

### (1) Professional Experience

- 09/2017–present Dean, SCUT-HKUST Joint Research Institute, SCUT, Guangzhou, China  
10/2015–present Director, Hong Kong Branch of National Engineering Research Center for Tissue Restoration & Reconstruction, Hong Kong, China  
01/2013–present Stephen K. C. Cheong Professor of Science, HKUST, Hong Kong  
07/2008–present Chair Professor, Department of Chemistry, Division of Life Science, Division of Biomedical Engineering HKUST, Hong Kong  
07/2005–06/2008 Professor, Department of Chemistry, HKUST, Hong Kong, China  
07/1994–06/2005 Assistant/Associate Professor, Department of Chemistry, HKUST

### (2) Selected Publications (>1600 journal papers, 65 book chapters and 60 patents; h-index 141)

1. Zhao, Z.; Zhang, H.; Lam, J. W. Y.; Tang, B. Z. "Aggregation-Induced Emission: New Vistas at Aggregate Level" *Angew. Chem. Int. Ed.* **2020**, *59*, in press.
2. Peng, H.-Q.; Liu, B.; Wei, P.; Zhang, P.; Zhang, H.; Zhang, J.; Li, K.; Li, Y.; Cheng, Y.; Lam, J. W. Y.; Zhang, W.; Lee, C.-S.; Tang, B. Z\*. "Visualizing the Initial Step of Self-Assembly and the Phase Transition by Stereogenic Amphiphiles with Aggregation-Induced Emission" *ACS Nano* **2019**, *13* (1), 839–846.
3. Cheng, Y.; Liu, S.; Song, F.; Khorloo, M.; Zhang, H.; Kwok, R. T. K.; Lam, J. W. Y.; He, Z\*.; Tang, B. Z\*. "Facile Emission Color Tuning and Circularly Polarized Light Generation of Single Luminogen in Engineering Robust Forms" *Mater. Horiz.* **2019**, *6*, 405–411.
4. Wang, D\*.; Lee, M. M. S.; Xu, W.; Shan, G.; Zheng, X\*.; Kwok, R. T. K.; Lam, J. W. Y.; Hu, X\*.; Tang, B. Z\*. "Boosting Non-Radiative Decay to Do Useful Work: Development of a Multi-Modality Theranostic System from an AIEgen" *Angew. Chem. Int. Ed.* **2019**, *58*, 1–6.
5. Liu, S.; Zhang, H.; Li, Y.; Liu, J.; Du, L.; Chen, M.; Kwok, R. T. K.; Lam, J. W. Y.; Phillips, D. L.; Tang, B. Z\*. "Strategies to Enhance the Photosensitization: Polymerization and D/A Even-Odd Effect" *Angew. Chem. Int. Ed.* **2018**, *57*, 15189–15193
6. Chen, Y.; Zhang, W.; Zhao, Z.; Cai, Y.; Gong, J.; Kwok, R. T. K.; Lam, J. W. Y.; Sung, H. H. Y.; Williams, I. D.; Tang, B. Z\*. "An Facilely Accessible Ionic Aggregation-induced Emission Luminogen with Hydrogen Bonding Switchable Emission and Wash-free Imaging Ability" *Angew. Chem. Int. Ed.* **2018**, *57*, 5011–5015.
7. Qiu, Z.; Zhao, W.; Cao, M.; Wang, Y.; Lam, J. W. Y.; Zhang, Z\*.; Chen, X.; Tang, B. Z\*. "Dynamic Visualization of Stress/Strain Distribution and Fatigue Crack Propagation by an Organic Mechanoresponsive AIE Luminogen" *Adv. Mater.* **2018**, *30*, 1803924.
8. Zhang, H.; Zheng, X.; Kwok, R. T. K.; Wang, J.; Leung, N. L. C.; Shi, L.; Sun, J. Z.; Tang, Z.; Lam, J. W. Y.; Qin, A\*.; Tang, B. Z\*. "In Situ Monitoring of Molecular Aggregation Using Circular Dichroism" *Nat. Commun.* **2018**, *9*, 4961 (1–9).
9. Zhao, W.; He, Z\*.; Peng, Q\*.; Lam, J. W. Y.; Ma, H.; Qiu, Z.; Chen, Y.; Zhao, Z.; Shuai, S.; Dong, Y\*.; Tang, B. Z\*. "Highly Sensitive Switching of Solid-State Luminescence by Controlling Intersystem Crossing" *Nat. Commun.* **2018**, *9*, 3044 (1–8).
10. Wang, J.; Gu, X\*.; Ma, H.; Peng, Q.; Huang, X.; Zheng, X.; Sung, S. H. P.; Shan, G.; Lam, J. W. Y.; Shuai, Z.; Tang, B. Z\*. "A Facile Strategy for Realizing Room Temperature Phosphorescence and Single Molecule White Light Emission" *Nat. Commun.* **2018**, *9*, 2963 (1–9).

11. Qi, J.; Chen, C.; Zhang, X.; Hu, X.; Ji, S.; Kwok, R. T. K.; Lam, J. W. Y.; Ding, D\*.; Tang, B. Z\*. "Light-Driven Transformable Optical Agent with Adaptive Functions for Boosting Cancer Surgery Outcomes" *Nat. Commun.* **2018**, 1848.
12. Wei, P.; Zhang, J.-X.; Zhao, Z.; Chen, Y.; He, X.; Chen, M.; Gong, J.; Sung, H. H. Y.; Williams, I. D.; Lam, J. W. Y.; Tang, B. Z\*. "Multiple yet Controllable Photoswitching in a Single AIEgen System" *J. Am. Chem. Soc.* **2018**, *140*, 1966–1975.
13. He, X.; Zhao, Z.; Xiong, L.-H.; Gao, P. F.; Peng, C.; Li, R. S.; Xiong, Y.; Li, Z.; Sung, H.; Williams, I. D.; Kwok, R. T. K.; Lam, J. W. Y.; Huang, C. Z.; Ma, N.; Tang, B. Z\*. "Redox-active AIEgen Derived Plasmonic and Fluorescent Core@shell Nanoparticles for Multimodality Bioimaging" *J. Am. Chem. Soc.* **2018**, *140*, 6904–6911.
14. Han, T.; Deng, H.; Qiu, Z.; Zhao, Z.; Zhang, H.; Zou, H.; Leung, N. L. C.; Shan, G.; Elsegood, M.; Lam, J. W. Y\*.; Tang, B. Z\*. "Facile Multicomponent Polymerizations toward Unconventional Luminescent Polymers with Readily Openable Small Heterocycles" *J. Am. Chem. Soc.* **2018**, *140*, 5588–5598.
15. Tian, T.; Hu, R\*.; Tang, B. Z\*. "Room Temperature One-Step Conversion from Elemental Sulfur to Functional Polythioureas through Catalyst-Free Multicomponent Polymerizations" *J. Am. Chem. Soc.* **2018**, *140*, 6156–6163.
16. Liu, H.; Zeng, J.; Guo, J.; Nie, H.; Zhao, Z\*.; Tang, B. Z\*. "A Versatile Molecular Design for High-Performance Nondoped OLEDs with ~100% Exciton Utilization and Negligible Efficiency Roll-Off" *Angew. Chem. Int. Ed.* **2018**, *59*, 9290–9294.
17. Xiong, Y.; Zhao, Z.; Zhao, W.; Ma, H.; Peng, Q\*.; He, Z.; Zhang, X.; Chen, Y.; He, X.; Lam, J. W. Y.; Tang, B. Z\*. "Design Efficient and Ultralong Pure Organic Room-Temperature Phosphorescent Materials by Structural Isomerism" *Angew. Chem. Int. Ed.* **2018**, *57*, 7997–8001.
18. Liu, S.; Cheng, Y.; Zhang, H.; Qiu, Z.; Kwok, R. T. K.; Lam, J. W. Y.; Tang, B. Z\*. "Making Invisible Visible: In Situ Monitoring the RAFT Polymerization by Tetraphenylethylene-Containing Agents with Aggregation-Induced Emission Characteristics" *Angew. Chem. Int. Ed.* **2018**, *57*, 6274–6278.
19. He, Z.; Zhao, W.; Lam, J. W. Y.; Peng, Q\*.; Ma, H.; Liang, G.; Shuai, Z.; Tang, B. Z. "White Light Emission from A Single Organic Molecule with Dual Phosphorescence at Room Temperature" *Nat. Commun.* **2017**, *8*, 416.
20. Xie, S.; Wong, A. Y. H.; Kwok, R. T. K.; Li, Y.; Su, H.; Lam, J. W. Y.; Chen, S\*.; Tang, B. Z\*. "Fluorogenic Ag<sup>+</sup>-Tetrazolate Aggregation Enables Novel and Efficient Fluorescent Biological Silver Staining" *Angew. Chem. Int. Ed.* **2018**, *57*, 5750–5753.
21. Li, X.; Jiang, M.; Lam, J. W. Y.; Tang, B. Z\*.; Qu, J. Y.\* "Mitochondrial Imaging with Combined Fluorescence and Stimulated Raman Scattering Microscopy Using a Probe of Aggregation-Induced Emission Characteristic" *J. Am. Chem. Soc.* **2017**, *139*, 17022–17030.
22. Ni, J.-S.; Zhang, P.; Jiang, T.; Chen, Y.; Su, H.; Wang, D.; Yu, Z.-Q.; Kwok, R. T. K.; Zhao, Z.; Lam, J. W. Y.; Tang, B. Z\*. "Red/NIR-Emissive Benzo[d]imidazole-Cored AIEgens: Facile Molecular Design for Wavelength Extending and In Vivo Tumor Metabolic Imaging" *Adv. Mater.* **2018**, *30*, 1805220 (1–9).
23. Wang, D\*.; Lee, M. M. S.; Shan, G.; Kwok, R. T. K.; Lam, J. W. Y.; Su, H\*.; Cai, Y\*.; Tang, B. Z\*. "Highly Efficient Photosensitizers with Far-Red/Near-Infrared Aggregation-Induced Emission for In Vitro and In Vivo Cancer Theranostics" *Adv. Mater.* **2018**, *30*, 1802105 (1–9).
24. Wang, J.; Gu, X.; Zhang, P.; Huang, X.; Zheng, X.; Chen, M.; Feng, H.; Kwok, R. T. K.; Lam, J. W. Y.; Tang, B. Z\*. "Ionization and Anion- $\pi^+$  Interaction: A New Strategy for Structural Design of Aggregation-Induced Emission Luminogens" *J. Am. Chem. Soc.* **2017**, *139*, 16974–16979.

25. Zhang, H.; Zheng, X.; Xie, N.; He, Z.; Liu, J.; Leung, N. L. C.; Niu, Y.; Huang, X.; Wong, K. S.; Kwok, R. T. K.; Sung, H. H. Y.; Williams, I. D.; Qin, A.; Lam, J. W. Y.; Tang, B. Z\*. "Why Do Simple Molecules with "Isolated" Phenyl Rings Emit Visible Light?" *J. Am. Chem. Soc.* **2017**, *139*, 16264–16272.
26. Wang, Z\*.; Nie, J.; Qin, W.; Hu, Q\*.; Tang, B. Z\*. "Gelation Process Visualized By Aggregation-Induced Emission Fluorogens" *Nat. Commun.* **2016**, *7*, 12033 (1–8).
27. Guan, W.; Wang, S.; Lu, C\*.; Tang, B. Z\*. "Fluorescence Microscopy as an Alternative to Electron Microscopy for Microscale Dispersion Evaluation of Organic-Inorganic Composites" *Nat. Commun.* **2016**, *7*, 11811 (1–7).
28. Mei, J.; Leung, N. L. C.; Kwok, R. T. K.; Lam, J. W. Y.; Tang, B. Z\*. "Aggregation-Induced Emission: Together We Shine, United We Soar!" *Chem. Rev.* **2015**, *115*, 11718–11940 (*Invited review article*)
29. Chen, L.; Wang, Y.-H.; He, B.; Nie, H.; Hu, R.; Huang, F.; Qin, A.; Zhou, X.-S.; Zhao, Z\*.; Tang, B. Z\*. "Multichannel Conductance of Folded Single-Molecule Wires Aided by Through-Space Conjugation" *Angew. Chem. Int. Ed.* **2015**, *54*, 4231–4235.
30. Gu, X.; Zhao, E.; Lam, J. W. Y.; Peng, Q.; Xie, Y.; Zhang, Y.; Wong, K. S.; Sung, H. H. Y.; Williams, I. D.; Tang, B. Z\*. "Mitochondrion-Specific Live-Cell Bioprobe Operated in a Fluorescence Turn-On Manner and a Well-Designed Photoactivatable Mechanism" *Adv. Mater.* **2015**, *27*, 7093–7100.

### (3) Selected Honors & Awards

- CCTV 2018 Science & Technology Innovation Figures Award (2019)
- Lifetime Achievement Award, the Chinese American Society of Nanomedicine & Nanobiotechnology (2018)
- State Natural Science Award, 1<sup>st</sup> Class, Chinese Government (2018)
- HLHL Foundation for Scientific and Technological Progress Award (2017)
- Membership Award from the American Chemical Society (2015–2018)
- Khwarizmi International Award, Iranian Organization for Science & Technology (2014)
- Fellow, The Royal Society of Chemistry (elected in 2013)
- Pioneer from Asia, Asian Chemical Congress (2013)
- MACRO2012 Lecture Award, PMSE Division, American Chemical Society (2012)
- Academician, Chinese Academy of Sciences (elected in 2009)

### (4) Selected Patents

1. Tang, B. Z.; Ng, K. M.; Luo, Q.; Yong, Y.; Hong, Y. N.; Liu, J. Z.; Chen, S. J.; Lam, W. Y.; Wang, Z. K.; Qin, W.; Kwok, T. K. "Aggregation Induced Emission of Fluorescent Bioprobes and Methods of Using the same" US patent US9618453 B2. 11 Apr 2017
2. Tang, B. Z.; Lam, W. Y.; Liu, J. Z.; Mahtab, F.; Liu, Y.; Yu, Y. "Silica Nanoparticles with aggregation induced emission characteristics as fluorescent bioprobe for intracellular imaging and protein carrier" US 9518921 B2, 13 Dec 2016
3. Tang B. Z.; Hong, Y. N.; Chen, S. J. "A Water-Soluble AIE Luminogen and Its Use in Detecting and Retardation of Amyloid Fibrillation of Amyloid Protein" HK1174687, 22 Apr 2016
4. Tang, B. Z.; Liu, J. Z.; Chen, S. J.; Sun, J. Z.; Qin, A. J.; Qin, W.; Liu, B.; Li, K.; Ding, D.; Zhao, Q. L. "Biocompatible Nanoparticles with Aggregation-Induced Emission Characteristics as Far-Red/Near-Infrared Fluorescent Bioprobes for in Vitro and in Vivo Imaging Applications" SG 11201400944Q, 30 Aug 2016
5. Tang, B. Z.; Hong, Y. N.; Chen, S. J.; Leung, W. T. "Photostable AIE Luminogens for Specific Mitochondrial Imaging and Its Method of Manufacturing Thereof" US 9315465, 19 Apr 2016
6. Tang, B. Z.; Hu, R. R.; Liu, Y.; Sun, J. Z.; Qin, A. J. "Specific Detection of D-Glucose by a Tetraphenylethene-Based Fluorescent Sensor" US9051598, 9 Jun 2015

7. Tang, B. Z.; Hong, Y.; Chen, S.; Kwok, R. T. K. “Water-Soluble AIE Luminogen for Monitoring and Retardation of Amyloid Fibrillation of Insulin” US Patent Application 8679738, 25 March 2014

**(5) Selected Journal Editorships**

- Editor-in-Chief, *Materials Chemistry Frontiers* (RSC, 2016–present)
- Editor-in-Chief, *RSC Polymer Chemistry Series* (RSC, 2010–present)
- Editor, *Advances in Polymer Science* (Springer, 2013–present)
- Associate Editor, *Progress in Chemistry* (Chinese Academy of Sciences, 2015–present)
- Associate Editor, *Optoelectronics Science & Technology Frontiers Series* (Science Press, 2015–present)
- Associate Editor, *Science China: Chemistry* (Science China Press, 2015–present)
- Senior Editor, *Journal of Molecular Engineering & Systems Biology* (Herbert Publications Limited, 2011–present)
- Member, Editorial Advisory Board of ACS Applied Bio Materials (published by American Chemical Society; 2018–present)
- Member, Editorial Advisory Board of ACS Sensors (published by American Chemical Society; 2018–present)
- Member, Editorial Advisory Board of Polymer Chemistry (published by Royal Society of Chemistry; 2016–present)
- Member, Scientific Advisory Board of Small Methods (published by Wiley-VCH; 2016–present)

**(6) Selected Research Grants (Active Projects only for Last 3 Years)**

- “Development of a Gene Detection Platform Based on Aggregation-Induced Emission Materials” HybriBio Ltd., 2019–2021, HK\$1,530,000.00 (Principal Investigator)
- “Development of a Gene Detection Platform Based on Aggregation-Induced Emission Materials” Innovation and Technology Fund (ITF) Grant, 2019–2021, HK\$1,473,800.00 (Principal Investigator)
- “Development of a New Fluorescence-Based Technique for Regional Humidity Sensing in Intelligent Building Systems” Innovation and Technology Fund (ITF) Grant, 2018–2019, HK\$2,043,100.00 (Principal Investigator)
- “Development of New AIEgen-Based Chiral Materials for Efficient Circularly-Polarized Organic Light-Emitting Diodes” RGC General Research Fund, 2019–2021, HK\$757,947.000 (Principal Investigator)
- “Aggregation-Induced Emission (AIE): Development of New AIE Systems and Exploration of Their Biomedical Applications” Research Grants Council Collaborative Research Fund (CRF), 2018–2021, HK\$7,492,016.00 (Principal Coordinator)
- Ministry of Science & Technology (MoST) Research Grant to CNERC Hong Kong Branch, 2018–2020, HK\$1,255,362.34 (RMB1,000,000.00) (Principal Investigator)
- “State Key Laboratory of Molecular Neuroscience” Grant, 2018–2019, HK\$500,000.00 (Co-Investigator) (Principal Coordinator: Prof. Nancy Ip, HKUST)
- “Polymer Nanostructures with Aggregation-Induced Emission Properties for Bioimaging and Theranostics” The French National Research Agency (ANR)/Research Grants Council (RGC) Joint Research Scheme, 2017–2020, HK\$2,449,500.00 (Principal Investigator)
- “Development of New Chiral Luminogenic Materials with Aggregation-Induced Emission Characteristics” Research Grants Council General Research Fund, 2017–2019, HK\$540,824.00 (Principal Investigator)

**(7) Selected Research-Related Committee for Last 5 Years**

- Chair, Academic Advisory Committee of CAS Key Laboratory of Soft Matter Chemistry (2019–2021)

- Member, Academic Advisory Committee of Xingjian Scholars Program (2019–present)
- Panel Member, Division of Chemistry & Chemical Engineering of the Ho Leung Ho Lee Foundation (Scientific and Technological Progress Award; 2018)
- Board Member of the Green Technology Organization (GTO; 2018–present)
- Vice Chair, Advisory Committee for the School of Environment and Energy at South China University of Technology (2017–2020)
- Vice Chair, Advisory Committee of the National Engineering Laboratory for VOC Pollution Control Technology and Equipment (2017–2022)
- Scientific Advisor, Hong Kong Residing Nankai Yanbu Clansmen Association Ltd. (2016–present)
- Member, Academic Committee of Beijing Advanced Innovation Center (BAIC) for Soft Matter Science and Engineering (2016–present)
- Member, Academic Committee of the Kay Laboratory of Polymer Chemistry and Physics of Peking University administrated by the Ministry of Education of China (2015–present)
- Member, Scientific Advisory Board of the Division of Biomedical Polymer Materials of the Chinese Biomaterials Society (2015–present)

#### **(8) Selected Invited Talks for Last 3 Years**

- Tang, B. Z. “Aggregation-Induced Emission: Making the Impossible Possible” the Asian Chemical Congress, Taipei, 8–12 Dec 2019 (**Keynote Lecture**)
- Tang, B. Z. “AIE Research: Past, Present and Future” 2019 MRS Fall Meeting Tutorial on Aggregation-Induced Emission, Boston, USA, 1–6 Dec 2019 (**Tutorial Lecture**)
- Tang, B. Z. “Functional Materials Based on AIEgens” International Conference on Functional Materials and Manufacturing Engineering, Hong Kong, 26–28 Feb 2019 (**Keynote Lecture**)
- Tang, B. Z. “Sulfur-Containing AIEgens” The 28th International Symposium on the Organic Chemistry of Sulfur, Tokyo, Japan, 26–31 Aug 2018 (**Plenary Lecture**)
- Tang, B. Z. “Journey of AIE Research” The 3rd Sino-American Nanomedicine Symposium, Nanjing, 28–30 July 2018 (**Plenary Lecture**)
- Tang, B. Z. “Aggregation-Induced Emission: from Fundamentals to Applications” International Conference on Science and Technology of Synthetic Metals (ICSM), Busan, Korea, 1–6 July 2018 (**Plenary Lecture**)
- Tang, B. Z. “AIE Nanoaggregates for Biomedical Applications” The 14th International Conference on Nanostructured Materials, Hong Kong, 24–29 June 2018 (**Plenary Lecture**)
- Tang, B. Z. “Bioelectronic Systems Built on AIEgens” The 14th International Conference on Organic Electronics, Bordeaux, France, 18–22 June 2018 (**Plenary Lecture**)
- Tang, B. Z. “Advanced Polymers Built from Alkyne Monomers” The 15th Pacific Polymer Conference (PPC), Xiamen, 10–14 Dec 2017 (**Plenary Lecture**)
- Tang, B. Z. “Molecular Imaging Systems Based on AIEgens” Zhuhai International Molecular Imaging Symposium, Zhuhai, 18–19 Nov 2017 (**Plenary Lecture**)
- Tang, B. Z. “Metallo-AIEgens as Functional Materials” 2017 Fall ACS National Meeting, Washington DC, USA, 20–24 Aug 2017 [Metal-Containing and Metallo-Supramolecular Polymers and Materials (VI); **Plenary Lecture**]
- Tang, B. Z. “Optoelectronic Applications of Functional Materials with Aggregation-Induced Emissions” SPIE International Symposium on Optics & Photonics, The 21th Liquid Crystal Conference, San Diego, USA, 6–10 Aug 2017 (**Keynote Lecture**)
- Tang, B. Z. “Advanced Biomaterials and Biosensors from AIEgens” The 3rd International Symposium on Biomaterials & Biosensors (BIOMATSEN 2017), Oludeniz, Fethiye/Mugla, Turkey, 22–26 April 2017 (**Plenary Lecture**)