Kenry, PhD

Postdoctoral Fellow in Bioengineering / Research Fellow in Radiology and Imaging
Harvard University ● Dana-Farber Cancer Institute
27 Drydock Avenue, DD-466H, Boston, MA 02210, USA ● ✉ kenry@seas.harvard.edu

Postdoctoral Research Training

1. **Harvard University** — Cambridge, MA, USA
   Postdoctoral Fellow, Harvard John A. Paulson School of Engineering and Applied Sciences — 11/2020 – Present
   Advisor: Samir Mitragotri, PhD
   Research Fellow, Department of Radiology, Harvard Medical School — 09/2019 – Present
   Advisor: Moritz F. Kircher, MD, PhD (09/2019 – 08/2020)
2. **Dana-Farber Cancer Institute** — Boston, MA, USA
   Research Fellow, Department of Imaging — 09/2019 – Present
   Advisor: Moritz F. Kircher, MD, PhD (09/2019 – 08/2020)
3. **National University of Singapore** — Singapore
   Research Fellow, Department of Chemical and Biomolecular Engineering — 02/2017 – 04/2019
   Advisor: Bin Liu, PhD

Education

1. **National University of Singapore** — Singapore
   Doctor of Philosophy (Biomedical Engineering) — 01/2017
   NGS Scholar, Awarded NUSS Medal for Outstanding Achievement
   Advisor: Chwee Teck Lim, PhD
2. **Nanyang Technological University** — Singapore
   Bachelor of Engineering (Electrical and Electronic Engineering) with First Class Honors — 07/2011
   ASEAN Undergraduate Scholar, Awarded EEE Excellence Award

Selected Awards & Honors

1. Highly Cited Paper Award, Microsystems & Nanoengineering, Springer Nature — 08/2020
2. Distinguished Young Scholars Seminar, University of Washington — 08/2020
3. Nanomaterials Travel Award 2020 — 03/2020
4. Travel Grant for 8th Bio-AFM Summer School, Kanazawa University, Japan — 08/2019
5. Postdoc Mobility Travel Grant, Technical University of Munich, Germany — 07/2018
6. Lush Prize – Young Researcher Asia Award — 11/2017
7. NUSS Medal for Outstanding Achievement — 07/2017
8. ASEAN Outstanding Engineering Achievement Award — 11/2016
9. IES Prestigious Engineering Achievement Award — 07/2016
10. Young Scientist Award, 2016 E-MRS Spring Meeting — 05/2016
11. Graphene2016 Travel Grant — 04/2016
12. JSPS 8th HOPE Meeting with Nobel Laureates Fellowship — 03/2016
13. Best Poster Award (2nd Prize), Flexible and Stretchable Devices Symposium — 11/2015
14. NUS Graduate School for Integrative Sciences and Engineering (NGS) Scholarship — 08/2012 – 08/2016
15. NTU EEE Excellence Award — 07/2011
16. Singapore-MIT Undergraduate Research Fellowship — 06/2011
17. NTU EEE Dean's List — 08/2010
18. ASEAN Undergraduate Scholarship (NTU Undergraduate Scholarship) — 08/2008 – 07/2011

First-Author Journal Publications

† co-first author; * corresponding author

55 articles in total, > **2,200** citations, h-index **25**, i10-index **40** (Google Scholar 12/2020)

1. **Kenry**, Trifanny Yeo, Mui Hoon Nai, Yutong Pan, Eshu Middha, Chwee Teck Lim, Bin Liu, "Differential collective cell migratory behaviors modulated by phospholipid nanocarriers." In revision.
2. **Kenry**, Ben Zhong Tang, Bin Liu, "Catalyst: Aggregation-induced emission – how far have we come, and where are we going next?" ***Chem*** 6, 1195-1198 (2020).
3. **Kenry**, Trifanny Yeo, Purnima Naresh Manghnani, Eshu Middha, Yutong Pan, Huan Chen, Chwee Teck Lim, Bin Liu, "Mechanistic understanding of the biological responses to polymeric nanoparticles." ***ACS Nano*** 14, 4509-4522 (2020).

4. Yandong Dou[†], **Kenry**[†], Jiang Liu, Fangfang Zhang, Chunhui Cai, Qing Zhu, "2-Styrylquinoline-based two-photon AIEgens for dual monitoring of pH and viscosity in living cells." ***Journal of Materials Chemistry B*** 7, 7771-7775 (2019).
5. **Kenry**, Kok Chan Chong, Bin Liu, "Reactivity-based organic theranostic bioprobes." ***Accounts of Chemical Research*** 52, 3051-3063 (2019).
6. **Kenry**, Bin Liu, "Bio-orthogonal click chemistry for *in vivo* bioimaging." ***Trends in Chemistry*** 1, 763-778 (2019).
7. **Kenry**, Chengjian Chen, Bin Liu, "Enhancing the performance of pure organic room-temperature phosphorescent luminophores." ***Nature Communications*** 10, 2111 (2019).
8. Yandong Dou[†], **Kenry**[†], Jiang Liu, Jianze Jiang, Qing Zhu, "Late-stage direct *o*-alkenylation of phenols by Pd^{II}-catalyzed C-H functionalization." ***Chemistry – A European Journal*** 25, 6896-6901 (2019).
9. **Kenry**, Yukun Duan, Bin Liu, "Recent advances of optical imaging in the second near-infrared window." ***Advanced Materials*** 30, 1802394 (2018).
10. **Kenry**, Bin Liu, "Recent advances in biodegradable conducting polymers and their biomedical applications." ***Biomacromolecules*** 19, 1783-1803 (2018).
11. **Kenry***, "Understanding the hemotoxicity of graphene nanomaterials through their interactions with blood proteins and cells." ***Journal of Materials Research*** 33, 44-57 (2018).
12. **Kenry**, Wong Cheng Lee, Kian Ping Loh, Chwee Teck Lim, "When stem cells meet graphene: opportunities and challenges in regenerative medicine." ***Biomaterials*** 155, 236-250 (2018).
13. Alisha Geldert[†], **Kenry**[†], Chwee Teck Lim, "Paper-based MoS_2 nanosheet-mediated FRET aptasensor for rapid malaria diagnosis." ***Scientific Reports*** (***Nature Research***) 7, 17510 (2017).
14. **Kenry**[†], Ying Bena Lim[†], Mui Hoon Nai, Jianshu Cao, Kian Ping Loh, Chwee Teck Lim, "Graphene oxide inhibits malaria parasite invasion and delays parasitic growth *in vitro*." ***Nanoscale*** 9, 14065-14073 (2017).
15. **Kenry**, Alisha Geldert, Yanpeng Liu, Kian Ping Loh, Chwee Teck Lim, "Nano-bio interactions between carbon nanomaterials and blood plasma proteins: why oxygen functionality matters." ***NPG Asia Materials*** (***Nature Research***) 9, e422 (2017).
16. **Kenry**, Bin Liu, "When in situ techniques meet nickel-based electrocatalyst in hydrogen evolution reaction." ***Chem*** 3, 19-21 (2017).
17. Alisha Geldert[†], **Kenry**[†], Xiao Zhang, Hua Zhang, Chwee Teck Lim, "Enhancing the sensing specificity of a MoS_2 nanosheet-based FRET aptasensor using a surface blocking strategy." ***Analyst*** 142, 2570-2577 (2017).
18. **Kenry**, Chwee Teck Lim, "Nanofiber technology: current status and emerging developments." ***Progress in Polymer Science*** 70, 1-17 (2017).
19. **Kenry**[†], Alisha Geldert[†], Zhuangchai Lai, Ying Huang, Peng Yu, Chaoliang Tan, Zheng Liu, Hua Zhang, Chwee Teck Lim, "Single-layer ternary chalcogenide nanosheets as a fluorescence-based "capture-release" biomolecular nanosensor." ***Small*** 13, 1601925 (2017).
20. **Kenry**, Chwee Teck Lim, "Biocompatibility and nanotoxicity of layered two-dimensional nanomaterials." ***ChemNanoMat*** 3, 5-16 (2017).
21. **Kenry**[†], Alisha Geldert[†], Xiao Zhang, Hua Zhang, Chwee Teck Lim, "Highly sensitive and selective aptamer-based fluorescence detection of a malaria biomarker using single-layer MoS_2 nanosheets." ***ACS Sensors*** 1, 1315-1321 (2016).
22. **Kenry**, Joo Chuan Yeo, Chwee Teck Lim, "Emerging flexible and wearable physical sensing platforms for healthcare and biomedical applications." ***Microsystems & Nanoengineering*** (***Nature Research***) 2, 16043 (2016).
23. **Kenry**, Kian Ping Loh, Chwee Teck Lim, "Selective concentration-dependent manipulation of intrinsic fluorescence of plasma proteins by graphene oxide nanosheets." ***RSC Advances*** 6, 46558-46566 (2016).
24. **Kenry**, Kian Ping Loh, Chwee Teck Lim, "Molecular interactions of graphene oxide with human blood plasma proteins." ***Nanoscale*** 8, 9425-9441 (2016).
25. Joo Chuan Yeo[†], **Kenry**[†], Jiahao Yu, Kian Ping Loh, Zhiping Wang, Chwee Teck Lim, "Triple-state liquid-based microfluidic tactile sensor with high flexibility, durability, and sensitivity." ***ACS Sensors*** 1, 543-551 (2016).
26. **Kenry**[†], Parthiv Kant Chaudhuri[†], Kian Ping Loh, Chwee Teck Lim, "Selective accelerated proliferation of malignant breast cancer cells on planar graphene oxide films." ***ACS Nano*** 10, 3424-3434 (2016).
27. **Kenry**[†], Joo Chuan Yeo[†], Jiahao Yu, Menglin Shang, Kian Ping Loh, Chwee Teck Lim, "Highly flexible graphene oxide nanosuspension liquid-based microfluidic tactile sensor." ***Small*** 12, 1593-1604 (2016).

28. **Kenry**, Kian Ping Loh, Chwee Teck Lim, "Molecular hemocompatibility of graphene oxide and its implication for antithrombotic applications." ***Small*** 11, 5105-5117 (2015).
29. **Kenry**, Man Chun Leong, Mui Hoon Nai, Fook Chiong Cheong, Chwee Teck Lim, "Viscoelastic effects of silicone gels at the micro- and nanoscale." ***Procedia IUTAM*** 12, 20-30 (2015).
30. **Kenry**, Chwee Teck Lim, "Synthesis, optical properties, and chemical-biological sensing applications of one-dimensional inorganic semiconductor nanowires." ***Progress in Materials Science*** 58, 705-748 (2013).
31. **Kenry**, Ken-Tye Yong, Siu Fung Yu, "AlN nanowires: synthesis, physical properties, and nanoelectronics applications." ***Journal of Materials Science*** 47, 5341-5360 (2012).

Presentations

1. **Kenry**, "Engineering nano-bio interface to overcome biological barriers for precision nanomedicine." ***2020 Virtual AIChE Annual Meeting***, November 16–20, 2020 (Virtual Oral Presentation).
2. **Kenry**, "Interactions of graphene oxide nanosheets with blood-related entities and their implications for hematological disorders." ***2020 Virtual AIChE Annual Meeting***, November 16–20, 2020 (Virtual Oral Presentation).
3. **Kenry**, "Mechanistic understanding of the biological responses to polymeric nanoparticles." ***2020 Virtual AIChE Annual Meeting***, November 16–20, 2020 (Virtual Oral Presentation).
4. **Kenry**, Bin Liu, "Rational engineering of polymeric nanocarriers for enhancing selective delivery to vascular endothelium." ***AAPS 2020 PharmSci 360***, October 26 – November 5, 2020 (Virtual Poster Presentation).
5. **Kenry**, "Nano-engineering of polymeric nanocarriers for vascular theranostics." ***Virtual Seminars in Biomedical Science***, October 8, 2020 (Virtual Oral Presentation).
6. **Kenry**, "Exploiting the interactions between nanomaterials and circulatory barriers to combat vascular diseases." ***10th Annual Distinguished Young Scholars Seminar (DYSS 2020) at the University of Washington***, August 10, 2020 (Invited Virtual Talk).
7. **Kenry**, Bin Liu, "Elucidating the biological behaviors of colloidal polymeric nanoparticles." ***2020 Virtual ACS Colloid & Surface Science Symposium***, June 8–10, 2020 (Virtual Oral Presentation).
8. **Kenry**, "*In situ* visualization of dynamic cellular effects of phospholipid nanocarriers using HS-SICM." ***8th Bio-AFM Summer School***, Kanazawa University, Japan, August 19–24, 2019 (Oral Presentation).
9. **Kenry**, "Understanding and engineering nano-bio interface for functional disease theranostics." Department of Imaging, Dana-Farber Cancer Institute and Harvard Medical School, USA, June 7, 2019 (Invited Talk).
10. **Kenry**, "Understanding and modulating nano-bio interface for functional disease theranostics." Department of Biosystems Science and Engineering, ETH Zürich, Switzerland, November 6, 2018 (Invited Talk).
11. **Kenry**, "Understanding and engineering nanomaterial-protein interactions and their effects on biological interfaces." Institute of Biological and Medical Imaging, Helmholtz Zentrum München, Germany, July 27, 2018 (Invited Talk).
12. **Kenry**, "Highly selective and sensitive diagnosis of malaria using MoS_2 nanosheet-mediated fluorescence aptasensors: from solution- to paper-based nanosensors." ***Targeted Nucleic Acid Detection and Delivery***, University of Notre Dame, USA, July 23–24, 2018 (Oral Presentation).
13. **Kenry**, "Nano-bio interactions of graphene oxide with blood-related entities and their effects on hematological disorders." ***12th New Diamond and Nano Carbons Conference (NDNC 2018)***, Flagstaff, USA, May 20–24, 2018 (Oral Presentation).
14. **Kenry**, "Malaria theranostics using 2D nanomaterials." ***SMART ID-IRG Weekly Seminars – Research-in-Progress***, Singapore, August 23, 2017 (Invited Talk).
15. **Kenry**, Kian Ping Loh, Chwee Teck Lim, "Engineering graphene oxide-based functional surfaces for biological and biomedical applications." ***2017 CASNN Annual Meeting***, Suzhou, China, July 28–31, 2017 (Oral Presentation).
16. **Kenry**, Hua Zhang, Kian Ping Loh, Chwee Teck Lim, "2D nanomaterials for biomedical applications." ***9th Singapore International Chemistry Conference***, Singapore, December 11–14, 2016 (Oral Presentation).
17. **Kenry**, Kian Ping Loh, Chwee Teck Lim, "Engineering graphene oxide-based nanofunctional surfaces for biological and biomedical applications." ***16th International Conference on Biomedical Engineering***, Singapore, December 7–10, 2016 (Oral Presentation).
18. **Kenry**, Kian Ping Loh, Chwee Teck Lim, "Molecular hemocompatibility of graphene oxide and its implication for hematological disorders." ***E-MRS 2016 Spring Meeting***, Lille, France, May 2–6, 2016 (Oral Presentation).
19. **Kenry**, Joo Chuan Yeo, Jiahao Yu, Menglin Shang, Kian Ping Loh, Chwee Teck Lim, "Highly flexible graphene oxide nanosuspension microfluidic tactile sensor." ***Graphene2016***, Genova, Italy, April 19–22, 2016 (Oral Presentation).

20. **Kenry**, Kian Ping Loh, Chwee Teck Lim, "Molecular interactions of graphene oxide with blood plasma proteins and its implication for antithrombotic applications." ***JSPS 8th HOPE Meeting with Nobel Laureates***, Tsukuba City, Japan, March 7–11, 2016 (Poster Presentation).
21. **Kenry**, Kian Ping Loh, Chwee Teck Lim, "Molecular hemocompatibility of graphene oxide and its implication for antithrombotic application." ***2015 MRS Fall Meeting & Exhibit***, Boston, USA, November 29 – December 4, 2015 (Oral Presentation).
22. **Kenry**, Kian Ping Loh, Chwee Teck Lim, "Microfluidics for evaluating the hemocompatibility of functionalized graphene oxide and its implication for antithrombotic application." ***Lab-on-a-Chip Asia Conference and Exhibition – Microfluidics, Point of Care Diagnostics, and Organ-on-a-Chip***, Singapore, November 19–20, 2015 (Oral Presentation).
23. **Kenry**, Joo Chuan Yeo, Chwee Teck Lim, "Liquid-state flexible microfluidic tactile sensor." ***Flexible and Stretchable Devices Symposium***, Singapore, November 16–17, 2015 (Poster Presentation).
24. **Kenry**, Man Chun Leong, Mui Hoon Nai, Fook Chiong Cheong, Chwee Teck Lim, "Viscoelastic effects of silicone gels on cellular traction force measurements." ***7th WACBE World Congress on Bioengineering***, Singapore, July 6–8, 2015 (Oral Presentation).
25. **Kenry**, Yeo Joo Chuan, Lim Chwee Teck, "Highly flexible and wearable liquid-based microfluidic tactile sensor." ***InnovFest unBound 2015***, Singapore, April 28–29, 2015 (Poster Presentation).
26. **Kenry**, Man Chun Leong, Mui Hoon Nai, Fook Chiong Cheong, Chwee Teck Lim, "Viscoelastic effects of silicone gels on cellular traction force measurements at the micro- and nanoscale." ***2014 BioNanotechnology Summer Institute***, University of Illinois at Urbana-Champaign, USA, July 28 – August 8, 2014 (Poster Presentation).

Patents & Applications

1. "A resistive microfluidic pressure sensor." Inventors: **Kenry**, Joo Chuan Yeo, Chwee Teck Lim (National University of Singapore).
   - Chinese Patent No. ZL201680029883.6; Application No. 201680029883.6; Publication No. CN 107615031 B
2. "Resistive microfluidic pressure sensor." Inventors: **Kenry**, Joo Chuan Yeo, Chwee Teck Lim (National University of Singapore).
   - US Patent No. 10,488,276; Application No. 15/559,617
3. "A resistive microfluidic pressure sensor." Inventors: **Kenry**, Joo Chuan Yeo, Chwee Teck Lim (National University of Singapore).
   - PCT Patent Application No. PCT/SG2016/050133; Publication No. WO 2016/153429
   - Singapore Patent Application No. 11201707294X
   - Hong Kong Patent Application No. 18109339.1T; Publication No. 1249929A
   - Macau Patent Application No. J/3191
4. "Highly wearable flexible liquid graphene oxide-based microfluidic resistive pressure sensor." Inventors: **Kenry**, Joo Chuan Yeo, Chwee Teck Lim (National University of Singapore).
   - US Provisional Patent Application No. 62/137,391

Research Mentoring & Teaching

1. **Research Mentoring**
   - Lilyanne Cheah (post-baccalaureate researcher at NUS BIGHEART) 03/2018 – 08/2018
     (NUS BIGHEART Internship Program)
   - Bruce Lim and Rui Min Jereme Cheong (undergraduate students at NUS MSE and NUS YLL Medicine, respectively) 01/2017 – 06/2017
     (The NUS Medical Grand Challenge)
   - Alisha Geldert (post-baccalaureate researcher at NUS BME) 09/2015 – 06/2016
     (Whitaker International Program)
   - Jiahao Yu (undergraduate student at NUS BME) 05/2015 – 07/2015, 12/2014 – 01/2015
     (NUS Vacation Internship Program)
   - Menglin Shang (undergraduate student at NUS BME) 12/2014 – 01/2015
     (NUS Vacation Internship Program)
   - Bruce Lim (incoming undergraduate student to NUS MSE) 01/2015 – 04/2015
     (MBI Internship Program at NUS)
   - Elizabeth Rigby (undergraduate research exchange student from Imperial College London) 07/2013 – 09/2013
     (NUS-Imperial College London Summer Undergraduate Research Exchange Program)

- Thuan Beng Saw (first year PhD student at NUS NGS) 08/2013 – 05/2014

2. **Teaching (as Graduate Teaching Assistant)**
   - LSM1104 General Physiology NUS AY2013/2014 Semester 2
   - LSM1301 General Biology NUS AY2013/2014 Semester 2

Journal Editorial Activities

Guest editor of *Nanomaterials* special issue on "State-of-the-Art in Nano-Bio Interface" (to be published in 2021).

Journal Reviewer Board

Reviewer board member of: *Nanomaterials*.

Journal Reviewing Activities

Ad hoc independent reviewer for: *Biomaterials*, *Communications Biology*, *Scientific Reports*, *Nanotheranostics*, *Nanomaterials*, *Materials*, *Molecules*, *Polymers*, *Sensors*, *Applied Sciences*, *Journal of Nanomaterials*, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, *Metals*, *International Journal of Environmental Research and Public Health*, *Coatings*.

Conference Reviewing Activities

Ad hoc independent reviewer for: *AAPS 2020 PharmSci 360.*

Professional Association Memberships

1. **American Institute of Chemical Engineers (AIChE)**, Professional Member 2020 – Present
2. **Society for Immunotherapy of Cancer (SITC)**, Student Member 2020 – Present
3. **American Association of Pharmaceutical Scientists (AAPS)**, Postdoctoral Fellow Member 2020 – Present
4. **American Association for Cancer Research (AACR)**, Associate Member 2019 – Present
5. **Controlled Release Society Canada Chapter (CC-CRS)**, Member 2019
6. **Materials Research Society (MRS)**, Student Member 2016

Leadership, Outreach & Services

Harvard Medical School

1. **Harvard Medical Postdoctoral Association**, Entrepreneurship Committee Member 2020–Present

National University of Singapore (NUS)

1. **Department of Chemical and Biomolecular Engineering**, Lab Guide 2017–2019
2. **Department of Biomedical Engineering**, Lab Guide 2013–2016

Nanyang Technological University (NTU)

1. **NTUSU BP Mentoring**, Mentor 2010–2011
2. **NTU Spanish Society**, President 2009–2010, Business Manager 2008–2009
3. **The Institution of Engineering & Technology (IET – NTU Student Section)**, Vice Chairperson of Orientation Committee 2009, Assistant Event Manager 2008–2009
4. **NTU Japanese Appreciation Club**, Special Project Officer 2008–2009
5. **AIESEC – NTU Local Committee**, Outgoing Exchange Officer 2008