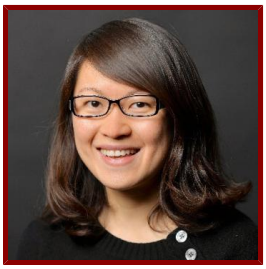
Stanford



Sindy Tang

Associate Professor of Mechanical Engineering, Senior Fellow at the Woods Institute for the Environment and Professor, by courtesy, of Radiology and of Bioengineering

Bio

BIO

Prof. Sindy K.Y. Tang is the Kenneth and Barbara Oshman Faculty Scholar and Associate Professor of Mechanical Engineering, with courtesy appointments in Bioengineering and Radiology (Precision Health and Integrated Diagnostics) at Stanford University. Her research group aims to develop engineering platforms that measure biological systems and convert these measurements into quantitative datasets, enabling both mechanistic insight and data-driven discovery. Current work focuses on experimental systems that probe biological processes across cellular and tissue scales, particularly how physical context—geometry, mechanics, and spatial organization—shapes biological function. By creating new measurement infrastructure for biology, her work aims to advance understanding of immune responses, spatial tissue organization, and cellular self-repair.

Website: http://web.stanford.edu/group/tanglab/

ACADEMIC APPOINTMENTS

- Associate Professor, Mechanical Engineering
- Senior Fellow, Stanford Woods Institute for the Environment
- Associate Professor (By courtesy), Bioengineering
- Member, Bio-X
- Member, Wu Tsai Human Performance Alliance
- Faculty Fellow, Sarafan ChEM-H
- Member, Stanford Cancer Institute

ADMINISTRATIVE APPOINTMENTS

- Associate Professor (by courtesy), Department of Bioengineering, Stanford University, (2023- present)
- Associate Professor (by courtesy), Department of Radiology, School of Medicine, Stanford University, (2018- present)
- Associate Professor, Mechanical Engineering, Stanford University, (2018- present)
- Assistant Professor, Mechanical Engineering, Stanford University, (2011-2018)

HONORS AND AWARDS

- Faculty Fellow Award, The Reid and Polly Anderson Foundation (2011-2013)
- Junior Faculty Fellow Award, Gabilan (2011-2013)
- Petroleum Fund New Investigator Award, ACS (2013-2015)
- 3M Nontenured Faculty Award, 3M (2013-2015)
- NSF CAREER Award, NSF (2015-2020)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Board of Directors, The Chemical and Biological Microsystems Society (2024 - present)
- Editorial Board, Microsystems & Nanoengineering, Nature Springer Publishing (2022 - present)
- International Advisory Board, Advanced NanoBioMed Research, Wiley Publishing (2020 - present)
- Associate Editor, Droplets, Wiley Publishing (2022 - present)
- Advisory Board, Lab on a Chip, Royal Society of Chemistry (2022 - present)
- Editorial Board, Micromachines, Multidisciplinary Digital Publishing Institute (MDPI) Publishing (2020 - present)
- Site Director, NSF Science & Technology Center for Cellular Construction (2017 - present)
- Co-lead of Bio Interfaces Focus Area, Stanford SystemX Alliance (2018 - present)

PROGRAM AFFILIATIONS

- Stanford SystemX Alliance

PROFESSIONAL EDUCATION

- PhD, Harvard University , Engineering Sciences
- MS, Stanford University , Electrical Engineering
- BS, Caltech , Electrical Engineering

PATENTS

- Sindy KY Tang, Craig Criddle, Jaewook Myung, Minkyu Kim. "United States Patent 10,273,510 Emulsion-based fermentation for accelerated gas substrate mass transfer", Leland Stanford Junior University
- Sindy K.Y. Tang, Ming Pan, Fengjiao Lyu, Ratmir Derda. "United States Patent 11,135,586 Fluorinated pickering emulsion", Leland Stanford Junior University
- Lucas R. Blauch, Sindy K. Y. Tang. "United States Patent App. 16/425796 Microfluidic guillotine for splitting cellular structures", Leland Stanford Junior University
- Nimit Jain, Andrew Z. Fire, Lucas R. Blauch, Sindy K. Y. Tang, Karen L. Artiles, Julia T. Garcia-Daou; Y. Whitney Yin; Michal R. Szymanski. "United States Patent App. 17/624,782 RNA Replication Using Transcription Polymerases", Leland Stanford Junior University
- Nicolas Castano, Seth Cordts, Fengjiao Lyu, Bryan Bunning, Kari Nadeau, Sindy K.Y. Tang. "United States Patent App. 62/888,884 Microfluidic device and diagnostic methods for allergy testing based on detection of basophil activation", Leland Stanford Junior University
- Ratmir Derda, Sindy K.Y. Tang, George M. Whitesides. "United States Patent 9,499,813 Systems and methods for amplification and phage display", Harvard University, Dec 11, 0189

LINKS

- Tang Lab: http://stanford.edu/group/tanglab/
- Google Scholar: https://scholar.google.com/citations?hl=en&user=HJt-6nkAAAAJ&view_op=list_works&sortby=pubdate

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Prof. Sindy K.Y. Tang’s research focuses on developing engineering platforms that measure biological systems and convert these measurements into quantitative datasets, enabling both mechanistic insight and data-driven discovery. Her lab builds experimental systems that probe biological processes across cellular and tissue scales, with particular emphasis on how physical context—such as geometry, mechanics, and spatial organization—shapes biological function.

Current research areas include:

(I) Functional immune measurements and diagnostics, including engineered workflows for basophil activation testing and other assays that preserve immune function during sample handling.
(II) Spatial tissue sampling technologies that preserve physical context for downstream multi-omics analysis, including microdissection approaches for spatial proteomics and organoid-based studies.
(III) Single-cell perturbation experiments that probe how defined physical damage and environmental history influence cellular repair and adaptive responses.

By developing new measurement infrastructure for biology, her research aims to enable deeper understanding of immune responses, spatial tissue organization, and cellular self-repair.

For additional details see: https://web.stanford.edu/group/tanglab/

Teaching

COURSES

2026-27

- Biotransport Phenomena: BIOE 235, BIOPHYS 235 (Spr)
- Introductory Fluids Engineering: ME 70 (Win)

2025-26

- Biotransport Phenomena: APPPHYS 235, BIOE 235, BIOPHYS 235, ME 235 (Spr)
- Introductory Fluids Engineering: ME 70 (Win)

2024-25

- Biotransport Phenomena: APPPHYS 235, BIOE 235, BIOPHYS 235, ME 235 (Spr)
- Introductory Fluids Engineering: ME 70 (Win)

2023-24

- Introductory Fluids Engineering: ME 70 (Win)

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Annatoma Arif, Roslyn Massey, Mengren Wu

Doctoral Dissertation Advisor (AC)

Myra Kurosu Jalil, Jun Lee, Rosa Son

Doctoral Dissertation Co-Advisor (AC)

Lauren Cooper, Ramon Rodriguez

Master's Program Advisor

Carolina Rodrigues Carvalho

Doctoral (Program)

Feven Naba, Ashka Patel

Publications

PUBLICATIONS

- **Multi-Tiered µDicer Enables Protein-Preserving Microdissection at 10 µm Resolution.** *Small (Weinheim an der Bergstrasse, Germany)*
  Arif, A., Kumar, R., Kwon, Y., Rodriguez, R., Cordts, S. C., Koppaka, S., Zhu, Y., Paša-Tolić, L., Tang, S. K.
  2026: e14816

- **A hand-operated microfluidic sample preparation-to-analysis workflow for simplifying the basophil activation test.** *Lab on a chip*
  Castano, N., Chua, K., Nguyen, A., Marshall, W., Hofmann, G. H., Lee, J., Tsai, M., Sindher, S. B., Nadeau, K. C., Chinthrajah, R. S., Galli, S. J., Tang, S. K.
  2025

- **Microdissection tools to generate organoids for modeling the tumor immune microenvironment.** *Microsystems & nanoengineering*
  Cordts, S. C., Yuki, K., Henao Echeverri, M. F., Narasimhan, B., Kuo, C. J., Tang, S. K.
  2024; 10 (1): 126

- **Can artificial intelligence (AI) replace oral food challenge?** *The Journal of allergy and clinical immunology*
  Tang, S. K., Castaño, N., Nadeau, K. C., Galli, S. J.
  2024

- **Exponential magnetophoretic gradient for the direct isolation of basophils from whole blood in a microfluidic system.** *Lab on a chip*
  Castano, N., Kim, S., Martin, A. M., Galli, S. J., Nadeau, K. C., Tang, S. K.
  2022

- **Microfluidic guillotine reveals multiple timescales and mechanical modes of wound response in Stentor coeruleus.** *BMC biology*
  Zhang, K. S., Blauch, L. R., Huang, W., Marshall, W. F., Tang, S. K.
  2021; 19 (1): 63

- **Self-repairing cells: How single cells heal membrane ruptures and restore lost structures.** *Science (New York, N.Y.)*
  Tang, S. K., Marshall, W. F.
  2017; 356 (6342): 1022-1025

- **Microfluidic guillotine for single-cell wound repair studies.** *Proceedings of the National Academy of Sciences of the United States of America*
  Blauch, L. R., Gai, Y. n., Khor, J. W., Sood, P. n., Marshall, W. F., Tang, S. K.
  2017; 114 (28): 7283–88

- **Code-multiplexed multi-frequency impedance cytometry with a unified deep-unfolding network.** *Microsystems & nanoengineering*
  Lee, W., Tang, S. K.
  2026; 12 (1)

- **A role for the Stentor syntaxin protein in post-wound cell survival.** *Molecular biology of the cell*
  Nadkarni, A. V., Diaz, U., Rodriguez, R., Zhang, K. S., Tang, S. K., Marshall, W. F.
  2026: mbcE25110527

- **Label-free, machine-learning assisted impedance assessment of basophil activation** *SENSORS AND ACTUATORS B-CHEMICAL*
  Kim, S., Kloker, L., Lee, W., Castano, N., Chang, C., Tang, S. K. Y.
  2026; 447

- **Label-free, machine-learning assisted impedance assessment of basophil activation.** *Sensors and actuators. B, Chemical*
  Kim, S., Kloker, L. H., Lee, W., Castaño, N., Chang, C. Y., Tang, S. K.
  2026; 447 (Pt 2)

- **A role for the Stentor syntaxin protein in post-wound cell survival.** *bioRxiv : the preprint server for biology*
  Nadkarni, A. V., Diaz, U., Zhang, K. S., Tang, S. K., Marshall, W. F.
  2025

- **Characterization of cellular wound resistance in the giant ciliate Stentor coeruleus.** *Soft matter*
  Paul, R., Nadkarni, A. V., Sipkova, J., Sato, J. E., Zhang, K. S., Barone, V., Marshall, W. F., Tang, S. K.

2025

- **Geometrical compartmentalization of trigger waves.** *Proceedings of the National Academy of Sciences of the United States of America*
  Li, Z., Zhang, K. S., Chen, Y., Tang, S. K., Ferrell, J. E.
  2025; 122 (40): e2512872122

- **A lung tumor-on-a-chip model recapitulates the effect of hypoxia on radiotherapy response and FDG-PET imaging.** *Lab on a chip*
  Nasiri, R., Kurosu Jalil, M., Ibanez Gaspar, V., Flores Perez, A. S., Nguyen, H. T., Khan, S., Tang, S. K., Yang, Y. P., Pratx, G.
  2025

- **A Lung Tumor-on-a-Chip Model Recapitulates the Effect of Hypoxia on Radiotherapy Response and FDG-PET Imaging.** *bioRxiv : the preprint server for biology*
  Nasiri, R., Jalil, M. K., Gaspar, V. I., Perez, A. S., Nguyen, H. T., Khan, S., Tang, S. K., Yang, Y. P., Pratx, G.
  2025

- **Environmental monitoring for Ascaris egg remediation: a critical review.** *Environmental science and pollution research international*
  Strong, N. I., Andraka, J. T., Woo, S. G., Abbadi, S. H., Lewis, A. J., Tang, S. K., Luby, S. P., Criddle, C. S.
  2025

- **Characterization of 3D printed micro-blades for cutting tissue-embedding material.** *Extreme Mechanics Letters*
  Koppaka, S., Doan, D., Cai, W., Gu, W., Tang, S. K.
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- **Evaluation of a method to simplify sample preparation for basophil activation tests**
  Castano, N., Nguyen, A., Cai, N., Lee, J., Marshall, W., Chua, K., Hofmann, G., Somen, D., Cao, S., Tsai, M., Desai, M., Sindher, S., Chinthrajah, et al
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- **Physical Forces in Regeneration of Cells and Tissues.** *Cold Spring Harbor perspectives in biology*
  Tang, S. K., Marshall, W. F.
  2024

- **SMORES: a simple microfluidic operating room for the examination and surgery of Stentor coeruleus.** *Scientific reports*
  Zhang, K. S., Rodriguez, R., Tang, S. K.
  2024; 14 (1): 8684

- **SMORES: A Simple Microfluidic Operating Room for the Examination and Surgery ofStentor coeruleus.** *bioRxiv : the preprint server for biology*
  Zhang, K. S., Rodriguez, R., Tang, S. K.
  2024

- **Parallelized Immunomagnetic Isolation of Basophils Directly from Whole Blood.** *Advanced nanobiomed research*
  Myles, J., Castaño, N., Kim, S., Zhu, Z., Tang, S. K.
  2024; 4 (2)

- **A Hole Lot of Fun: Microfluidic Stamping Reveals Donut Cell Mysteries**
  Rodriguez, R., Zhang, K. S., Knapp, D., Jiang, G., Kam, A., Harms, E., Huang, S., Marshall, W. F., Tang, S. Y.
  AMER SOC CELL BIOLOGY.2024

- **Parallelized Immunomagnetic Isolation of Basophils Directly from Whole Blood** *ADVANCED NANOBIOMED RESEARCH*
  Myles, J., Castano, N., Kim, S., Zhu, Z., Tang, S. K. Y.
  2023

- **Combining avidin with CD63 improves basophil activation test accuracy in classifying peanut allergy.** *Allergy*
  Castaño, N., Chua, K., Kaushik, A., Kim, S., Cordts, S. C., Nafarzadegan, C. D., Hofmann, G. H., Seastedt, H., Schuetz, J. P., Dunham, D., Parsons, E. S., Tsai, M., Cao, et al
  2023

- **The role of a robust cytoskeleton in wound resistance and healing in the ciliate Stentor coeruleus**
  Nadkarni, A. V., Zhang, K. S., Marshall, W. F., Tang, S. Y.
  AMER SOC CELL BIOLOGY.2023: 268-269

- **The role of a robust cytoskeleton in wound resistance and healing in the ciliate Stentor coeruleus**
  Nadkarni, A. V., Zhang, K. S., Marshall, W. F., Tang, S. Y.
  AMER SOC CELL BIOLOGY.2023: 403
- **Collective behavior of crowded drops in microfluidic systems** *PHYSICAL REVIEW FLUIDS*
  Gai, Y., Montessori, A., Succi, S., Tang, S. K. Y.
  2022; 7 (8)
- **Hydrodynamic dissection of Stentor coeruleus in a microfluidic cross junction.** *Lab on a chip*
  Paul, R., Zhang, K. S., Kurosu Jalil, M., Castano, N., Kim, S., Tang, S. K.
  2022
- **Modular, cascade-like transcriptional program of regeneration in Stentor.** *eLife*
  Sood, P., Lin, A., Yan, C., McGillivary, R., Diaz, U., Makushok, T., Nadkarni, A., Tang, S. K., Marshall, W. F.
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- **The living interface between synthetic biology and biomaterial design.** *Nature materials*
  Liu, A. P., Appel, E. A., Ashby, P. D., Baker, B. M., Franco, E., Gu, L., Haynes, K., Joshi, N. S., Kloxin, A. M., Kouwer, P. H., Mittal, J., Morsut, L., Noireaux, et al
  2022; 21 (4): 390-397
- **Development of Basophil Activation Test (BAT)-based point-of-care diagnostic tool for allergies**
  Ha, J., Castano, N., Cansdale, S., Vel, M., Tang, S., Tsai, M., Nadeau, K., Galli, S.
  MOSBY-ELSEVIER.2022: AB48
- **Microfluidic Surgery in Single Cells and Multicellular Systems.** *Chemical reviews*
  Zhang, K. S., Nadkarni, A. V., Paul, R., Martin, A. M., Tang, S. K.
  1800
- **Fabrication of a silicon mu Dicer for uniform microdissection of tissue samples** *APPLIED PHYSICS LETTERS*
  Cordts, S. C., Castano, N., Koppaka, S., Tang, S. K. Y.
  2021; 119 (1)
- **Strategic placement of an obstacle suppresses droplet break up in the hopper flow of a microfluidic soft crystal.** *Proceedings of the National Academy of Sciences of the United States of America*
  Bick, A. D., Khor, J. W., Gai, Y., Tang, S. K.
  2021; 118 (19)
- **Fomite Transmission, Physicochemical Origin of Virus-Surface Interactions, and Disinfection Strategies for Enveloped Viruses with Applications to SARS-CoV-2.** *ACS omega*
  Castano, N., Cordts, S. C., Kurosu Jalil, M., Zhang, K. S., Koppaka, S., Bick, A. D., Paul, R., Tang, S. K.
  2021; 6 (10): 6509–27
- **Microfluidics-Coupled Radioluminescence Microscopy for In Vitro Radiotracer Kinetic Studies.** *Analytical chemistry*
  Kim, T. J., Ha, B., Bick, A. D., Kim, M., Tang, S. K., Pratx, G.
  2021
- **Vision-based Autonomous Disinfection of High-touch Surfaces in Indoor Environments**
  Roelofs, S., Landry, B., Jalil, M., Martin, A., Koppaka, S., Tang, S. K. Y., Pavone, M., IEEE
  IEEE.2021: 263-270
- **Fabrication of 3D Micro-Blades for the Cutting of Biological Structures in a Microfluidic Guillotine.** *Micromachines*
  Koppaka, S., Zhang, K. S., Kurosu Jalil, M., Blauch, L. R., Tang, S. K.
  2021; 12 (9)
- **Interaction and breakup of droplet pairs in a microchannel Y-junction** *PHYSICAL REVIEW FLUIDS*
  Schuetz, S. S., Khor, J., Tang, S. K. Y., Schneider, T. M.
  2020; 5 (8)
- **Aurora kinase inhibitors delay regeneration in Stentor coeruleus at an intermediate step.** *Matters select*

Lin, A., Summers, D., Reiff, S. B., Tipton, A. R., Tang, S. K., Marshall, W. F.
2020; 6 (4)

- **Aurora kinase inhibitors delay regeneration in Stentor coeruleus at an intermediate step** *ScienceMatters*
  Lin, A., Summers, D., Reiff, S. B., Tipton, A. R., Tang, S. K., Marshall, W. F.
  2020
- **Microfluidic methods for precision diagnostics in food allergy.** *Biomicrofluidics*
  Castaño, N. n., Cordts, S. C., Nadeau, K. C., Tsai, M. n., Galli, S. J., Tang, S. K.
  2020; 14 (2): 021503
- **Transcription polymerase-catalyzed emergence of novel RNA replicons.** *Science (New York, N.Y.)*
  Jain, N. n., Blauch, L. R., Szymanski, M. R., Das, R. n., Tang, S. K., Yin, Y. W., Fire, A. Z.
  2020
- **MICROFLUIDIC TOOLS FOR SINGLE-CELL WOUND REPAIR STUDIES**
  Blauch, L. R., Zhang, K., Tang, S. K. Y., IEEE
  IEEE.2020: 140–41
- **Effect of volume fraction on droplet break-up in an emulsion flowing through a microfluidic constriction** *APPLIED PHYSICS LETTERS*
  Bick, A. D., Tang, S. K. Y.
  2019; 115 (9)
- **Modified Micro-Emulsion Synthesis of Highly Dispersed Al/PVDF Composites with Enhanced Combustion Properties** *ADVANCED ENGINEERING MATERIALS*
  Huang, S., Pan, M., Deng, S., Jiang, Y., Zhao, J., Levy-Wendt, B., Tang, S. K. Y., Zheng, X.
  2019; 21 (5)
- **Using machine learning to discover shape descriptors for predicting emulsion stability in a microfluidic channel** *SOFT MATTER*
  Khor, J., Jean, N., Luxenberg, E. S., Ermon, S., Tang, S. K. Y.
  2019; 15 (6): 1361–72
- **Timescale and spatial distribution of local plastic events in a two-dimensional microfluidic crystal** *PHYSICAL REVIEW FLUIDS*
  Gai, Y., Bick, A., Tang, S. K. Y.
  2019; 4 (1)
- **Cell-based biosynthesis of linear protein nanoarrays**
  Ishikawa, H., Yu, J. E., Tian, J., Tang, S. K. Y., Qin, H., Marshall, W. F.
  edited by Achilefu, S., Raghavachari, R.
  SPIE-INT SOC OPTICAL ENGINEERING.2019
- **Cell learning.** *Current biology : CB*
  Tang, S. K., Marshall, W. F.
  2018; 28 (20): R1180–R1184
- **Primer Cell learning** *CURRENT BIOLOGY*
  Tang, S. K. Y., Marshall, W. F.
  2018; 28 (20): R1180-R1184
- **Phenotyping antibiotic resistance with single-cell resolution for the detection of heteroresistance** *SENSORS AND ACTUATORS B-CHEMICAL*
  Lyu, F., Pan, M., Patil, S., Wang, J., Matin, A. C., Andrews, J. R., Tang, S. K. Y.
  2018; 270: 396–404
- **Programming self-organizing multicellular structures with synthetic cell-cell signaling** *SCIENCE*
  Toda, S., Blauch, L. R., Tang, S. K. Y., Morsut, L., Lim, W. A.
  2018; 361 (6398): 156-+
- **Internal flow inside droplets within a concentrated emulsion during droplet rearrangement** *Physics of Fluids*
  Leong, C. M., Gai, Y., Tang, S. K.

2018

- **Quantifying phenotypes in single cells using droplet microfluidics** *MICROFLUIDICS IN CELL BIOLOGY, PT C: MICROFLUIDICS FOR CELLULAR AND SUBCELLULAR ANALYSIS*
  Lyu, F., Blauch, L. R., Tang, S. K. Y.
  edited by Fletcher, D. A., Doh, J., Piel, M.
  2018; 148: 133-159
- **Quantifying phenotypes in single cells using droplet microfluidics.** *Methods in cell biology*
  Lyu, F., Blauch, L. R., Tang, S. K.
  2018; 148: 133–59
- **Time-varying droplet configuration determines break-up probability of drops within a concentrated emulsion** *APPLIED PHYSICS LETTERS*
  Khor, J., Kim, M., Schutz, S. S., Schneider, T. M., Tang, S. K. Y.
  2017; 111 (12)
- **Methods to coalesce fluorinated Pickering emulsions** *ANALYTICAL METHODS*
  Pan, M., Lyu, F., Tang, S. K. Y.
  2017; 9 (31): 4622-4629
- **Encapsulation of Single Nanoparticle in Fast-Evaporating Micro-droplets Prevents Particle Agglomeration in Nanocomposites** *ACS APPLIED MATERIALS & INTERFACES*
  Pan, M., Shi, X., Lyu, F., Levy-Wendt, B., Zheng, X., Tang, S. K. Y.
  2017; 9 (31): 26602–9
- **Towards a droplet radiometric assay for single-cell analysis.** *Analytical chemistry*
  Gallina, M. E., Kim, T. J., Shelor, M., Vasquez, J., Mongersun, A., Kim, M., Tang, S. K., Abbyad, P., Pratx, G.
  2017
- **Amphiphilic nanoparticles as droplet stabilizers for high-fidelity droplet-based biochemical assays**
  Pan, M., Tang, S.
  AMER CHEMICAL SOC.2017
- **High-Efficiency and High-Throughput On-Chip Exchange of the Continuous Phase in Droplet Microfluidic Systems.** *SLAS technology*
  Kim, M., Leong, C. M., Pan, M., Blauch, L. R., Tang, S. K.
  2017: 2472630317692558-?
- **Amphiphilic nanoparticles suppress droplet break-up in a concentrated emulsion flowing through a narrow constriction.** *Biomicrofluidics*
  Gai, Y. n., Kim, M. n., Pan, M. n., Tang, S. K.
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- **Toward a Droplet-Based Single-Cell Radiometric Assay** *Analytical Chemistry*
  Gallina, M. G., Kim, T., et al
  2017: 6472-6481
- **Methods to coalesce fluorinated Pickering emulsions** *Analytical Methods*
  Pan, M., Lyu, F., Tang, S. K.
  2017; 9: 4622-4629
- **Encapsulation of Single Nanoparticle in Fast-Evaporating Micro-droplets Prevents Particle Agglomeration in Nanocomposites** *ACS Applied Materials & Interfaces*
  Pan, M., Shi, X., Lyu, F., Levy-Wendt, B. L., Zheng, X., Tang, S. K.
  2017; 9 (31): 26602–26609
- **Time-varying droplet configuration determines break-up probability of drops within a concentrated emulsion** *Applied Physics Letters*
  Khor, J., Kim, M., Schütz, S. S., Schneider, T. M., Tang, S. K.
  2017; 111: 124102
- **Internal flow in droplets within a concentrated emulsion flowing in a microchannel** *PHYSICS OF FLUIDS*
  Leong, C. M., Gai, Y., Tang, S. K.
  2016; 28 (11)

- **Spatiotemporal periodicity of dislocation dynamics in a two-dimensional microfluidic crystal flowing in a tapered channel.** *Proceedings of the National Academy of Sciences of the United States of America*
  Gai, Y., Leong, C. M., Cai, W., Tang, S. K.
  2016; 113 (43): 12082-12087
- **Confinement and viscosity ratio effect on droplet break-up in a concentrated emulsion flowing through a narrow constriction.** *Lab on a chip*
  Gai, Y., Khor, J. W., Tang, S. K.
  2016; 16 (16): 3058-3064
- **Low energy emulsion-based fermentation enabling accelerated methane mass transfer and growth of poly(3-hydroxybutyrate)-accumulating methanotrophs.** *Bioresource technology*
  Myung, J., Kim, M., Pan, M., Criddle, C. S., Tang, S. K.
  2016; 207: 302-307
- **Surface-functionalizable amphiphilic nanoparticles for pickering emulsions with designer fluid-fluid interfaces** *RSC ADVANCES*
  Pan, M., Kim, M., Blauch, L., Tang, S. K.
  2016; 6 (46): 39926-39932
- **Fluorinated Pickering Emulsions with Nonadsorbing Interfaces for Droplet-based Enzymatic Assays** *ANALYTICAL CHEMISTRY*
  Pan, M., Lyu, F., Tang, S. K.
  2015; 87 (15): 7938-7943
- **Actuating Fluid-Fluid Interfaces for the Reconfiguration of Light** *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*
  Pan, M., Kim, M., Kuiper, S., Tang, S. K.
  2015; 21 (4)
- **Quantitative detection of cells expressing BlaC using droplet-based microfluidics for use in the diagnosis of tuberculosis.** *Biomicrofluidics*
  Lyu, F., Xu, M., Cheng, Y., Xie, J., Rao, J., Tang, S. K.
  2015; 9 (4): 044120-?
- **Quantitative detection of cells expressing BlaC using droplet-based microfluidics for use in the diagnosis of tuberculosis** *BIOMICROFLUIDICS*
  Lyu, F., Xu, M., Cheng, Y., Xie, J., Rao, J., Tang, S. K.
  2015; 9 (4)
- **Optofluidic ultrahigh-throughput detection of fluorescent drops.** *Lab on a chip*
  Kim, M., Pan, M., Gai, Y., Pang, S., Han, C., Yang, C., Tang, S. K.
  2015; 15 (6): 1417-1423
- **Fluorinated Pickering Emulsions Impede Interfacial Transport and Form Rigid Interface for the Growth of Anchorage-Dependent Cells** *ACS APPLIED MATERIALS & INTERFACES*
  Pan, M., Rosenfeld, L., Kim, M., Xu, M., Lin, E., Derda, R., Tang, S. K.
  2014; 6 (23): 21446-21453
- **Time capsule: an autonomous sensor and recorder based on diffusion-reaction.** *Lab on a chip*
  Gerber, L. C., Rosenfeld, L., Chen, Y., Tang, S. K.
  2014; 14 (22): 4324-4328
- **Droplet microfluidics for diagnostics applications**
  Pan, M., Kim, M., Rosenfeld, L., Gerber, L., Tang, S. K. Y.
  AMER CHEMICAL SOC.2014
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