model for evaluating the environmental impacts of building construction in Hong Kong, Building and Environment, 2015, 89: 183 – 191. DOI: 10.1016/j.buildenv.2015.02.020 (IF: 7.093; Google Citation: 129)
- **YH Dong**, ST Ng*, AHK Kwan, SK Wu, 2015. Substituting local data for overseas life cycle inventory – a case study of concrete products in Hong Kong, Journal of Cleaner Production, 2015,87: 414 – 422. DOI: 10.1016/j.jclepro.2014.10.005 (IF: 11.072; Google Citation: 36)
- **YH Dong**, ST Ng*, 2014. Comparing the midpoint and endpoint approaches based on 'ReCiPe' – a study of commercial buildings in Hong Kong, International Journal of Life Cycle Assessment, 2014, 19 (7): 1409 – 1423. DOI: 10.1007/s11367-014-0743-0 (IF: 5.257; Google Citation:123)

**Selected Peer-reviewed Journal Papers (Chinese):**

- 李兴盛，**董雅红**，李蔚（2022），中国输配电系统生命周期碳排放研究，《环境科学学报》。（IF: 1.91, 北大核心）（外审中）
- 郭傑，**董雅紅***， 2021. 生態文明視域下的創新經濟理論辨析，《 山東社會科學》。（IF：

  1.303， CSSCI 南大核心，北大核心）

**Conferences:**

- **Y Dong***, TY Yahong, ZY Xu, 2022, P Liu, Life cycle carbon assessment of buildings based on GB/T 51366: the pros and cons, The 6th Sustainable Process Integration Laboratory (SPIL) Scientific Conference, 14 – 15 November 2022 (Hybrid), Brno, Czech Republic. (Forthcoming)
- **Y Dong***, YT Zhao, P Liu, 2022. Achieving carbon emissions peak at township level: a case study in China,, 5th SEE SDEWES Conference, 22 - 26 May, 2022, Vlore, Albania
- **Y Dong***, P Liu, 2022. Replacing natural gas with electricity: a life cycle carbon assessment of the Chinese liquor industry, 5th SEE SDEWES Conference, 22 - 26 May, 2022, Vlore, Albania
- **Y Dong***, P Liu, 2021. The influential factors of consumer purchasing of carbon-labeled products in the post-COVID-19 era, Energy, Water, Emission & Waste in Industry and Cities, The 5th Sustainable Process Integration Laboratory Scientific Conference, 4-5 November, 2021, Brno, Czech Republic.

**Y Dong*,** YT Zhao, P Liu, 2021. Development of a calculation tool of regional carbon

emissions(CToRCE) in China, Energy, Water, Emission & Waste in Industry and Cities, The 5th Sustainable Process Integration Laboratory Scientific Conference, 4-5 November, 2021, Brno,Czech Republic.

- **YH Dong**, ST Ng*, H Li, 2016. Development of a social life cycle impact assessment method forconstruction management in Hong Kong, International Conference on Advancement of Construction Management and Real Estate, 14-17 December, 2016, Hong Kong, China.
- **YH Dong***, 2016. Sustainability assessment of public residential buildings in Hong Kong based on LCSA, EcoBalance 2016, The 12th Biennial International Conference on EcoBalance, Responsible Value Chains for Sustainability, 3-6 October, 2016, Kyoto, Japan.
- **YH Dong**, L Jaillon*, CS Poon, 2016. Life cycle assessment of precast and cast-in-situ construction, Sustainable Built Environment Regional Conference, 15 – 17 June, 2016, Zurich, Switzerland.
- **YH Dong**, ST Ng*, 2015. A life cycle sustainability assessment framework for building construction, The First International Conference for Sustainable Development and Management, 28 – 30 June 2015, HKSAR, China.
- **YH Dong,** ST Ng*, 2014. Life cycle assessment of biodiesel in Hong Kong, EcoBalance 2014, The 11th International Conference on EcoBalance, Creating Benefit through Life Cycle Thinking,27-30 October, 2014, Tsukuba, Japan.
- **YH Dong**, ST Ng*, 2013. Application of life cycle assessment to compare the environmental footprint of concrete methods, SETAC Europe 19th LCA Case Study Symposium: LCA in Market, Research, Policy: Harmonization beyond Standardization, 11-13 November, 2013, Rome,Italy.
- **YH Dong**, ST Ng*, 2013. LCA modeling for building construction processes, Sustainable Building 2013 Hong Kong Regional Conference – Urban Density & Sustainability, 12-13 September, HKSAR, China.
- **YH Dong**, CTC Wong, ST Ng*, JMW Wong, 2013. Life Cycle assessment of precast concrete units, International Conference on Civil, Environmental and Architectural Engineering, 28-29 March, Madrid, Spain.

**Other publications:**

- Book Chapter: Sustainable Building Assessment and Certification System, Rethinking Pathwaysto Sustainable Built Environment (In preparation).
- 董雅紅，方媛，吳兆堂（2022），低碳發展藍皮書 -中國碳標籤發展報告（2021-2022）-建築行業篇。
- 董雅紅，楊宇峰，沈洪濤 （2022），“關於推動廣東海洋產業低碳發展的建議”《南方智

庫專報》。

- 宋獻中，董雅紅，沈洪濤（2021），“粵港澳大灣區高校建設零碳校園，引領零碳社區的建議”《南方智庫專報》。 （獲得省部級領導批示）

## Professional Certification and Awards

The 4th National WebLCA Competition. 2022. The First Class Prize.

Top 10 Most Viewed Presentations, Developing a Calculation Tool of Regional Carbon Emissions (CToRCE): A Case Study of Lingshan Island in China, 5th Sustainable Process Integration Laboratory Scientific Conference: Energy, Water, Emissions & Waste in Industry and Cities, November 4-5, 2021,Brno, Czech Republic.

BEAM Pro, accredited by Hong Kong Green Building Council (HKGBC)

Best Paper Award, International Conference for Sustainable Development and Management, June 2015,Hong Kong, China.

Certificate of Mental Health First Aid, Mental Health Association of Hong Kong (MHFA)

## Journal Editorship

Editor, Sustainability (SI)

## Personal Website