Kam W. Leong, Ph.D.
Samuel Y. Sheng Professor

Department of Biomedical Engineering
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A. Field of Specialization

Biomedical Engineering; Biomaterials; Systems Biology

B. Education

1975 – 1977	University of California, Santa Barbara, CA B.S. in Chemical Engineering
1977 – 1982	University of Pennsylvania, Philadelphia, PA Ph.D. in Chemical Engineering (Degree conferred 1987)
1982 – 1986	Massachusetts Institute of Technology, Cambridge, MA Research Associate in Whitaker College of Health Sciences and Technology and Department of Applied Biological Science PhD Dissertation: Synthesis of Graphite Oxide Intercalation Compounds PhD Advisor: William C Forsman

C. Academic Position

2014 – Present Columbia University	Professor, Department of Biomedical Engineering, School of Engineering Professor, Department of Systems Biology, School of Medicine
2006 – 2014 Duke University	Professor, Department of Biomedical Engineering, School of Engineering *Joint appointment in Department of Mechanical Engineering and Materials Science, and in Department of Surgery, School of Medicine*
2006 – 2009	Director of Bioengineering Initiative on Nanomedicine/Nanotherapeutics
2006 – 2009	Principal Investigator, Stem Cell Bioengineering Laboratory Duke-National University of Singapore Graduate Medical School, Singapore
1998 – 2006 Johns Hopkins University	Professor, Department of Biomedical Engineering, School of Medicine *Joint appointment in Department of Orthopedic Surgery, School of Medicine*
	Program Director and Technical Advisor to Institute of Materials Research and Engineering (IMRE), Singapore, 1998 – 2004
	Principal Investigator, Division of Johns Hopkins in Singapore, 1999 - 2006
1991 – 1998 Johns Hopkins University	Associate Professor, Department of Biomedical Engineering, School of Medicine *Joint appointment in Department of Materials Science and Engineering*
	Director of Master Program in Biomedical Engineering, 1990 - 2005
1986 – 1991 Johns Hopkins University	Assistant Professor, Department of Biomedical Engineering, School of Medicine *Joint appointment in Department of Materials Science and Engineering*

Professional Activity

NIH Review Panels

- NIDA and NIH-SBIR Ad Hoc Research Contract Review Committees, 1986, 1990-92, 1995, 1996, 1997
- NIH Ad Hoc Study Sections, NIGMS, NIBIB,1995, 2004-2017, 2019-2023

- NIH Gene and Drug Delivery Study Section, NIBIB, 2004-2005, 2007-2011

NSF Review Panels

- NSF Biomaterials and Bioengineering review panels, 1993-1999, 2002
- NSF-Engineering Research Center Site Visit panels, 1995, 1999
- NSF proposal mail reviewer, 2007, 2012-13, 2015, 2020

Other Review Panels

- American Cancer Society Institutional Research Grant Committee, 1988
- Review Panel of National Health Research Institute, Taiwan, 1999 - present
- Nanoscience and Nanotechnology Research Grant Committee, Singapore, 2002
- Reviewer for Research Grants Council of Hong Kong, 2004-2006
- Review Panel of Chinese Academy of Sciences, Beijing, China, 2012
- Review Panel for MOE, Singapore, 2013-present

Advisory Panels

- Advisory Panel of Nanoscience and Nanotechnology Initiative, Singapore, 2002
- Advisory Panel of Div. of Bioengineering at National University of Singapore, 2003
- Advisory Panel of Tissue Engineering Program at National University of Singapore, 2005, 2007, 2011
- Advisory Panel of Department of Chemistry, Wuhan University, China, 1998, 2002-6
- International Advisory Panel for Chongqing University, China, 2012-2013
- International Advisory Panel for Beijing University of Aeronautics and Astronautics, China, 2014-2017
- International Advisory Panel for Ningbo University, China, 2016

Symposium Organizer

- Chairman of Symposium on Polymeric Controlled Release
  - *ACS National Meeting, Dallas, April, 1989*
- Co-chairman on Session of Materials for Drug Delivery
  - *AICHE Summer Meeting, Philadelphia, August, 1989*
- Chairman of Symposium on Polymeric Controlled Release
  - *ACS National Meeting, Dallas, April, 1989*
- Co-chairman of Symposium on Polymer-Cell Interactions
  - *AICHE Annual Meeting, Miami, November, 1992*
- Co-chairman of Symposium on Polymers in Medicine and Pharmacy
  - *MRS Annual Meeting, San Francisco, 1995*
- Chairman of Tissue Engineering and Stem Cell Technology
  - *New York Academy of Sciences, New York, 2002*
- Co-chairman of Workshop on Stem Cell Tissue Engineering
  - *Biomedical Engineering Society Meeting, Baltimore, 2005*
- Co-chairman on Session of Gene Therapy for Tissue Engineering
  - *Biomedical Engineering Society Meeting, Baltimore, 2005*
- Program co-Chairman
  - *Controlled Release Society Annual Meeting, New York 2008*
- Organizer for Session on Derivation of Transdifferentiated Cells
  - *Society for Biomaterials Annual Meeting, New Orleans, October, 2012*
- Organizer for Biomaterials Session
  - *Materials Today Asia, Hong Kong, December, 2014*

Service Within University (JHU)

- Graduate Committee of Whiting School of Engineering, 1999 - 2005
- Chairman of ad hoc committees on faculty promotion, School of Engineering, 2002, 2004, 2005

(Duke)

- Steering Committee for Hopkins Institute of Bionanotechnology, 2004 – 2006
- Faculty ad hoc promotion committees, 2006-present
- Faculty Search Committees, 2006-present
- Dean Search Committee, 2007-2008

(Columbia)

- Provost Lectureship Committee, 2007-2008
- Graduate Committee of BME, 2013-14
- Faculty Search Committees, 2014-present
- Faculty ad hoc promotion committees, 2014-present
- Graduate Committee of BME, 2018-present

Other Activities

- Member of NSF Delegation of US-South Korea Collaboration in Biomedical Engineering, Seoul, South Korea, 1997
- Participant of Interagency Working Group on Nanoscience, Engineering, and Technology, Sponsored by National Science and Technology Council, 1999
- Member of NSF Delegation of US-Japan Joint Symposium on Nanomedicine, Yokohama, Japan, 2002
- Presenter at NCI Workshop on Building the Interface of Nanotechnology and Cancer Imaging Research, 2004
- Member of NSF Delegation for US-Mauritius Collaboration in Biomaterials, Workshop: Perspectives and Opportunities, Mauritius, 2009
- Honorary Professor, Sun Yat-Sen University, China, 2013 - present
- Foreign Distinguished Scholar of BK21 PLUS Program, Dankook University, S Korea, 2013-18
- Member of NSF-sponsored Study to assess global activity on advanced biomanufacturing; co-Leader of panel on visit to Germany, Italy, Portugal, and Britain, 2014

Journal Reviewer

Nature; Science, Nature Medicine; Nature Materials; Nature Biotechnology; Nature Nanotechnology; Nature Communications; Nature Methods; J. Polym. Sci.; Biomaterials; Pharm. Research; J. Controlled Release; Polymer; J. AICHE; J. Pharm. Sci.; J. Biomat. Sci.; Biotech. Bioeng.; Chem. Eng. Sci.; Macromolecules; Biomacromolecules; Advanced Materials; J. Biomed. Mat. Res.; ASAIO; JACS; Mol Ther; J. Gene Medicine; Gene Therapy; Int. J. Nanomedicine; JACS; Advanced Healthcare Materials; ACS Nano; Nano Letters; NanoToday

Editorial Member

• Molecular Therapy • Acta Biomaterialia • J Biomat. Sci., Poly Ed. • J Controlled Release • Int. J Nanomedicine • Nanomedicine • Biomacromolecules • NanoToday • Engineering

Editor-in-Chief

Biomaterials

Selected Honor

2024	**Elected (Inaugural) Member of Asian American Academy of Science and Engineering**
2024	**IEEE-Biomedical Engineering Award**
2023	Honorary Doctorate of University of Macau
2023	**IEEE-EMBS (Engineering in Medicine and Biology Society) Career Achievement Award**
2022	**Founders Award of Society for Biomaterials**
2022	IEEE-EMBS (Engineering in Medicine and Biology Society) Technical Achievement Award
2022	Chandra P Sharma Award, Society of Biomaterials, Artificial Organs, India
2020	**Elected Member of the USA National Academy of Medicine**
2020	CAB Global Biomaterials Leadership Award
2019	Elected Member of International Institute of Medical and Biological Engineering
2019	Distinguished Visiting Professorship of University of Hong Kong (Deferred)
2019	Distinguished Visiting Professorship of Chinese University of Hong Kong
2018	**Elected Academician of Academia Sinica**

2017	Lifetime Achievement Award of Chinese American Society of Nanotechnology and Nanomedicine
2017	Honorary Professorship of Zhejiang University
2017	Honorary Professorship of Beijing University of Chemical Technology
2017	Honorary Professorship of 301 PLA Hospital
2016	Chinese Academy of Sciences President's Fellowship for Distinguished Scientists
2014	**Samuel Y Sheng Professorship, Columbia University**
2014	International Journal of Nanomedicine Distinguished Scientist Award
2014	Honorary Professorship of Sichuan University
2014	Honorary Professorship of Southeast University
2014	**Elected Member of the USA National Academy of Inventors**
2013	Clemson Award for Applied Research, Society for Biomaterials
2013	**Elected Member of the USA National Academy of Engineering**
2006-2013	Distinguished Visiting Professor of National University of Singapore
2010	Stansell Family Distinguished Research Award
2007	**James B. Duke Professorship, Duke University**
2007	J Controlled Release Jorge Heller Best Manuscript Award Student Award (Hunter Chen) for Excellence in Research, American Society for Gene Therapy
2006	Best Manuscript Award of Acta Biomaterialia
1998	Fellow of American Institute for Medical and Biological Engineering
1996-8, 2001-2	Capsugel Award on Innovative Aspects of Controlled Release Research, Controlled Release Society
1997	Controlled Release Society - Cygnus Recognition Award
1996	Controlled Release Society - 3M Pharmaceuticals Recognition Award
1995	The Chinese-American Chemical Society Award for Recognition of Pioneering Contributions in Polymer Chemistry and Biomedical Engineering
1994	**Young Investigator Research Achievement Award of Controlled Release Society**
1993	Controlled Release Society - Proctor & Gamble Recognition Award

D. Teaching Experience

Courses taught at Johns Hopkins University

- Biological Transport
- Pharmacoengineering
- Biomedical Polymers
- Biosensing
- Cell and Tissue Engineering I
- Cell and Tissue Engineering II
- Advances Biomaterials

Courses taught at Duke University

- Biomedical Polymers
- Topics in Nanomedicine
- Introduction to Bionanotechnology

Courses taught at Columbia University

- Biomaterials
- Topics in Nanomedicine
- Drug and Gene Delivery

Training

No. of PhD students trained: 48 graduated; 7 current
No. of postdoctoral fellows trained: ~80

E. Publication

Google Scholar	All	Since 2020	Date
Citations	79,500	~28,500	Sept, 2025
h-index	147	85	i10 index = 562

2025

Alexander, E., & Leong, K. W. (2025). *Toxicity and biodistribution comparison of functionalized nanodiamonds, quantum dot nanocarbons and gold nanoparticles*. ***Frontiers in Nanotechnology***, *7*, 1512622.

Bao, L., Cui, X., Zeng, T., Liu, G., Lai, W., Zhao, H., Gao, F., Wu, J., Leong, K. W., & Chen, C. (2025). *Incorporation of polylactic acid microplastics into the carbon cycle as a carbon source to remodel the endogenous metabolism of the gut*. ***Proceedings of the National Academy of Sciences***, *122*(19), e2417104122. https://doi.org/10.1073/pnas.2417104122

Bhansali, D., Latorre, R., Tonello, R., Poolman, D., Ding, S., Schmidt, B. L., Bunnett, N. W., & Leong, K. W. (2025). *Cationic Nanoparticles Mitigate Chemotherapy-Induced Peripheral Neuropathy*. ***Advanced NanoBiomed Research***, 2500002. https://doi.org/10.1002/anbr.202500002

Bhansali, D., Tu, N. H., Inoue, K., Teng, S., Li, T., Tran, H. D., Kim, D. H., Dong, J., Peach, C. J., Sokrat, B., Jensen, D. D., Dolan, J. C., Yamano, S., Robinson, V. M., Bunnett, N. W., Albertson, D. G., Leong, K. W., & Schmidt, B. L. (2025). *PAR(2) on oral cancer cells and nociceptors contributes to oral cancer pain that can be relieved by nanoparticle-encapsulated AZ3451*. ***Biomaterials***, *314*, 122874. https://doi.org/10.1016/j.biomaterials.2024.122874

Chen, X., Huang, H., Guo, C., Zhu, X., Chen, J., Liang, J., Yang, R., Shao, D., Chen, F., Shi, B., Yang, C., Leong, K. W., & Zhao, L. (2025). *Controlling Alveolar Bone Loss by Hydrogel-Based Mitigation of Oral Dysbiosis and Bacteria-Triggered Proinflammatory Immune Response*. ***Advanced Functional Materials***, *35*(3), 2409121. https://doi.org/10.1002/adfm.202409121

Chen, Y., Sun, W., Wen, Y., Wang, X., Li, J., Xie, S., Li, R., Ma, Y., Wu, H., Zhu, Q., Chen, Z., Zhang, X., Liao, Y., Lin, J., Li, W., Yan, Y., Ying, D., He, Q., Meng, H., Leong, K.W., & Ouyang, H. (2025). *A cationic polymer drives glycosaminoglycan assembly and secretion for preclinical osteoarthritis therapy*. ***Science Translational Medicine***, *17*(804), eadl5623. https://doi.org/10.1126/scitranslmed.adl5623

Chen, Z., Yi, X., Liao, Z., Zhou, S., Han, M., Wu, C., Zhang, D., He, Y., Leong, K. W., & Zhong, Y. (2025). *Combining magnetic hyperthermia and ectonucleotidase inhibition to amplify antitumor immunity*. ***Cell Biomaterials***. https://www.cell.com/cell-biomaterials/fulltext/S3050-5623(25)00095-9

Ding, S., Alexander, E., Liang, H., Kulchar, R. J., Singh, R., Herzog, R. W., Daniell, H., & Leong, K. W. (2025). *Synthetic and Biogenic Materials for Oral Delivery of Biologics: From Bench to Bedside*. ***Chemical Reviews***, *125*(8), 4009–4068. https://doi.org/10.1021/acs.chemrev.4c00482

Han, M., Chen, Z., Zhou, S., Liao, Z., Yi, X., He, Y., Zhong, Y., & Leong, K. W. (2025). *Silicon-based metal-organic frameworks (SiMOFs) for immunogenic cell death in cancer therapy*. ***Nano Research***, *18*(1), 94907080.

Han, M., Zhou, S., Liao, Z., Zishan, C., Yi, X., Wu, C., Zhang, D., He, Y., Leong, K. W., & Zhong, Y. (2025). *Bimetallic peroxide-based nanotherapeutics for immunometabolic intervention and induction of immunogenic cell death to augment cancer immunotherapy*. ***Biomaterials***, *315*, 122934.

He, S., Jin, Y., Nazaret, A., Shi, L., Chen, X., Rampersaud, S., Dhillon, B. S., Valdez, I., Friend, L. E., Fan, J. L., Park, C. Y., Mintz, R. L., Lao, Y. H., Carrera, D., Fang, K. W., Mehdi, K., Rohde, M., McFaline-Figueroa, J. L., Blei, D., Leong, K. W., Rudensky, A. Y., Plitas, G., & Azizi, E. (2025). *Starfysh integrates spatial transcriptomic and histologic data to reveal heterogeneous tumor-immune hubs*. ***Nature Biotechnology*** , *43*(2), 223–235. https://doi.org/10.1038/s41587-024-02173-8

He, X., Wang, Y., Gao, Y., Wang, X., Sun, Z., Zhu, H., Leong, K. W., & Xu, B. (2025). CalciumZero: *A toolbox for fluorescence calcium imaging on iPSC derived brain organoids*. ***Brain Informatics***, *12*(1), 2.

https://doi.org/10.1186/s40708-024-00248-5
Hong, H. J., Lee, N.-H., Kim, H. S., Leong, K. W., & Kim, H.-W. (2025). *Biomechanics in miniature: Microfluidic-based in vitro modeling to decipher mechanobiological phenomena*. ***Trends in Biotechnology***. https://www.cell.com/trends/biotechnology/abstract/S0167-7799(25)00309-9
Hua, Y., Song, H., Deng, H., Tian, H., Liu, C., Wu, H., Wang, S., Shao, C., Ye, L., & Ge, S. (2025). *A senescence-responsive nanodrug amplifies radiotherapy efficacy*. ***Journal of Controlled Release***, 114202.
Hung, L. Y., Alves, N. D., Del Colle, A., Talati, A., Najjar, S. A., Bouchard, V., Gillet, V., Tong, Y., Huang, Z., & Browning, K. N. (2025). *Intestinal epithelial serotonin as a novel target for treating disorders of gut-brain interaction and mood*. ***Gastroenterology***, *168*(4), 754–768.
Liu, Y., Liu, R., Dong, J., Xia, X., Yang, H., Wei, S., Fan, L., Fang, M., Zou, Y., Zheng, M. Leong, K.W. & Shi, B. (2025). *Targeted protein degradation via cellular trafficking of nanoparticles*. ***Nature Nanotechnology***, *20*(2), 296–302.
Margaronis, A., Piunti, C., Hosn, R. R., Bortel, S., Nayagam, S., Wang, J. S., Uvaldo, D., Leong, K. W., Cimetta, E., & Correa, S. (2025). *Extracellular vesicles as dynamic crosslinkers for bioactive injectable hydrogels*. ***Matter***. https://www.cell.com/matter/abstract/S2590-2385(25)00383-2
Rao, S. B., Sun, Z., Brundu, F., Chen, Y., Sun, Y., Zhu, H., Shprintzen, R. J., Tomer, R., Rabadan, R., Leong, K. W., & Xu, B. (2025). *Aberrant pace of cortical neuron development in brain organoids from patients with 22q11. 2 deletion syndrome-associated schizophrenia*. ***Nature Communications***, *16*(1), 6986.
Santibañez, J. R., Bok, D., Teng, S., Bhansali, D., de Amorim Ferreira, M., Tonello, R., Peach, C. J., Latorre, R., Thanigai, G. S., Leong, K. W., & Jansen, D. (2025). *Characterization and targeting of the endosomal signaling of the gastrin releasing peptide receptor in pruritus*. ***bioRxiv.*** https://pmc.ncbi.nlm.nih.gov/articles/PMC11956961/
Tian, H., Deng, H., Liu, X., Liu, C., Zhang, C., Leong, K. W., Fan, X., & Ruan, J. (2025). *A novel FTO-targeting nanodrug induces disulfidptosis and ameliorates the suppressive tumor immune environment to treat uveal melanoma*. ***Biomaterials***, *319*, 123168.
Wang, Z., Liu, X., Ye, T., Zhai, Z., Wu, K., Kuang, Y., Ostrovidov, S., Shao, D., Wang, Y., Leong, K. W., & Shi, S. (2025). *3D-printed perfused models of the penis for the study of penile physiology and for restoring erectile function in rabbits and pigs*. ***Nature Biomedical Engineering***, 1–14.
Yu, L., Yang, Y. X., Gong, Z., Wan, Q., Du, Y., Zhou, Q., Xiao, Y., Zahr, T., Wang, Z., & Yu, Z.….Leong, K.W., & Qiang, L. (2025). *FcRn-dependent IgG accumulation in adipose tissue unmasks obesity pathophysiology*. ***Cell Metabolism***, *37*(3), 656–672.
Zheng, K., Tsitsos, F. N., Batts, A. J., Ji, R., Nuriel, T., Konofagou, E. E., & Leong, K. W. (2025). *Focused ultrasound-mediated APOE4 knockdown in mouse brain*. ***Alzheimer's & Dementia***, *21*(7), e70464. https://doi.org/10.1002/alz.70464
Zhou, X., Deng, R., Liao, Z., Huang, X., Huang, J., Yang, H., Leong, K. W., & Zhong, Y. (2025). *Integrating Metabolic Modulation and Nanomedicine for Cancer Immunotherapy*. ***Advanced Science***, e10004. https://doi.org/10.1002/advs.202510004
Zhu, Y., Tavakol, D. N., Wang, H., He, S., Ponnaiya, B., Zhu, Z., Xiao, Y., Yoshinaga, N., Wu, X., Wu, X., Ning, D., Baldassarri, I., Teles, D., Amundson, S. A., Garty, G., Brenner, D. J., Vunjak-Novakovic, G., & Leong, K. W. (2025). *Development of Nanocarrier-Based Oral Pegfilgrastim Formulations for Mitigating Hematopoietic Acute Radiation Syndrome*. ***Advanced Functional Materials***, *35*(25), 2421462. https://doi.org/10.1002/adfm.202421462
Zhu, Y., Xu, C., Li, Z., Bao, X., Liu, M., She, Y., Ma, R., Liu, X., Li, J., & Wen, W., Leong, K.W., & Tu, Z. (2025). *Nanostructured organic sheets sequestering small extracellular vesicles and reactive species to protect against radiation-induced mucositis*. ***Nature Communications***, *16*(1), 6120.

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Zhu Y, Cai SS, Ma J, Cheng L, Wei C, Aggarwal A, Toh WH, Shin C, Shen R, Kong J, Mao SA, Lao YH, Leong KW, and Mao HQ. *Optimization of lipid nanoparticles for gene editing of the liver via intraduodenal delivery.* ***Biomaterials,*** 308: 122559. (2024). PMC11099935

Zhu J, Li X, Zhou Y, Ge C, Li X, Hou M, Wei Y, Chen Y, Leong KW, and Yin L. *Inhaled immunoantimicrobials for the treatment of chronic obstructive pulmonary disease*. ***Sci Adv,*** 10(6): eabd7904. (2024). PMC10849584

Zahr T, Li T, Bhansali D, Wan Q, Leong KW, and Qiang L. *Targeted delivery of a cationic dendrimer with a plaque-homing peptide for the treatment of atherosclerosis*. ***Life Med,*** 3(6): lnae039. (2024). PMC11761737 blinded from reviewing or making decisions for the manuscript.

Yu L, Yang YX, Gong Z, Wan Q, Du Y, Zhou Q, Xiao Y, Zahr T, Wang Z, Yu Z, Yang K, Geng J, Fried SK, Li J, Haeusler RA, Leong KW, Bai L, Wu Y, Sun L, Wang P, Zhu BT, Wang L, and Qiang L. *FcRn-dependent IgG accumulation in adipose tissue unmasks obesity pathophysiology*. ***Cell Metab***. (2024).

Yoo HS, Hwang NS, and Leong KW. *Preface: Image-assisted organoid research and application*. ***Adv Drug Deliv Rev,*** 211: 115360. (2024).

Xu C, He S, Zhu Y, Crasto G, Chen C, Clay ML, Lao YH, and Leong KW. *Vascular Organoid Generation from Human-Induced Pluripotent Stem Cells*. ***J Vis Exp,*** (214). (2024).

Xu C, Alameri A, Leong W, Johnson E, Chen Z, Xu B, and Leong KW. *Multiscale engineering of brain organoids for disease modeling*. ***Adv Drug Deliv Rev,*** 210: 115344. (2024). PMC11265575

Xiao YQ, Fang H, Wang X, Liu M, Shen T, Zhang M, Xia ZF, Leong KW, Ma D, Ma J, Tu ZX, and Zhang TY. *Modulation of Unregulated Inflammation-Associated Coagulopathy in Sepsis Using Multifunctional Nanosheets*. ***Adv Funct Mater,*** 34(38). (2024).

Xiao Y, Fang H, Zhu Y, Zhou J, Dai Z, Wang H, Xia Z, Tu Z, and Leong KW. *Multifunctional Cationic Hyperbranched Polyaminoglycosides that Target Multiple Mediators for Severe Abdominal Trauma Management*. ***Adv Sci (Weinh),*** 11(1): e2305273. (2024). PMC10767409

Wu M, Ma Z, Tian Z, Rich JT, He X, Xia J, He Y, Yang K, Yang S, Leong KW, Lee LP, and Huang TJ. *Sound innovations for biofabrication and tissue engineering*. ***Microsyst Nanoeng,*** 10(1): 170. (2024). PMC11577104 Technologies Inc., to commercialize technologies involving acoustofluidics and acoustic tweezers.

Windemuth S, Hahn J, You J, Wang Z, Ding S, Tarrab S, Coker C, Leong KW, and Danino T. *Iron-Tannin Coating Reduces Clearance and Increases Tumor Colonization of Systemically Delivered Bacteria*. ***ACS Synth Biol,*** 13(12): 3948-3960. (2024).

Wang Z, Chen F, Cao Y, Zhang F, Sun L, Yang C, Xie X, Wu Z, Sun M, Ma F, Shao D, Leong KW, and Pei R. *An Engineered Nanoplatform with Tropism Toward Irradiated Glioblastoma Augments Its Radioimmunotherapy Efficacy*. ***Adv Mater,*** 36(32): e2314197. (2024).

Wang S, Wang Z, Shen Z, Zhang M, Jin D, Zheng K, Liu X, Chai M, Wang Z, Chi A, Ostrovidov S, Wu H, Shao D, Liu G, Wu K, Leong KW, and Shi X. *Magnetic soft microrobots for erectile dysfunction therapy*. ***Proc Natl Acad Sci U S A,*** 121(49): e2407809121. (2024). PMC11626158

Tu Z, Zhu Y, Gao W, Liu M, Wei Y, Xu C, Xiao Y, Wen Y, Li J, Leong KW, and Wen W. *Tackling Severe Neutrophilic Inflammation in Airway Disorders with Functionalized Nanosheets*. ***ACS Nano,*** 18(9): 7084-7097. (2024).

Tavakol DN, Nash TR, Kim Y, Graney PL, Liberman M, Fleischer S, Lock RI, O'Donnell A, Andrews L, Ning D, Yeager K, Harken A, Deoli N, Amundson SA, Garty G, Leong KW, Brenner DJ, and Vunjak-Novakovic G. *Modeling the Effects of Protracted Cosmic Radiation in a Human Organ-on-Chip Platform*. ***Adv Sci (Weinh),*** 11(42): e2401415. (2024). PMC11558103

Liu Y, Liu R, Dong J, Xia X, Yang H, Wei S, Fan L, Fang M, Zou Y, Zheng M, Leong KW, and Shi B. *Targeted protein degradation via cellular trafficking of nanoparticles*. ***Nat Nanotechnol***. (2024).

Kim HS, Xiao Y, Chen X, He S, Im J, Willner MJ, Finlayson MO, Xu C, Zhu H, Choi SJ, Mosharov EV, Kim HW, Xu B, and Leong KW. *Chronic Opioid Treatment Arrests Neurodevelopment and Alters Synaptic Activity in Human Midbrain Organoids*. ***Adv Sci (Weinh),*** 11(21): e2400847. (2024). PMC11151039

Hung LY, et al. *Intestinal Epithelial Serotonin as a Novel Target for Treating Disorders of Gut-Brain Interaction and Mood*. ***Gastroenterology***. (2024).

He S, Zhu Y, Chauhan S, Tavakol DN, Lee JH, Berris RB, Xu C, Lee JH, Lee C, Cai S, McElroy S, Vunjak-Novakovic G, Tomer R, Azizi E, Xu B, Lao YH, and Leong KW. *Human vascular organoids with a mosaic AKT1 mutation recapitulate Proteus syndrome*. ***bioRxiv***. (2024). PMC10849631

He S, Jin Y, Nazaret A, Shi L, Chen X, Rampersaud S, Dhillon BS, Valdez I, Friend LE, Fan JL, Park CY, Mintz RL, Lao YH, Carrera D, Fang KW, Mehdi K, Rohde M, McFaline-Figueroa JL, Blei D, Leong KW, Rudensky AY, Plitas G, and Azizi E. *Starfysh integrates spatial transcriptomic and histologic data to reveal heterogeneous tumor-immune hubs*. ***Nat Biotechnol***. (2024). PMC11415552

Hahn J, Ding S, Im J, Harimoto T, Leong KW, and Danino T. *Bacterial therapies at the interface of synthetic biology and nanomedicine*. ***Nat Rev Bioeng****,* 2(2): 120-135. (2024). PMC11218715

Chi CW, Lao YH, Ahmed AHR, He S, Merghoub T, Leong KW, and Wang S. *Enabling continuous immune cell recirculation on a microfluidic array to study immunotherapeutic interactions in a recapitulated tumour microenvironment*. ***Lab on a Chip****,* 24(3): 396-407. (2024).

Cheng X, Sui H, Chen F, Li C, Du M, Zhang S, Chen J, Dou J, Huang Y, Xie X, Cheng C, Yang R, Yang C, Shi B, Shao D, Leong KW, and Huang H. *Nanomaterial-Mediated Reprogramming of Macrophages to Inhibit Refractory Muscle Fibrosis*. ***Adv Mater****,* 36(52): e2410368. (2024).

Chen Y, Chauhan S, Gong C, Dayton H, Xu C, De La Cruz ED, Tsai YW, Datta MS, Rosoklija GB, Dwork AJ, Mann JJ, Boldrini M, Leong KW, Dietrich LEP, and Tomer R. *Low-cost and scalable projected light-sheet microscopy for the high-resolution imaging of cleared tissue and living samples*. ***Nat Biomed Eng****,* 8(9): 1109-1123. (2024).

Chang GH, Wu MY, Yen LH, Huang DY, Lin YH, Luo YR, Liu YD, Xu B, Leong KW, Lai WS, Chiang AS, Wang KC, Lin CH, Wang SL, and Chu LA. *Isotropic multi-scale neuronal reconstruction from high-ratio expansion microscopy with contrastive unsupervised deep generative models*. ***Comput Methods Programs Biomed****,* 244: 107991. (2024).

Bhansali D, Tu NH, Inoue K, Teng S, Li T, Tran HD, Kim DH, Dong J, Peach CJ, Sokrat B, Jensen DD, Dolan JC, Yamano S, Robinson VM, Bunnett NW, Albertson DG, Leong KW, and Schmidt BL. *PAR(2) on oral cancer cells and nociceptors contributes to oral cancer pain that can be relieved by nanoparticle-encapsulated AZ3451*. ***Biomaterials****,* 314: 122874. (2024).

Bhansali D, Akinade T, Li TY, Zhong YL, Liu F, Huang HY, Tu ZX, Devey EA, Zhu YF, Jensen DD, and Leong KW. *Comparative Analysis of Nucleic Acid-Binding Polymers as Potential Anti-Inflammatory Nanocarriers*. ***Pharmaceutics****,* 16(1). (2024).

Alexander E and Leong KW. *Nanodiamonds in biomedical research: Therapeutic applications and beyond*. ***PNAS Nexus****,* 3(5): pgae198. (2024). PMC11231952

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Invited Presentation

- "Implantable controlled drug delivery," ACEMB, Lutherville MD, 1986
- "New biodegradable polymers for orthopedic applications," Walter Reed Army Research Institute, 1988
- "Biodegradable poly(phosphate)s and poly(phosphonate)s as orthopedic prostheses," Zimmer Corporate Research Center, Warsaw, IN, 1988

- "Poly(phosphate)s and poly(phosphonate)s for orthopedic and controlled release applications," Whitaker Foundation, 1988
- "Poly(phosphate esters) as drug-carriers," ACS Symposium on Drug Delivery, Dallas, 1989
- "Polymeric controlled delivery of antisense," NIH, 1989
- "Recent developments of polymeric controlled drug delivery," Institute of Polymer Chemistry, Nankai University, China, 1989
- "Biodegradable polymers for long bone fracture repair," NIH, 1990
- "Biodegradable elastomeric poly(phosphoester-urethane)s," Johnson & Johnson, 1990
- "Design of elastomeric poly(phosphoester-urethane)s for biodegradable stents," Medtronics Corporate Research Center, 1990
- "Poly(phosphoesters) as Biomaterials," ACS, Boston, 1990
- "Poly(phosphoesters) as biomaterials: Controlled drug delivery and orthopedic applications," Guilin International Symposium on Biomaterials and Fine Polymers, 1991
- "Polymeric controlled release device for restenosis," Medtronics, Minneapolis, 1991
- "Controlled release microspheres for osteoarthritis," Osteoarthritis Sciences Inc., Cambridge MA, 1992
- "Poly(phosphoesters) and poly(phosphoester-urethanes) in controlled drug delivery applications," American Society for Artificial Internal Organs, New Orleans, 1993
- "Poly(phosphoesters) and poly(phosphoester-urethanes) in orthopedic and controlled drug delivery applications," Gordon Conference, San Miniato, Italy, 1993
- "Designing polymers for controlled drug delivery," Science Innovation 93, Boston, 1993
- "Biodegradable polymers in orthopedic applications," Symposium on Biological Response to Biomaterials, Baltimore, 1993
- "Alternative rodding materials for osteogenesis imperfecta," Symposium on Osteogenesis Imperfecta, Bethesda, 1993
- "Chemical and mechanical considerations of biodegradable polymers for orthopedic applications," International Soc. Fracture Repair Workshop, Hong Kong, 1993
- "Design of synthetic bone graft: BMP-containing biodegradable polymeric foam," International Conf. on Bone Morphogenetic Proteins, Baltimore, MD, 1994
- "Biomedical applications of polymeric biomaterials (5 lectures)," Institute of Polymer Chemistry, Nankai University, China, 1994
- "Polymeric controlled drug delivery," Guangzhou College of Pharmaceutics, China, 1994
- "Synthesis and biomedical applications of poly(phosphoester)s (3 Lectures)," Department of Chemistry, Wuhan University, China, 1994
- "Synthesis and characterization of poly(phosphoester)s," Department of Macromolecular Science, Fudan University, China, 1994
- "Microspheres and microcapsules for gene delivery and cell encapsulation," International Symposium on Biomaterials and Fine Polymers, Wuhan, 1994
- "Role of polymer chemistry in tissue engineering," Fall Meeting of CACS, Chicago, 1995
- "New biodegradable polymers for drug delivery," Skypharm, La Jolla, CA, 1995
- "Drug delivery to the joint," Keystone Conference on Drug Delivery, Hilton Head, 1995
- "A synthetic CFTR gene delivery system," Cystic Fibrosis Foundation Conference, Williamsburg, 1995
- "Delivery of cytokines by gelatin/chondroitin sulfate microspheres," ACS Symposium on Protein Delivery, Boston, 1995
- "Biodegradable and macroporous polymeric scaffolds," Keystone Conference on Tissue Engineering, Taos, New Mexico, 1996
- "Controlled release biodegradable scaffolds for bone regeneration," AAAS Annual Meeting, Baltimore, 1996

- "Urease-sensitive delivery system for diagnostic and therapeutic applications," Boston Scientific, Framingham, MA, 1996
- "Urease-sensitive delivery system for diagnostic and therapeutic applications," Abbott Laboratory, Chicago, 1996
- "Synthesis of biodegradable and macroporous scaffolds for bone tissue engineering," Osiris, Baltimore, 1996
- "Polymeric controlled gene delivery," Department of Bioengineering, University of Utah, 1996
- "Polymeric controlled drug and gene delivery," AAAS Annual Meeting, Philadelphia, 1996
- "Biodegradable poly(phosphoester)s for drug and gene delivery applications," Guilford Pharmaceuticals, Baltimore, 1996
- "Adjuvant anti-tumor effects of GM-CSF polymeric microspheres," US-Japan Cancer Cooperative Research Program on The Role of Cytokines in Cancer, Bethesda, 1996
- "Design of new biodegradable hydrogels for controlled drug delivery," BF Goodrich Corporate Research Center, 1996
- "Design and synthesis of enzymatically degradable polymeric biomaterials by group transfer polymerization," Medical Gel Sciences, Lexington, MA, 1996
- "Polymeric controlled delivery of antigens," Institute of Life Sciences, Zhongzhan University, 1996
- "Macroporous scaffolds with controlled release functions applied to tissue engineering," Department of Bioengineering, Penn, 1997
- "Polymeric controlled gene delivery: mechanism and genetic immunization," Institute of Bioengineering and Biosciences, Georgia Tech, 1997
- "DNA nanospheres as non-viral vectors for gene delivery," Eighth Conferences on Advances in Drug Delivery, Salt Lake City, Utah, 1997
- "Cystic fibrosis gene therapy by gelatin-DNA nanospheres," Cystic Fibrosis Foundation Conference, Williamsburg, 1997
- "Polymeric carriers in non-viral gene therapy," Department of Chemistry, Fudan University, China, 1997
- "Biodegradable polymers for gene delivery and tissue engineering applications," Fourth International Symposium on Biomaterials and Fine Polymers, Xian, China 1997
- "Recent trends of tissue engineering," Institute of Materials Research and Engineering, Singapore, 1997
- "Controlled release microspheres for cancer vaccination," Workshop on Cancer Vaccines, Cambridge Health Institute, Washington, D.C., 1997
- "Application of controlled release technology for optimization of immune response," NIH Workshop on Interface of Bioengineering and Immunology, Bethesda, 1997
- "Polymeric controlled non-viral gene delivery," Transkaryotic Therapeutics, Boston, 1997
- "Gene delivery properties of chitosan-DNA nanoparticles," Korean Institute of Science and Technology, Seoul, 1998
- "Polymeric controlled gene delivery," US-South Korea Cooperative Research Program on Biomedical Engineering, Daejon, South Korea, 1998
- "Genetic immunization by DNA nanoparticles," Schering Plough Corporate Research Center, NJ, 1998
- "Non-viral gene delivery by DNA nanoparticles," Department of Pulmonary Medicine, Cornell Medical Center, NY, 1998
- "Cancer vaccination and non-viral gene delivery," Department of Anatomy, NUS, Singapore, 1998
- "Genetic immunization with DNA-nanoparticles and cytokine adjuvants," Institute of Molecular Cell Biology, Singapore, 1998
- "Bioengineering approach to gene therapy," Faculty of Science, NUS, Singapore, 1998
- "Mechanism and efficiency of gene transfection by DNA-nanospheres," Keystone Symposia on Molecular and Cellular Biology: Synthetic Non-Viral Gene Delivery Systems, Keystone, CO, 1998
- "Recent trends of biodegradable scaffolding design in tissue engineering," Guilford Pharmaceuticals, Baltimore, 1998

- "Polymeric controlled drug and gene delivery," Omeros Medical System, Seattle, 1998
- "Polymeric non-viral gene delivery," Department of Medicine, Memorial Sloan Kettering Institute, 1998
- "Non-viral gene delivery," GeneMedicine, Woodlands, TX, 1998
- "Polymeric controlled gene delivery," Bohreinger Ingleheim, Connecticut, 1998
- "Design of new polymeric gene carriers," Gene Therapy, Inc., 1998
- "Polymeric controlled gene delivery for immunotherapy," 3rd Congress of European Association for Clinical Pharmacology and Therapeutics, Jerusalem, Israel, 1999
- "Mechanism and efficiency of gene transfer by DNA-nanoparticles ," Department of Bioengineering, Rice University, 1999
- "Mechanism and efficiency of gene transfer by DNA-nanoparticles ," Department of Chemical Engineering, Caltech, 1999
- "Supramolecular hydrogels for drug and gene delivery," Omeros Medical System, Seattle, 1999
- "Controlled release cytokine microspheres in DNA vaccination," Alza, Palo Alto, 1999
- "Non-viral gene delivery," RPR Gencell, Mountain View, CA, 1999
- "Bioengineering approach to gene delivery," Bioengineering Program, Cornell University, 1999
- "Biodegradable poly(phosphoester)s", ACS Symposium honoring Robert Langer, Anaheim, 1999
- "Controlled release approaches applied to cancer vaccination," Symposium on Cancer Therapy, Johns Hopkins-Singapore, Singapore, 1999
- "Tissue engineering approach to intervertebral disc regeneration," Workshop on Spinal Injury, Baltimore, 2000
- "New tissue engineering scaffolding design and cell encapsulation technology," Becton Dickinson Corporate Research Center, Durham, NC, 2000
- "Design of biodegradable polymeric biomaterials for gene delivery and tissue engineering," Department of Biomedical Engineering, Duke University, 2000
- "Design of biomaterials, and drug and gene delivery related to tissue engineering," Workshop of Musculoskeletal Tissue Engineering, Hong Kong, 2000
- "Oral gene therapy of food allergy," NIH, 2000
- "Biomaterials research in IMRE," Johnson and Johnson Corporate Biomaterials Center, Somerville, NJ, 2000
- "Polymeric biomaterials for drug delivery and tissue engineering," DuPont Research Center, Wilmington, 2000
- "Polymeric Controlled Gene Delivery," International Meeting of BME, Singapore, 2000
- "Non-viral Gene Delivery," MRS Meeting, Boston, 2000
- "Polymeric Controlled Gene Delivery," University of Washington, Department of Bioengineering, 2001
- "Biodegradable Polymeric Drug Carriers," Alza Corp., Palo Alto, 2001
- "Non-viral Genetic Immunization: Efficacy and Mechanism," Merck, West Point, 2001
- "Potential of Poly(phosphoester)s in Tissue Engineering Applications," Guilford Pharmaceuticals, Baltimore, 2001
- "Biomaterials for Gene Delivery," Society for Biomaterials Meeting, St. Paul, 2001
- "Oral DNA Vaccines," CRS Workshop, San Diego, 2001
- "Advances in Liver Tissue Engineering," ICMAT, Singapore 2001
- "New Biodegradable Poly(phosphoester)s for Gene Delivery," ACS National Meeting, Chicago, 2001
- "Polymeric controlled gene delivery," Golden Gate Polymer Forum, San Francisco, 2001
- "Oral gene delivery," Virsol Scientific Meeting, Paris, 2001
- "Polymeric controlled gene delivery," 6th Symposium of Controlled Drug Delivery, Hawaii, 2001
- "Nanoparticles in Biomedical Applications. Symposium on Nanoscience and Nanotechnology," Singapore, February, 2002
- " Polymeric Controlled Gene Delivery. Department of Biomedical Engineering," Northwestern University, March, 2002
- "Polymeric Gene Carriers. Institute of Biomaterials and Biomedical Engineering," University of Toronto,

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- "Tissue Engineering Scaffold," Department of Chemical Engineering, McMaster University, Hamilton, March, 2002
- "Oral gene delivery," National Hemophilia Foundation Annual Meeting, Philadelphia. April 2002.
- "Polymer-DNA nanoparticles," The 29th International Symposium on Controlled Release of Bioactive Materials, Seoul, Korea. July 2002.
- "Biomaterials and Tissue Engineering," University of Virginia, June 2002.
- "Drug and gene delivery in tissue engineering," Challenges in Regenerative Medicine (ChaRM), Toronto, June 2002.
- "Nanoparticle technology," US-Taiwan Nanotechnology Summit, Caltech, September 2002.
- "Polyphosphoesters for drug delivery & tissue engineering," Workshop on Polymeric Biomaterials: Design & Applications, Wuhan, China. October 2002.
- "Biodegradable and biofunctional scaffolds for tissue engineering," Plenary Speaker of 11th Annual Scientific Meeting on Tissue Engineering, Kyungpook National University, Daegu, South Korea, December 2002
- "Biofunctional scaffolds," Symposium on Gels, Genes, Grafts, and Giants, Maui, Hawaii, December 2002
- "Interface of Biomaterials and tissue engineering," First World Congress of Chinese Biomedical Engineers, Taipei, December 2002
- "Polymeric controlled oral gene delivery," Winter Symposium on Controlled Release of Bioactive Agents, Utah, March, 2003
- "Oral gene delivery," IBC Symposium on Protein Formulation and Delivery, Boston, March, 2003
- "Oral non-viral gene delivery," Department of Pediatrics, University of Pennsylvania, June, 2003
- "Nanoparticles for gene therapy," US-Japan Symposium on Nanomedicine, Yokohama, Japan, October, 2003
- "Polymeric controlled nonviral gene therapy," NIH, November, 2003
- "Biofunctional fibrous scaffolds," Institute of Bioengineering and Nanotechnology, Singapore, December, 2003
- "Liver tissue engineering," A*STAR Symposium, Singapore, December, 2003
- "Towards engineering of trachea tissue," 1st International Conference on Epithelial Tissue Engineering, Singapore, December, 2003
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- "Delivery aspects of DNA vaccination," Keystone Conference on Vaccines, January, Keystone, Colorado, 2004
- "Nanoparticles in biomedical applications," NIH Workshop on Interface of Nanotechnology and Cancer Imaging," January, Bethesda, Maryland, 2004
- "Polymeric controlled gene delivery," Department of Chemical Engineering, Ohio State University, February, Columbus, Ohio, 2004
- "Interface of controlled drug delivery and tissue engineering," Annual Meeting of Society for Biomaterials, Sidney, May, 2004
- "Biofunctional fibrous scaffolds for tissue engineering," Wurzburg Conference on Tissue Engineering, Julius-Maximilians-University Würzburg, Germany, June, 2004
- "Interface of controlled drug delivery and regenerative medicine," National Science Council Symposium on Bioengineering, Taipei, Taiwan, June, 2004
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- "Biofunctional fibrous scaffolds," 9th Symposium on Biochemical Engineering, Tai Chung, Taiwan, June, 2004
- "Controlled drug delivery applied to regenerative medicine," 10th SCBA Symposium, Beijing, China, July, 2004

- "Design of fibrous scaffolds for regenerative medicine," International Conference of Bioengineering and Nanotechnology, Singapore, September, 2004
- "Interface of controlled drug delivery and regenerative medicine," Department of Biomedical Engineering, Purdue University, West Lafayette, Indiana, October, 2004
- "Drug and gene delivery applied to regenerative medicine," Department of Bioengineering, University of Illinois, Urbana-Champaign, Illinois, November, 2004
- "Delivery of biologics from fibrous scaffold," School of Pharmacy, University of North Carolina, Chapel Hill, North Carolina, November, 2004
- "Nanoparticle technology applied to nonviral gene delivery," NSF Center for Affordable Nanoengineering of Polymer Bioengineering, Ohio State University, February, 2005
- "Cellular response to fibrous scaffolds with micro/nanoscale features," Department of Chemical and Materials Engineering, University of California, Irvine, March 2005
- "Bionanotechnology: Therapeutic applications," GRC Keynote Lecture, U of Maryland, Baltimore and Baltimore County Campus, Baltimore, April, 2005
- "Cellular response to biofunctional fibrous scaffolds," Department of Biomedical Engineering, Duke University, April 2005
- "Influence of nanostructures on cellular response," AAPS Symposium on Nanomedicine, San Francisco, June 2005
- "Controlled release micro/nano-ordered structures for tissue engineering," Proceedings of International Conference on Controlled Release of Bioactive Agents, Miami, June 2005
- "Influence of nanotopography on cellular behavior," 3rd International Conference on Materials Applied Technology, Singapore, July, 2005
- "Synthetic and natural biopolymers applied to tissue engineering scaffolding design**,"** Symposium on New Trends in Biomaterials—Tissue Engineering, National University of Singapore, Singapore, July 2005
- "Interface of controlled drug delivery and tissue engineering," Department of Biomedical Engineering, University of Minnesota, October, 2005
- "Significance of nanostructures in dictating cellular behavior," Department of Biomedical Engineering, Iowa State University, November, 2005
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- "Nanotherapeutics: application of nanotechnology to gene and cell therapy," Center for Bioinspired Materials and Material Systems, Duke University, January, 2006
- "Nanotechnology applied to gene and cell therapy," National Heart, Lung, and Blood Institute of NIH, Bethesda, April, 2006
- "Biofunctionality derived from continuous nanostructures," 1st Chapel Hill Drug Conference, Chapel Hill, June 2006
- "Applications of nanomedicine," Becton Dickinson Technology, Durham, July, 2006
- "Nanotherapeutics: application of nanotechnology to gene and cell therapy," Key Laboratory of Biomedical Polymers, Wuhan University, China, August, 2006
- "Nanotherapeutics: application of nanotechnology to gene and cell therapy," Polymer Chemistry Institute, Nankai University, China, August, 2006
- "Application of nanotechnology to medicine," Peking Union Medical College Hospital, Beijing, China, August, 2006
- "Nanotherapeutics: application of nanotechnology to gene and cell therapy," Department of Biomedical Engineering, Peking University, Beijing, China, August, 2006

- "Nanotherapeutics: application of nanotechnology to drug, gene and cell therapy," Cancer Center Oncology Symposium, Duke University, October, 2006
- "Nanotechnology applied to gene and cell therapy," Pulmonary Research Conference, Duke University, October, 2006
- "Nanotherapeutics: application of nanotechnology to gene and cell therapy," School of Pharmaceutical Sciences, University of Wisconsin, Madison, November, 2006
- "Biofunctionality derived from continuous nanostructures," 1st Cancer Nanotechnology Symposium, University of North Carolina, Chapel Hill, November, 2006
- "Biofunctionality derived from polymeric continuous nanostructures," NANOBIO Tokyo-2006, Tokyo, Japan, December, 2006
- "Delivering biochemical and topographical cues by polymeric continuous nanostructures," Department of Biotechnology, University of Malaya, February, 2007
- "Response of stem cells to continuous nanostructures," NIH-Specialized Cooperative Centers in Reproduction and Infertility Research, Portland, Oregon, May, 2007
- "Novel design of biofunctional contact lens," Bausch & Lomb Corporation, Rochester, New York, May 2007
- "Nanotherapeutics: Application to gene and cell therapy," Samyang Corporation, Seoul, South Korea, June, 2007
- "Response of stem cells to nanostructures," ACS-Polymers in Medicine and Biology, Sonoma, California, June, 2007
- "Nanotherapeutics: Application of nanotechnology to gene and cell therapy," Global Enterprise for Micro-Mechanics and Molecular Medicine—Cancer Conference, Singapore, June, 2007
- "Application of quantum-dot FRET to investigate nonviral gene transfer," Keynote Speaker, International Conference of Materials Advanced Technology, Singapore, July, 2007
- "Delivering biochemical and topographical cues by polymeric continuous nanostructures," Keynote Speaker, 3rd International Conference on Bioengineering and Nanotechnology, Singapore, July, 2007
- "Nonviral oral gene delivery for hemophilia therapy," Durham VA Medical Center, Durham, August, 2007
- "Biofunctionality derived from polymeric continuous nanostructures for tissue engineering," Materials Today Asia Conference, Beijing, China, September, 2007
- "Nanotherapeutics," Institute of Life Sciences, University of Science and Technology, Hefei, China, September, 2007
- "Nanotherapeutics: Application of nanotechnology to gene and cell therapy," Department of Biomedical Engineering, Tsinghua University, Beijing, September, 2007
- "Nanotherapeutics: Application of nanotechnology to gene and cell therapy," William Monk Distinguished Lectureship, University of Hong Kong, Hong Kong, September, 2007
- "Biofunctional polymeric continuous nanostructures," Hong Kong University of Science and Technology, Hong Kong, September, 2007
- "Nonviral gene transfer mediated by DNA nanoparticles," Keynote Speaker, 57th Canadian Chemical Engineering Conference, Edmonton, Alberta, October, 2007
- "Biofunctional polymeric continuous nanostructures," School of Pharmaceutical Sciences, Wayne State University, October, 2007
- "Delivering biochemical and topographical cues from continuous nanostructures," Department of Bioengineering, University of California, Berkeley, October, 2007
- "Delivering biochemical and topographical cues from continuous nanostructures," DB Robinson Distinguished Speaker, University of Alberta, November, 2007
- "Nonviral gene transfer mediated by DNA nanoparticles," Nanotechnology in Biology and Medicine Conference, Charlotte, North Carolina, November, 2007
- "Mechanism of nonviral oral gene delivery," National Institute of Biomedical Imaging and Bioengineering, Bethesda, November, 2007
- "Stem cell response to polymeric continuous nanostructures," Plenary Speaker, First International Conference on Biomolecular Cellular Engineering, Singapore, December, 2007

- "Stem cell response to polymeric nanostructures," Department of Biological Engineering, M.I.T. Boston, February, 2008
- "Nano and ultrafine particles: Adverse effects on health", Annual Meeting of American Academy of Allergy Asthma and Immunology, Philadelphia, March, 2008
- "Chitosan for oral delivery of nucleic acids", Annual Meeting of American Academy of Allergy Asthma and Immunology, Philadelphia, March, 2008
- "Nonviral oral gene delivery", 10th European Society of Controlled Drug Delivery Symposium, Amsterdam, April, 2008
- "Optimizing gene delivery with quantum dot-FRET technology", Center for Nanotechnology Science and Technology, University of Illinois, Urbana Champaign, April 2008
- "Identifying nonviral gene transfer barriers by quantum dot-FRET technology", Institute of Bioengineering and Nanotechnology, Singapore, May 2008
- "Optimizing gene delivery with quantum dot-FRET technology", Keynote speaker, 3rd International Symposium of Biomedical Engineering and Bionanotechnology, Changsha, China, June 2008
- "Nanotherapeutics", Vertex Pharmaceuticals, Boston, June 2008
- "Response of stem cells to polymeric continuous nanostructures", Gordon Research Conference on Signal Transduction by Engineered Extracellular Matrix, Portland, Maine, July 2008
- "Nanostructured biomaterials applied to regenerative medicine", Center for Integration of Medicine and Innovative Technology, Boston, October 2008
- "Cell-based intervertebral disc therapy with scaffold mediation", University of Zurich, Zurich, Switzerland, November 2008
- "Biomaterials-assisted therapy of intervertebral disc degeneration", AOSpine International, Zurich, Switzerland, November, 2008
- "Optimizing gene delivery with quantum dot-FRET technology", Second International Research Network Symposium, Seoul, S. Korea, December, 2008
- "Nanostructured biomaterials", Keynote speaker, A*STAR Workshop on Biomaterials, Singapore, December, 2008
- "Nanostructured biomaterials: Relevance to regenerative medicine and tissue biocompatibility", Keynote speaker, Biomaterials Asia, Hong Kong, April, 2009
- "Stem cell tissue engineering", Department of Medicine, University of Hong Kong, April, 2009
- "Nonviral gene carrier design aided by QD-FRET", Center for Biologically Bioinspired Materials and Material Systems, Beaufort, NC, May, 2009
- "Nanostructured biomaterials: Relevance to regenerative medicine and tissue biocompatibility", Wake Forest Institute of Regenerative Medicine, Winston-Salem, NC, May, 2009
- "Tissue-engineered intervertebral disc—is this possible?" Global Spine Congress, San Francisco, June, 2009
- "Nanostructured biomaterials: Relevance to regenerative medicine and tissue biocompatibility", Gordon Research Conference, Holderness, NH, July, 2009
- "Relevance of microfluidic platforms to nanomedicine", Nano Today 1st International Conference, Singapore, August, 2009
- "Nanostructured biomaterials: Relevance to regenerative medicine and tissue biocompatibility", School of Pharmacy, University of Tennessee, Memphis, TN, Sept, 2009
- "Convergence of microfluidics and nanophotonics for gene delivery", Ohio State University, Columbus, OH, Oct, 2009
- "Cancer therapy: challenges of delivery", NSF-Mauritius Workshop on Biomaterials: Perspectives and Opportunities, Mauritius, Dec, 2009
- "Gene therapy: barriers of nonviral delivery", NSF-Mauritius Workshop on Biomaterials: Perspectives and Opportunities, Mauritius, Dec, 2009
- "Microfluidic platforms related to nanomedicine", Keynote Speaker, 8th iNano Meeting, University of Aarhus, Denmark, Feb, 2010

- "Response of stem cells to nanotopographical cues and vascular tissue engineering," Keynote Speaker, NanoBio Collaborative Conference, University of South Florida, Tempa, FL, Mar, 2010
- "Microfluidic platforms related to nanomedicine", Keynote Speaker, Symposium on the Convergence of Nanotechnology and Life Sciences, SUNY at Albany, Albany, NY, Mar, 2010
- "Microfluidic platforms related to nanomedicine", Keynote Speaker, FNANO Symposium, Snowbird, UT, April, 2010
- "Optimization of oral nonviral gene delivery", Department of Pharmacology, School of Medicine, University of Pennsylvania, PA, April, 2010
- "Optimization of oral nonviral gene delivery", Institute of Life Sciences, University of Science and Technology of China, Hefei, China, June, 2010
- "Optimization of oral nonviral gene delivery", Key Laboratory of Biomedical Polymers of Ministry of Education, Department of Chemistry, Wuhan University, Wuhan, China, June, 2010
- "Response of stem cells to nanotopography: tissue-engineered blood vessels", Key Laboratory of Biomedical Polymers of Ministry of Education, Department of Chemistry, Wuhan University, Wuhan, China, June, 2010
- "Optimization of oral nonviral gene delivery", Institute of Chemistry, Chinese Academy of Sciences, Beijing, China, June, 2010
- "Biological treatment of intervertebral disc degeneration: controlled delivery technologies", AOSpine World Congress, Montreal, Canada, July, 2010
- "Nanostructured biomaterials: relevance to regenerative medicine and tissue biocompatibility", Keynote Lecture, American Society of Nanomedicine, Bethesda, NIH, Oct 2010
- "Nanostructured biomaterials", Keynote Lecture, Johnson and Johnson Nanotechnology Symposium, New Brunswick, Oct 2010
- "Nanostructured biomaterials: relevance to regenerative medicine and tissue biocompatibility", Keynote Lecture, Society of Biomaterials, Biomaterials Day at Johns Hopkins University, Baltimore, MD, Oct 2010
- "Optimizing Gene Delivery with QD-FRET and Microfluidics-mediated Self-assembly", Distinguished Lecture Series, NSF Center for High-Rate Nanomanufacturing, Northeastern University, Boston, Nov, 2010
- "Cellular response to topographical cues", Keynote Lecture, Molecular Nanotechnology Symposium, Nara, Japan, Dec 2010
- "Microfluidics-assisted synthesis of DNA nanocomplexes", Symposium on Recent Advances of Drug Delivery, Salt Lake City, Utah, Feb 2011
- "Optimization of nonviral gene delivery by QD-FRET technology", Center for Nanotechnology, University of Washington, Mar 2011
- "Relevance of topographical cues to regenerative medicine", Department of Bioengineering, University of Washington, Mar 2011
- "Nanotherapeutics: applications of discreet and continuous nanostructures," Distinguished Karcher Lecture Series, Department of Chemistry and Biochemistry, University of Oklahoma, Mar 2011
- "Self-assembly of polyplexes in picoliter volume," 15th International Symposium on Recent Advances in Drug Delivery Systems, Salt Lake City, Utah, Mar 2011
- "Microfluidics-mediated synthesis of polyplexes and their applications," School of Pharmacy, UNC Chapel Hill, Apr 2011
- "Stem cell response to nanostructured biomaterials," Gordon Research Conference on Environmental Nanotechnology, Waterville, NH, Jun 2011
- "Cellular response to topographical cues: Relevance to regenerative medicine and nonviral transfection," National University of Ireland, Galway, Ireland, Jun 2011
- "Microfluidics-mediated synthesis of DNA/RNA polyplexes," Controlled Release Society Annual Meeting, Washington DC, Aug 2011
- "Cellular response to continuous nanostructures", Keynote Lecture, 5th WACBE Symposium, Tainan, Taiwan, Aug 2011

- "Addressing barriers of nonviral gene delivery by QD-FRET and microfluidic technologies," National Kaohsiung University, Kaohsiung, Taiwan, Aug 2011
- "Cellular response to topographical cues", ACS Symposium on Polymer in Medicine, Santa Rosa, CA, Sept 2011
- "Cellular Response to Nanotopographical Cues: Relevance to Regenerative Medicine and Nonviral Gene Transfer", Russian 2nd Nanomaterials Conference, Moscow, Sept 2011
- "Role of cell-topography effects in nonviral gene delivery", 10th NHLBI Symposium on Gene Therapy, Sonoma, CA, Nov 2011
- "Nanotherapeutics for genetic medicine", Distinguished Lectures in Life Sciences Series, Pennsylvania State University, College Station, PA, Nov 2011
- "Microfluidics-mediated synthesis of DNA and RNA polyplexes", Keynote Lecture, 2nd Nano Today Conference, Hawaii, Dec 2011
- "Nanotherapeutics: applications of discreet and continuous nanostructures," University of Missouri, Kansas City, School of Pharmacy, Kansas City, Jan 2012
- "Nanotherapeutics for genetic medicine", Tianjin Medical University, Tianjin, China, March 2012
- "Cellular Response to Nanotopographical Cues: Relevance to Regenerative Medicine and Nonviral Gene Transfer", Department of Biomedical Engineering, Cornell University, April 2012
- "Nanostructured biomaterials for gene and cell therapy", Department of Chemical and Biomedical Engineering, Arizona State University, April 2012
- "Implications and applications of cell-topography interactions", Biointerface Gordon Research Conference, Les Diablerets, Switzerland, May 2012
- "Response of stem cells to topography cues", Keynote Lecture, 9th World Congress for Biomaterials, Chengdu, China, June 2012
- "Nanotherapeutics: Applications of discrete and continuous nanostructures for gene and cell therapy", Plenary Lecture, International Union of Materials Research Societies, Singapore, July 2012
- "Mechanistic understanding of cell-topography interactions", Engineered Extracellular Matrix Gordon Research Conference, Biddeford, Maine, July 2012
- "Microfluidics-mediated synthesis of DNA/RNA polyplexes", NanoBio Seattle, Seattle, Washington, July 2012
- "Nanotherapeutics for genetic medicine", College of Medicine, National Taiwan University, Taipei, Taiwan, August 2012
- "Implications and applications of cell-topography interactions", New Jersey Symposium of Biomaterials, Rutgers University, October 2012
- "Implications and applications of cell-topography interactions", Clemson Award Lecture, Annual Meeting of Society for Biomaterials, New Orleans, Louisiana, October 2012
- "Microfluidics-mediated synthesis Nanocomplexes", International Society for the Study of Xenobiotics, Dalls, Texas, October 2012
- "Influence of cell-topography interactions on stem cell tissue engineering", Department of Molecular Pharmaceutics, UNC-Chapel Hill, October 2012
- "Implications and applications of cell-topography interactions", Department of Chemical Engineering, Texas Tech University, November 2012
- "Stem cell response to topographical cues", Korea Regenerative Medicine Symposium, Cheongnam, S Korea, December, 2012
- "Implications and applications of cell-topography interactions", NIPAM-80 Conference, Maui, HI, December 2012
- "Mechanisms and applications of cell-topography interactions for tissue engineering", 1st IBN International Symposium on Nanosystems for Biomedical Applications, Jan 10, 2013
- "Nanotherapeutics applied to gene and cell therapy", Department of Bioengineering, Stanford University, Mar 11, 2013
- "Nanotherapeutics: Optimizing delivery of genetic medicine by engineering strategies", Department of Mechanical and Aerospace Engineering, George Washington University, Mar 14, 2013

- "Role of Biomaterials in direct cellular reprogramming", Society for Biomaterials Annual Meeting, Boston, Apr 12, 2013
- "Nonviral direct cellular reprogramming", Plenary Lecture, Korean Society of Tissue Engineering Annual Meeting, Seoul, S Korea, May, 2013
- "Role of Biomaterials in direct cellular reprogramming", World Class University Program, Department of Bionanotechnology, Dankook University, S Korea, June 2013
- "Role of Biomaterials in direct cellular reprogramming", Plenary Lecture, Biomedical Engineering Conference, Third Military Medical University, Chongqing, China, July 2013
- "Nanotherapeutics for gene and cell therapy", School of Chemistry and Chemical Engineering, Sun Yat-Shen University, China, July 2013
- "Engineering strategies to optimize nonviral gene delivery", Plenary Lecture, 6th WACBE Conference, Beijing, China, August 2013
- "Nanotherapeutics for gene and cell therapy", Plenary Lecture, Helmholtz Graduate School of Macromolecular Biosciences, Berlin, Germany, September 2013
- "Role of biomaterials in direct cell reprogramming", Plenary Lecture, 12th International Conference "Polymers for Advanced Technologies", Berlin, Germany, September 2013
- "Application of quantum dots to theranostics of nanomedicine", Duke Nanomaterials Symposium, Durham, NC, October, 2013
- "Optimizing gene and cell therapy with engineering strategies", Institute for Bioengineering and Bioscience, Georgia Tech, Atlanta, GA, November, 2013
- "Cell-topography interactions, nonviral gene delivery, and direct cellular reprogramming", Department of Biomedical Engineering, Carnegie Mellon University, Pittsburgh, PA, February, 2014
- "Optimizing delivery of genetic medicine by engineering strategies", National Jewish Health Center, Denver, CO, February, 2014
- "Cell-topography interactions and neuronal differentiation", Keynote Lecture, Annual Meeting of American Society for Nanomedicine, Washington, D.C., March 2014
- "Cell-topography interactions, nonviral gene delivery, and direct cellular reprogramming", Department of Biomedical Engineering, Columbia University, New York, NY, February, 2014
- "mRNA tumor vaccination and mRNA-polyplex nanomanufacturing", Acuitas Therapeutics, Vancouver, BC, March 2014
- "Direct cell reprogramming by exogenous and endogenous approaches: Transcription factor overexpression and genome editing", Dankook University, S Korea, April 2014
- "Optimizing delivery of genetic medicine by engineering strategies", Lecture for International Journal of Nanomedicine Distinguished Scientist Award, Annual Meeting of Society for Biomaterials, Denver, CO, April, 2014
- "Direct cell reprogramming by exogenous and endogenous approaches: Transcription factor overexpression and genome editing", Plenary Lecture, International Conference in Biomedical Engineering, Beijing University of Aerospace Aeronautics, Beijing, China, May 2014
- "Bioinspired biomaterials for drug, gene, and cell therapy", Keynote Lecture, The Hangzhou Future Sci-Tech City Meeting, Hangzhou, China, May 2014
- "Cell-topography Interactions and Direct Cellular Reprogramming", World Congress of Biomechanics, Boston, July 2014
- "Bioengineering of direct cell reprogramming", Keynote Lecture, 36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Chicago, IL, August, 2014
- "Bioengineering of direct cellular reprogramming", 2nd Symposium on Frontiers of Bioengineering, Urbana-Champagne, IL, September 2014
- "Advancing Direct Cellular Reprogramming with Biomaterials and Bioengineering Approaches", Plenary Lecture, 3rd Symposium on Innovative Polymers for Controlled Delivery, Suzhou, China, September 2014
- "Bioengineering of Direct Cellular Reprogramming", Plenary Lecture, Tissue Engineering and Regenerative Medicine International Society-Asia Pacific Meeting, Daegu, S Korea, September 2014

- "Targeting Lymphnode with Particulate Adjuvant", Keynote Lecture 1st International Symposium on Immunobiomaterials, Tianjin University, Tianjin, China, October 2014
- "Oral Nanotherapeutics: Promise and Challenge", Department of Medicine, University of North Carolina, Chapel-Hill, NC, October 2014
- "Bioengineering of Direct Cellular Reprogramming", Institute of Cell Engineering, Johns Hopkins School of Medicine, Baltimore, October, 2014
- "Bioengineering of Direct Cellular Reprogramming", Keynote Lecture, Materials Today Asia Conference, Hong Kong, December, 2014
- "Bioengineering of Direct Cellular Reprogramming", Distinguished Lectureship, Nantong University, China, Nantong, December, 2014
- "How to Publish in *Biomaterials* Without Any Data", 1st International Conference in Translational Nanomedicine, Guangzhou, 2015
- "Bioengineering of Direct Cellular Reprogramming", Department of Medicine, Medical University of South Carolina, Charleston, SC, January, 2015
- "Bioengineering of Direct Cellular Reprogramming", Department of Biomedical Engineering, University of Wisconsin, Madison WI, April, 2015
- "Publishing in *Biomaterials*: Editor's Perspective", Keynote Lecture, 5th Asian Biomaterials Congress, Taipei, May 2015
- "Bioengineering of Direct Cellular Reprogramming", Plenary Lecture, Savio L-Y Distinguished Scientist Award, 7th WACBE Conference, Singapore, July 2015
- "Endogenous and Exogenous Approaches for Direct Cell Reprogramming", Dankook University, Cheonan, S Korea, July 2015
- "Delivery Aspects of Direct Cell Reprogramming", Keynote Lecture, 1st International Conference on Biotherapeutics Delivery, Seoul, S Korea, September 2015
- "Bioengineering of Direct Cellular Reprogramming", Plenary Lecture, ChinaNano 2015, Beijing, China, September 2015
- "Bioengineering of Direct Cellular Reprogramming", Institute of High Energy Physics, Chinese Academy of Sciences, Beijing, China, September 2015
- "Bioengineering of Direct Cellular Reprogramming", Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun, China, September 2015
- "Direct Cellular Reprogramming and Tissue-on-a-Chip", State Key Laboratory of Bioelectronics, Southeast University, Nanjing, China, September 2015
- "Direct Cellular Reprogramming and Tissue-on-a-Chip", Institute of Biomaterials and Biomedical Engineering, University of Toronto, Canada, November 2015
- "Addressing Biomanufacturing Challenges with Microfluidics", Keynote Lecture, China-USA Forum on Grand Challenges for Biomaterials, Chengdu, China, November 2015
- "Biomaterials for Direct Cellular Reprogramming", Plenary Lecture, Chinese Biomaterials Congress, Haikou, China, November 2015
- "Direct Cellular Reprogramming and Tissue-on-a-Chip", Plenary Lecture, 4th NanoToday Conference, Dubai, UAE, December 2015
- "Bioengineering of Direct Cellular Reprogramming", Two Gene Distinguished Lecture, Department of Chemical and Biological Engineering, Northwestern University, Evanston, February 2016
- "Bioengineering of Direct Cellular Reprogramming", Plenary Lecture, ASME-NanoEngineering in Medicine and Biology, Houston, February 2016
- "Bioengineering of Direct Cellular Reprogramming", Department of Chemistry and Chemical Biology, Rutgers University, New Brunswick, April 2016
- "Bioengineering of Direct Cellular Reprogramming", Department of Biomedical Engineering, University of California, Riverside, April, 2016

- "Bioengineering of Direct Cellular Reprogramming", Plenary Lecture, Korean Society for Tissue Engineering and Regenerative Medicine, Seoul, June, 2016
- "Application of Stem Cell Engineering for Precision Medicine", Plenary Lecture, Chinese American Society of Nanotechnology and Nanomedicine, Beijing, July, 2016
- "Bioengineering of Direct Cellular Reprogramming", Department of Biomedical Engineering, Tsinghua University, July, 2016
- "Direct Cellular Reprogramming and Tissue-on-a-chip", Institute of Bioceramics, Chinese Academy of Sciences, Shanghai, China, July 2016
- "Direct Cellular Reprogramming", Institute of Chemistry, Chinese Academy of Sciences, Shanghai, China, July 2016
- "Bioengineering of Direct Cellular Reprogramming", Department of Chemistry, Peking University, July, 2016
- "Bioengineering of Direct Cellular Reprogramming", Department of Biomedical Engineering, Shanghai Jiaotong University, July, 2016
- "Direct Cellular Reprogramming and Tissue-on-a-chip", University of Chinese Academy of Sciences, Beijing, China, July 2016
- "Bioengineering of Direct Cellular Reprogramming", Plenary Lecture, Tissue Engineering and Regenerative Medicine – Asian Pacific (TERMIS-AP), Taiwan, August, 2016
- "Application of Stem Cell Engineering for Drug Development", Keynote Lecture, Chinese Academy of Engineering Pharmacology Conference, Shanghai, September, 2016
- "Bioengineering of Direct Cellular Reprogramming", Department of Biomedical Engineering, Case Western Reserve University, November, 2016
- "Implication and Application of Direct Cellular Reprogramming", Benjamin Zweifach Memorial Lectureship, Department of Biomedical Engineering, City College of New York, November, 2016
- "Bioengineering Strategies to Advance Biomanufacturing of Cell and Tissue Therapeutics", Keynote Lecture, New Jersey Biomaterials Symposium, New Brunswick, November 2016
- "Direct Cellular Reprogramming and Tissue-on-a-chip", Institute of Basic Medical Sciences, Zhejiang University, Hangzhou, China, January 2017
- "Bioengineering of Direct Cellular Reprogramming", Keynote Lecture, Engineering Frontiers in Translational Medicine Symposium, Dartmouth College, Hanover, February, 2017
- "Bioengineering of Direct Cellular Reprogramming", Distinguished Biomaterials Lectureship, Boston University, Boston, February, 2017
- "Implication and Application of Direct Cellular Reprogramming", Keynote Lecture, Tissue Engineering Symposium, National University of Singapore, April, 2017
- "Application of Direct Cellular Reprogramming", Keynote Lecture, International Symposium on Biomaterials and Tissue Engineering, Clemson University, April, 2017
- "Bioengineering of Direct Cellular Reprogramming", Keynote Lecture, School of Dental Medicine Research Day, University of Pennsylvania, Philadelphia, April, 2017
- "Direct Cellular Reprogramming and Tissue-on-a-chip", National Key Laboratory of Bioelectronics, Southeast University, Nanjing, China, July, 2017
- "Bioengineering of Direct Cellular Reprogramming", Department of Biomedical Engineering, Nanjing University, Nanjing, China, July, 2017
- "Bioengineering of Direct Cellular Reprogramming", Department of Chemistry, Nanjing University, Nanjing, China, July, 2017
- "Bioengineering of Direct Cellular Reprogramming", Department of Polymer Science, East China University of Science and Technology, Shanghai, China, July, 2017
- "No gene delivery, no tumor growth", Plenary Lecture, 2nd International Conference on Nanotechnology and Nanomedicine, Suzhou, China, August, 2017
- "Polycations as Molecular Scavengers", Chinese Academy of Sciences - Suzhou Institute of Nano-Tech and Nano-Bionics, Suzhou, China, August, 2017

- "Biomaterials strategies to control inflammation", Plenary Lecture, 2017 Tissue Engineering and Regenerative Medicine International Society-Asia Pacific Meeting (TERMIS-AP), Nantong, China, 2017
- "Polycations as Molecular Scavengers to combat sterile inflammation", Department of Chemical Engineering, Columbia University, October, 2017
- "New Directions of Biomaterials for Inflammation Control", Keynote Lecture, Xiang Shang Conference, Beijing, October, 2017
- "Biomaterials Strategy to Modulate Inflammation", Plenary Lecture, T3CN Symposium, University of Pennsylvania, December, 2017
- "Biomaterials Strategy to Modulate Inflammation", CAS Institute of Applied Chemistry, Changchun, China, January, 2018
- "Regenerative medicine applications in human tissue-on-chip", CAS Dalian Institute of Chemical Physics, Dalian, China, January, 2018
- "Biomaterials Strategy to Modulate Inflammation", School of Pharmacology and Pharmacy, Jilin University, China, January, 2018
- "Biomaterials Strategy to Modulate Inflammation", School of Biomedical Engineering, Huazhong University of Science and Technology, Wuhan, China, January, 2018
- "Direct cell reprogramming and human tissue-on-chip", Center for Regenerative Medicine, Tongji Hospital, Huazhong University of Science and Technology, Wuhan, China, January, 2018
- "Biomaterials Strategy to Modulate Inflammation", School of Life Sciences, University of Macau, Macau, China, January, 2018
- "Biomaterials Strategy to Control Inflammation", Institute of Health Science and Technology, CAS Institute of Advanced Technology, Shengzhen, China, January, 2018
- "Nanotherapeutics: Critical Delivery Barriers and Engineering Strategies", State Key Laboratory of Luminescent Materials and Devices, South China University of Technology, Guangzhou, China, January, 2018
- "Biomaterials Strategy to Modulate Inflammation", School of Life Sciences, South China University of Technology, Guangzhou, China, January, 2018
- "Biomaterials Strategy to Modulate Inflammation", Department of Pharmaceutics, University of Utah, Salt Lake City, March, 2018
- "New directions of nanomedicine: control of inflammation", Department of Biomedical Engineering, University of Texas, Southwestern Medical Center, March, 2018
- "Biomaterials strategies to control inflammation in tissue repair", Center for Cardiovascular Research, School of Medicine, Stanford University, March, 2018
- "Biomaterials strategies to control inflammation", Biannual Korean Academy of Science and Technology Conference, University of Utah, Salt Lake City, March, 2018
- "Integrated Microphysiological System of Cerebral Organoid and Blood Vessel for Disease Modeling and Neuropsychiatric Drug screening", Symposium on Microphysiological Systems, NCATS, NIH, March, 2018
- "Biomaterials strategies to control inflammation", Institute of Life Sciences, Nankai University, Tianjin, China, June 2018
- "Biomaterials strategies to control inflammation", CAS Institute of Genetics, Beijing, China, June, 2018
- "Design of Biomaterials to Combat Sterile Inflammation", Dalian University of Technology, China, June 2018
- "Chitosan Nanotherapeutics: From Gene to Protein Delivery and to Nanomanufacturing", CAS Institute of Process Engineering, Beijing, China, June, 2018
- "Disease Modeling and Drug Screening with Tissue-Engineered Blood Vessel", Institute of Bioelectronic Engineering, Southeast University, Nanjing, China, July, 2018
- "Disease Modeling and Drug Screening with Tissue-Engineered Blood Vessel", National Health Research Institute, Taiwan, August, 2018
- "Disease Modeling and Drug Screening with Tissue-Engineered Blood Vessel", Plenary Lecture, 5th International Biomaterials Symposium, Changchun, China, August 25, 2018

- ”Chitosan Nanotherapeutics: From Gene to Protein Delivery and to Nanomanufacturing”, CAS Changchun Institute of Applied Chemistry, Changchun, China, August 25, 2018
- ”Design of Biomaterials to Combat Sterile Inflammation”, Materials Today Conference, Rice University, October, 2018
- ”Modulating Sterile Inflammation with Nanostructured Biomaterials”, Plenary Lecture, China Nanomedicine 2018, Shanghai, China, October, 2018
- ”Disease Modeling and Drug Screening with Tissue-Engineered Blood Vessel”, Keynote Lecture, College of Life Sciences, South China University of Technology, January, 2019
- ”Disease Modeling and Drug Screening with Tissue-Engineered Blood Vessel”, Institute of Tissue regeneration Engineering, Dankook University, January, 2019
- ”Publishing in Biomaterials”, Institute of Tissue regeneration Engineering, Dankook University, January, 2019
- ”Design of Therapeutic Biomaterials to Control Sterile Inflammation”, Department of Chemistry, City College of New York, February, 2019
- ”Therapeutic Biomaterials: Strategy to Control Sterile Inflammation”, Stevenson Biomaterials Lectureship, Syracuse University, March, 2019
- “Design of Nanostructures to Modulate Inflammation”, Department of Nanoengineering, UCSD, March, 2019
- ”Therapeutic Biomaterials: Strategy to Control Sterile Inflammation”, Department of Biomedical Engineering, Stevens Institute of Technology, March, 2019
- “Design of Nanostructures to Modulate Inflammation”, Department of Pharmaceutical Sciences, College of Pharmacy, Virginia Commonwealth University, March, 2019
- “Design of Biomaterials to Modulate Inflammation”, Department of Chemistry, City College of New York, April, 2019
- “Microphysiological systems for disease modeling and drug discovery”, Institute of Bioelectronics Engineering, Southeast University, April, 2019
- ”Therapeutic Biomaterials: Strategy to Control Sterile Inflammation”, Stem Cell and Regenerative Medicine Center, Chinese University of Hong Kong, April, 2019
- “Microphysiological systems for drug development”, College of Macromolecular Sciences, Zhejiang University, April, 2019
- ”Promising directions of biomaterials and nanomedicine research”, School of Biological Sciences, Chinese University of Hong Kong, April, 2019
- ”Therapeutic Biomaterials: Strategy to Control Sterile Inflammation”, Department of Chemistry, Tsinghua University, China, May, 2019
- “Design of Biomaterials to Modulate Inflammation”, First Affiliated Hospital of Xian Jiaotong University, China, May, 2019
- ”Therapeutic Biomaterials: Strategy to Control Sterile Inflammation”, National Center of Nanoscience and Engineering, Beijing, May, 2019
- “Design of Nanostructures to Modulate Inflammation”, Annual Meeting of Biophysical Society, Baoding, China, June, 2019
- “Design of Biomaterials to Modulate Inflammation”, University of Macau, June, 2019
- ”Therapeutic Biomaterials: Strategy to Control Sterile Inflammation”, Department of Biomedical Engineering, UCLA, June, 2019
- ”Therapeutic Biomaterials: Strategy to Control Sterile Inflammation”, 4th International Conference of Regenerative Biomedical Materials, Wuhan, China, June, 2019
- “Can Microfluidics address the challenges of nanoparticle biomanufacturing?”, International Conference on Additive Manufacturing – 3D Printing, Shenzhen, China, June, 2019
- “Design of Nanostructures to Modulate Inflammation”, College of Pharmaceutical Sciences, Tianjin Medical University, July, 2019
- “What can be done to address the challenge of nanotherapeutics biomanufacturing?”, Changchun Institute of Applied Chemistry, China, July, 2019

- "What can the opposite of gene delivery accomplish", Department of Macromolecular Chemistry, Jilin University, China, July, 2019
- "Design of Biomaterials to Modulate Inflammation", Bethune Hospital, Jilin University, China, July, 2019
- "Design of Biomaterials to Modulate Inflammation", 9th WACBE World Congress on Bioengineering, Taipei, Taiwan, August, 2019
- "Recent advances in nanotherapeutics manufacturing for delivery of biologics", 8th International Conference on Nanoscience and Technology, ChinaNano 2019, Beijing, August, 2019
- "Recent advances on application of cationic biomaterials to modulate inflammation", 2019 Chinese Biomaterials Congress and International Symposium on Advanced Biomaterials, Dalian, China, August, 2019
- "What can be done to improve formulation of nanotherapeutics?", 2019 National Center for Nanoscience and Engineering, Beijing, China, Sept, 2019
- "Design of Biomaterials to Modulate Inflammation", Department of Pharmaceutical Sciences, University of Pittsburgh, November, 2019
- "Design of Biomaterials to Modulate Inflammation", South China University of Technology, Guangzhou, China, Jan, 2020
- "Design of Biomaterials to Modulate Inflammation", Department of Pharmaceutical Sciences, University of Utah, Salt Lake City, February, 2020
- "Design of Biomaterials to Modulate Inflammation", World Association of Chinese Biomedical Engineers, Online, March, 2021
- "Design of Biomaterials to Modulate Inflammation", Department of Pharmaceutical Sciences, Ohio State University, Online, April, 2021
- "Design of Biomaterials to Control Inflammation", Department of Biomedical Engineering, University of Arizona, Online, April, 2021
- "Design of Biomaterials to Modulate Inflammation", Terasaki Institute, Online, May, 2021
- "Design of Biomaterials to Control Inflammation", Society for Biomaterials, Honolulu, Hawaii, Jan, 2022
- "Design of Biomaterials to Control Inflammation", Tissue Talks, Department of Biomedical Engineering, Columbia University, Online, March, 2022
- "Design of Biomaterials to Control Inflammation", Annual Meeting of Korea Society of Tissue Engineering, Online, April, 2022
- "Design of Biomaterials to Control Inflammation", Department of Biomedical Engineering, Yale University, April, 2022
- "hIPSC-derived Brain Organoids for Modeling of Neuropsychiatric Diseases", South East University, Online, April, 2022
- "hIPSC-derived Brain Organoids for Modeling of Neuropsychiatric Diseases", Zhejiang University, Online, May, 2022
- "Design of Biomaterials to Modulate Inflammation", CREATE Symposium, Penn State University, State College, October, 2022
- "Design of Biomaterials to Control Inflammation", Department of Biomedical Engineering, Cornell University, November, 2022
- "Unexpected Applications of Cationic Biomaterials", POSTECH Signature Conference, Pohang, South Korea, October, 2022
- "Unexpected Applications of Cationic Biomaterials", Institute of Bionanotechnology, Dankook University, Cheongnam, South Korea, October, 2022
- "Design of Biomaterials to Control Inflammation", Department of Pharmaceutical Sciences, University of Buffalo, October, 2022
- "Cationic Drug Carriers as Immunomodulating Biomaterials", 4th Annual Immune Modulation & Engineering Symposium, Drexel University, December, 2022
- "Unexpected Applications of Cationic Biomaterials", International Conference on Biomaterials, Regenerative Medicine, and Devices, IIT Guwahati, India, December, 2022

- "Engineered Nonviral and Viral Vectors for *in vivo* Delivery of Genome-editing Machinery", Indian Institute of Science, Bangalore, India, December, 2022
- "Unexpected Applications of Cationic Biomaterials", Institute of Chinese Medicine, University of Macau, Online, January, 2023
- "Cationic Biomaterials as Therapeutic Carriers", Department of Biomedical Engineering, University of Texas, Austin, March, 2023
- "Design of Biomaterials to Tackle Inflammation", Department of Chemistry, Fudan University, Shanghai, May, 2023
- "Design of Biomaterials to Tackle Inflammation", National Center of Nanoscience and Engineering, Beijing, May, 2023
- "Unexpected Applications of Cationic Biomaterials", Institute of Life Sciences, Tongji University, Shanghai, May, 2023
- "Cationic Biomaterials as Therapeutic Carriers", National University of Singapore Hospital, Center for Medicine, Singapore, May, 2023
- "Design of Biomaterials to Modulte Inflammation", Renji Hospital, Shanghai Jiaotong University, Shanghai, August, 2023
- "Design of Biomaterials to Modulate Inflammation", ChinaNANO International Conference, Beijing, August, 2023
- "Unexpected Applications of Cationic Biomaterials", Department of Biomedical Engineering, Stevens Institute of Technology, Hoboken, New Jersey, October, 2023
- "Cationic Biomaterials as Therapeutic Carriers", Department of Chemistry, Rutgers University, New Brunswick, New Jersey, October, 2023
- "Viral and Nonviral Gene Editing in vivo", Chinese Society for Biomaterials, Chongqing, China, November, 2023
- "Viral and Nonviral Gene Editing in vivo", University of Macau, China, December, 2023
- "Targeting Nucleic Acid to Combat Inflammatory Diseases", Department of Biomedical Engineering, SUSTech University, Shenzhen, December, 2023
- "Impact of Acute and Chronic Fentanyl Exposure on hiPSC-Derived Midbrain Organoids", 2023 International Symposium on Microphysiological Systems, Online, Nanjing, China, December, 2023
- "Targeting Nucleic Acid to Combat Inflammation: A New Therapeutic Strategy", 2023 International Conference on Health and Technology, Online, Hanoi, Vietnam, December, 2023
- "Targeting Nucleic Acid to Combat Inflammation: A New Therapeutic Strategy", Institute of Biomedical Engineering and Biomaterials, University of Toronto, February, 2024
- "Targeting Nucleic Acid to Combat Inflammation", Department of Pharmaceutical Sciences, University of Wisconsin, February, 2024
- "Targeting Nucleic Acid to Combat Inflammation", Department of Biological Sciences and Biotechnology, Polytechnic University of Hong Kong, March, 2024
- "Targeting Nucleic Acid to Combat Inflammation", Polymer Society of Korea, Online Presentation, March, 2024
- "Targeting Nucleic Acid to Combat Inflammation", Department of Pharmaceutical Sciences, University of Wisconsin, February, 2024
- "Targeting Nucleic Acid to Combat Inflammation", Department of Life Sciences, Henan University, March, 2024
- "Targeting Nucleic Acid to Combat Inflammation", Institute of Biomedical Engineering, Guangzhou University of Medicine, March, 2024
- "Design of Biomaterials to Modulte Inflammation", Institute of Biomaterials, Biodegradables, and Biomimetics, University of Minho, Portugal, April 2024
- "Design of Biomaterials to Modulte Inflammation", Cancer Institute, University of Texas Southwestern Medical Center, May 2024